

# Chemical Pathology

## Specialty Specific Guidance

This guidance is to help doctors who are applying for entry onto the Specialist Register with a CESR in Chemical Pathology. You will also need to read the [Chemical Pathology curriculum](#).

## Introduction

You can [contact us](#) and ask to speak to the GMC Specialist Applications team for advice before you apply. You are strongly advised to contact the Royal College of Pathologists for guidance **before** you submit your application. The Royal College of Pathologists can be contacted at [training@rcpath.org](mailto:training@rcpath.org).

### **What is the indicative period of training for a Certificate of Completion of Training (CCT) in Chemical Pathology?**

The indicative period of training for a CCT in Chemical Pathology is five years and it is unlikely that you would achieve all the learning outcomes required for a CCT in a shorter period of time.

The curriculum requires training to be undertaken in both the laboratory and clinical settings. As all disease processes, whether occurring in premature neonates or the very elderly, involve changes in body chemistry, the scope of Chemical Pathology covers the whole of medicine. There are some areas in which a knowledge of the underlying biochemistry is particularly relevant, and trainees will be expected to attain capabilities to provide direct clinical care to patients in the following five areas, which comprised the former subspecialty of Metabolic Medicine:

- Nutrition
- Inborn errors of metabolism in adults
- Cardiovascular risk management and disorders of lipid metabolism
- Disorders of calcium and bone metabolism
- Diabetes mellitus.

Most Chemical Pathologists provide direct clinical care to patients in at least one of these areas (for example, leading clinical services for lipid clinics or nutrition), or contribute to clinical services in other areas such as endocrinology or toxicology.

For complete details refer to the [Chemical Pathology curriculum documentation](#).

## Submitting your evidence

Do not submit original documents.

All your copies, other than qualifications you're getting authenticated **must** be accompanied by pro-forma signed by the person who is attesting to the validity and accuracy of your evidence (your verifier). It's very important that you read an explanation of how to this in our [important notice about evidence](#).

You will also need to submit translations of any documents that are not in English. Please ensure the translations you submit meet our [translation requirements](#).

Your evidence **must** be accurate and may be verified at source should we have any queries or justifiable doubts about the accuracy of your evidence. All evidence submitted will be cross checked against the rest of your application and documents.

### **Anonymising your evidence**

It is important that you anonymise your evidence before you submit it to us. You must remove:

- All patient identifying details
- Details of patients' relatives
- Details of colleagues that you have assessed, written a reference for, or who have been involved in a complaint you have submitted.

This includes:

- Names (first and last)
- Addresses
- Contact details such as phone numbers or email addresses
- NHS numbers
- Other individual patient numbers
- GMC number

The following details don't need to be anonymised:

- Gender
- Date of birth

It is your responsibility to make sure that your evidence has been anonymised. Evidence which has not been anonymised deleted from your application and you'll be asked to reupload it. More information can be found on our [website](#).

### **How much evidence to submit**

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. We recognise that you may not have all the evidence listed here and we recommend that you delay submitting an application until you are able to gather it.

Your evidence **must** cover the knowledge, skills and qualifications to demonstrate the required learning outcomes and capabilities in all areas of the Chemical Pathology curriculum. If evidence is missing from any area of the curriculum, then the application may fail.

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 document is located elsewhere, and you would like to cross-reference it.

It will help us to deal with your application more quickly if you make sure that you send us only evidence that is directly relevant. Evidence of your competence should be recent. In general, evidence of skills or experience more than five years old should not be submitted, as typically it does not demonstrate that the competences have been recently maintained.

As a general guide, we would usually expect to see between 800 and 1000 pages of evidence.

**Our guidance on compiling your evidence will help you to decide what is relevant and what is not. We recommend that you read it carefully.**

### **Organising your evidence**

Your evidence will need to be organised to reflect the structure of the online application, which may mean you need to create your own dividers for any hard copy evidence.

The Chemical Pathology curriculum developed by the Royal College of Pathologists is divided into 11 capabilities in practice (CiPs). Each CiP has a set of descriptors associated with that activity or task. There are six generic CiPs which cover the universal requirements of all specialties as described in the GPC framework and five specialty CiPs which describe the laboratory and clinical tasks or activities which are essential to the practice of Chemical Pathology. The specialty CiPs have also been mapped to the GPC domains and subsections to reflect the professional generic capabilities required to undertake the clinical tasks.

You need to gather your evidence by area of competence in the curriculum and then attach this under the relevant section in your online application.

If evidence come under several CiPs, please add the evidence under the first one available only and make reference to the other CiPs it relates to.

It is important to note that you will not be able to compensate for shortfalls in your evidence of training and experience in a particular area of the curriculum by providing extra evidence in other areas.

The amount of evidence needed for each domain will vary, according to the documentation required to cover each capability.

## **Specialty Learning Outcomes**

The 11 CiPs describe the professional tasks or work within the scope of Chemical Pathology. Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the minimum level of knowledge, skills and attitudes which should be demonstrated for an entrustment decision to be made. By the completion of training and award of CCT, the doctor must demonstrate that they are capable of unsupervised practice in all generic and specialty CiPs.

The six generic CiPs cover the universal requirements of all specialties as described in the GPC framework. Assessment of the generic CiPs will be underpinned by the GPC descriptors.

The five specialty CiPs describe the laboratory and clinical tasks or activities which are essential to the practice of Chemical Pathology. The specialty CiPs have also been mapped to the GPC domains and subsections to reflect the professional generic capabilities required to undertake the clinical tasks.

### 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 focused on patient safety and delivers effective quality improvement in patient care.
5. Able to carry out research and manage data appropriately.
6. Able to act as a teacher and clinical supervisor.

### Specialty CiPs

7. Able to lead and manage a laboratory.
8. Able to use the laboratory service effectively in the investigation, diagnosis, and management of disease processes.
9. Able to manage a multi-disciplinary team effectively.
10. Able to contribute effectively to the management of problems in patients in other specialties.
11. Able to lead and manage a clinical service, including the management of patients in an outpatient clinic, inpatient, ambulatory or community setting, and the management of long-term conditions.

For each generic CiP there are a set of descriptors of the observable skills and behaviours which would demonstrate that a trainee has met the minimum level expected. The descriptors are not a comprehensive list and there may be more examples that would provide equally valid evidence of performance.

The five specialty CiPs describe the tasks or activities which are essential to the practice of Chemical Pathology and Metabolic Medicine. These CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake these tasks.

For complete details on the descriptors please refer to the [Chemical Pathology curriculum documentation](#).

## Unsuccessful applications or poor evidence

It is our experience that applications from doctors in the specialty of Chemical Pathology are often submitted with inadequate or poor evidence in the following areas:

- No evidence of Fellowship of the Royal College of Pathologists (FRCPath) by examination or equivalent robust evidence of knowledge of the breadth and depth of the curriculum.
- Lacks evidence of having signed routine Chemical Pathology samples of the kind described in the Chemical Pathology curriculum.
- Insufficient evidence of attendance at and involvement in clinical management of patients (such as endocrine, metabolic, bone disease, diabetes, lipids etc.).
- Insufficient evidence of laboratory experience of a nature and kind equivalent to the demands of the curriculum.

**We strongly recommend that you closely match your experiences against the current curriculum and provide evidence of equivalence across all areas.**

We also strongly recommend that your referees are able to provide detailed support for your competences across all or most areas and understand the requirements for specialist training in Chemical Pathology and Specialist Registration in the UK.

## Evidence of training and qualifications

Substantial primary evidence for any previous training towards a medical qualification should only be submitted if the training is directly relevant to your CESR capabilities and dates from the past five years. Otherwise, certificates of completion are sufficient evidence of training.

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 by ECFMG 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 ECFMG. The rest of your evidence should be verified in line with [our guidance](#).

Specialist medical qualification(s)

Please provide an **authenticated copy** of any specialist medical qualifications you hold. Applicants must provide evidence of success in the Fellowship of the Royal College of Pathologists (FRCPath) by examination (Information can be found on the college website) If the applicant does not hold the FRCPath then they must provide a robust portfolio of evidence of knowledge of the breadth and depth of the curriculum.

Applicants in possession of FRCPath should provide **a copy** of their certificate, but this does not have to be authenticated. This will be checked directly by the Royal College of Pathologists. If evidence of another specialist qualification is being provided, it must be supported by original or authenticated certificates and the curriculum/syllabi or standards for its award. Applicants without such evidence will need to submit very robust and clear alternative evidence that they have been assessed to an appropriate level in their specialty if the Board is to be satisfied of equivalence to CCT standards.

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.

Please list unsuccessful attempts at examinations (where you have not subsequently been successful) in the application form.

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.

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.

If you have undertaken approved specialty training towards a CCT or CESR(CP) in Chemical Pathology in the UK in the past five years, you should provide a copy of your ARCPs.

Specialist registration outside the UK

Please provide an **authenticated copy** of details of the registration requirements of that authority.

Other relevant qualifications and certificates

You may also include postgraduate qualifications in other areas if they are relevant to associated capabilities e.g. degrees or diplomas in relevant areas, teaching, management, research methodology.

Please provide **copies** of certificates.

## Evidence of employment in posts and duties (including training posts)

Curriculum Vitae

Information on how you present your CV can be found on the [GMC website](#).

Your CV should follow the GMC [guidance](#) and all information must match your employment letters and application form. If it does not meet these standards, then it will be returned to you.

Employment letters and contracts of employment

The information in these letters and contracts **must** match your CV. They will 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)

Job descriptions

These **must** match the information in your CV. They will 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.

## Evidence can be used to demonstrate the core competences in several areas

Some of the suggested evidence can be relevant in more than one area of the curriculum. For example, we suggest that the logbook can be used to demonstrate competence in seven different areas. This means that you can use the same logbooks to demonstrate the required competences across several areas if you wish. Please make sure that you state each time where this evidence is in your application and that you would like to include it.

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

| Evidence |  | Relevant specific capability   |
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| Logbooks | <p>Suggested evidence:</p> <ul style="list-style-type: none"> <li>• validated logbooks, containing rotas and timetables, and case summaries/histories including copies of clinical correspondence</li> <li>• evidence of attachments/rotations</li> <li>• reports from placements</li> </ul> <p>Numbers of clinics with cases seen with summaries e.g. Diabetes clinics: 2 per week, 20 cases, 18 type 2 diabetes, 2 type 1 diabetes.</p> <p>Duty rosters detailing duty biochemist and reporting sessions, attachments to sections within the laboratory or laboratory rotations, placements in other laboratories or hospitals with reports.</p> | <ol style="list-style-type: none"> <li>1. Able to function successfully within NHS organisation and management systems.</li> <li>2. Able to deal with ethical and legal issues related to clinical practice.</li> <li>3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement.</li> <li>5. Able to carry out research and manage data appropriately.</li> <li>7. Able to lead and manage a laboratory.</li> <li>8. Able to use the laboratory service effectively in the investigation, diagnosis, and management of disease processes.</li> <li>11. Able to lead and manage a clinical service, including the management of patients in an outpatient clinic, inpatient, ambulatory or community setting, and the management of long-term conditions.</li> </ol> |

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| <p>Appraisals and assessments</p>     | <p>Applicants should submit evidence in the last five years of Chemical Pathology practice:</p> <ul style="list-style-type: none"> <li>• record of periodic assessment undertaken during training, including ARCPs and workplace-based assessments</li> <li>• revalidation /appraisal portfolio, which might include evidence of RCPATH workplace-based assessments.</li> </ul> <p>If you have undertaken recognised specialist or specialty training in the UK, you must provide a copy of all Annual Reviews of Competence Progression (ARCPs) undertaken. These will also be checked directly by the Royal College of Pathologists).</p> <p><b>If you have not undertaken training in the UK, then you must still provide appraisal and assessment evidence from the last five years.</b> The evidence will need to be very strong. You will need to map your evidence to the CiP and you should state which item shows equivalence and describe why. The descriptors will help you.</p> | <ol style="list-style-type: none"> <li>1. Able to function successfully within NHS organisation and management systems.</li> <li>2. Able to deal with ethical and legal issues related to clinical practice.</li> <li>3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement.</li> <li>4. Curriculum learning outcome 4: Is focussed on patient safety and delivers effective quality improvement in patient care.</li> <li>10. Able to contribute effectively to the management of problems in patients in other specialties.</li> <li>11. Able to lead and manage a clinical service including the management of patients in an outpatient clinic, inpatient, ambulatory or community setting, and the management of long-term conditions.</li> </ol> |
| <p>ARCPs and training assessments</p> | <p>Applicants should submit records of periodic assessment undertaken during training (if you have undertaken recognised specialist or specialty training in the UK you must provide a copy of all Annual Reviews of Competence Progression [ARCPs] undertaken. These will also be checked directly by the Royal College of Pathologists).</p>  | <ol style="list-style-type: none"> <li>1. Able to function successfully within NHS organisation and management systems.</li> <li>2. Able to deal with ethical and legal issues related to clinical practice.</li> <li>3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement.</li> </ol>  |

## Curriculum learning outcome 1: Able to function successfully within NHS organisational and management systems

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates awareness of, and adherence to, the GMC professional requirements
- Demonstrates recognition of public health issues including population health, social detriments of health and global health perspectives
- Demonstrates effective clinical leadership
- Practices promotion of an open and transparent culture
- Demonstrates up to date practice through learning and teaching
- Demonstrates engagement in career planning
- Demonstrates capabilities in dealing with complexity and uncertainty
- Demonstrates awareness of the role and processes for commissioning

### Documentation required

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| 360° and multi-source feedback       | Applicants should submit evidence of Chemical Pathology practice, for example: <ul style="list-style-type: none"><li>• multi-source feedback (including feedback from patients) or external or peer-review reports</li></ul>   |
| Management and leadership experience | Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality service, including staff management (supported by evidence from clinical director/medical director or equivalent). Evidence could also include letters from Clinical Directors, rotas, course certificates. |

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| Chairing meetings and leading projects  | Applicants should provide evidence of meetings attended, chaired or organised by applicant (supported by letter of confirmation, copies of relevant page from minutes confirming role).  |
| CPD record certificates, certificates of attendance, workshops and at local, national and international meetings or conferences | Applicants may provide the following as evidence of Chemical Pathology practice: <ul style="list-style-type: none"><li>• a portfolio documenting evidence of life-long learning or CPD or CME</li><li>• local, national and international courses, conferences and meetings attended (supported by certificates of attendance for the five most relevant courses, conferences and meetings within specialty and/or practice)</li></ul> |
| Membership of professional bodies and organisations   | Applicants may provide evidence of membership of professional bodies and organisations (supported by certificates of membership certificate(s)).   |

## Curriculum learning outcome 2: Able to deal with ethical and legal issues related to clinical practice.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates awareness of national legislation and legal responsibilities, including safeguarding vulnerable groups
- Demonstrates behaviour in accordance with ethical and legal requirements
- Demonstrates ability to offer apology or explanation when appropriate
- Demonstrates leadership of the clinical and laboratory team in ensuring that medical legal factors are considered openly and consistently
- Demonstrates ability to advise clinicians and other health professionals on medico-legal issues related to pathology

### Documentation required

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| 360° and multi-source feedback       | Applicants should submit evidence of Chemical Pathology practice for example: <ul style="list-style-type: none"><li>• multi-source feedback (including feedback from patients) or external or peer-review reports</li></ul>           |
| Management and leadership experience | Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality service, including staff management (supported by evidence from clinical director/medical director or equivalent). |

Audits undertaken by applicant

Applicants must provide evidence of complete and ongoing internal (e.g. hospital) and external audit activities relevant to specialty and undertaken together with conclusion and effect on practice, (supported by evidence of any published audit, authenticated by the head of department or laboratory manager or equivalent).

For example, you could provide an internal audit within the department, e.g. audit of turnaround times for troponin for acute admission areas versus an external audit (outside the department), which could be an audit of troponin samples and results in acutely admitted patients with ACS against local pathway.

Another external audit could be audit of requesting patterns for HbA1c for diagnosis of diabetes in primary care practices.

You could provide a project report and the documentation, protocols or forms which may have been developed as part of this work. You may also include minutes of meetings where the project was discussed with other teams.

The above are examples of the types of audits we may expect to see but the specific topics are not mandatory.

Reflective diaries

Evidence of a reflective diary or log showing learning achievements as well as a list of courses. This can be alongside reflective reports. Demonstrate what you have learnt and any action plans for improvement.

You may wish to demonstrate personal reflections on cases or learning that have influenced your work.

Advice on reflection and a reflective diary template can be [found here](#).

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| Service Improvement and clinical governance meetings | Applicants should provide evidence of attendance at local or national external quality assurance (EQA) scheme (supported by evidence of participation in quality assurance, e.g. letter, certificate).   |
| Health and safety                                    | Applicants should refer to the Chemical Pathology curriculum and provide the following evidence: <ul data-bbox="920 395 1973 544" style="list-style-type: none"><li>• certificate of good standing</li><li>• disciplinary procedures or adverse outcomes you have been involved in</li><li>• health statement/declaration</li><li>• a portfolio documenting evidence of life-long learning or CPD or CME</li></ul> |

## Curriculum learning outcome 3: Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

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

### Documentation required

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| Colleagues | Applicants should provide evidence of Chemical Pathology practice of the following: <ul style="list-style-type: none"><li>• multi-source feedback (including pathology and non-pathology colleagues) or external or peer-review reports</li><li>• a portfolio documenting evidence of life-long learning or CPD or CME, which could include certificates</li><li>• letters produced by applicants requesting a second opinion</li><li>• letters of appreciation from colleagues regarding involvement in patient</li></ul> |
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|                                      | <p>management</p> <ul style="list-style-type: none"><li>• communications with clinical colleagues advising them or answering questions regarding a report issued</li></ul>   |
| Patients                             | <p>Applicants should provide evidence of Chemical Pathology practice of the following:</p> <ul style="list-style-type: none"><li>• risk assessments</li><li>• handling complaints from patients – please provide the complaint and the response. You may also provide evidence of a hypothetical complaint</li><li>• letters of appreciation from patients</li><li>• multi-source feedback (including feedback from patients) or external or peer-review reports</li></ul> |
| Management and leadership experience | <p>Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality service, including staff management (supported by evidence from clinical director/medical director or equivalent).</p>   |

## Curriculum learning outcome 4: Is focussed on patient safety and delivers effective quality improvement in patient care.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Identifies patient safety as 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
- Applies good practice appropriately
- Contributes to and delivers quality improvement
- Identifies basic Human Factors principles and practice at individual, team, organisational and system levels
- Recognises the importance of non-technical skills and crisis resource management
- Recognises and works within limit of personal competence

### Documentation required

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| Audits undertaken by applicant | <p>Applicants must provide evidence of complete and ongoing internal and external audit activities relevant to specialty and undertaken together with conclusion and effect on practice, (supported by evidence of any published audit, authenticated by the head of department or laboratory manager or equivalent).</p> <p>For example, you could provide an internal audit within the department, e.g. audit of turnaround times for troponin for acute admission areas versus an external audit (outside the department), which could be an audit of troponin samples and results in acutely admitted patients with ACS against local pathway.</p> <p>Another external audit could be audit of requesting patterns for HbA1c for</p> |
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|  | <p>diagnosis of diabetes in primary care practices.</p> <p>You could provide a project report and the documentation, protocols or forms which may have been developed as part of this work. You may also include minutes of meetings where the project was discussed with other teams.</p> <p>The above are examples of the types of audits we may expect to see but the specific topics are not mandatory.</p>                             |
| Reflective diaries                                   | <p>Evidence of a reflective diary or log showing learning achievements as well as a list of courses. This can be alongside with reflective reports. Demonstrate what you have learnt and any action plans for improvement.</p> <p>You may wish to demonstrate personal reflections on cases or learning that have influenced your work.</p> <p>Advice on reflection and a reflective diary template can be <a href="#">found here</a>.</p>  |
| Service Improvement and clinical governance meetings | <p>Applicants should provide evidence of attendance at local or national external quality assurance (EQA) scheme (supported by evidence of participation in quality assurance, e.g. letter).</p>  |
| Health and safety                                    | <p>Applicants should refer to the Chemical Pathology curriculum and provide the following evidence from Chemical Pathology practice:</p> <ul style="list-style-type: none"> <li>• certificate of good standing</li> <li>• disciplinary procedures or adverse outcomes</li> <li>• health statement/declaration</li> <li>• a portfolio documenting evidence of life-long learning or CPD or CME</li> <li>• letters of appreciation</li> </ul> |

## Curriculum learning outcome 5: Carrying out research and managing data appropriately.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Describes and explains principles of research and academic writing
- Describes and explains legal and ethical frameworks underlying research in the UK
- Describes and explains structures supporting health service research
- Demonstrates awareness of sources of finance to support research
- Demonstrates ability to manage clinical information/data appropriately
- Demonstrates ability to carry out critical appraisal of the literature
- Demonstrates ability to design and perform a research project
- Demonstrates ability to follow guidelines on ethical conduct in research and consent for research  
Identifies public health epidemiology and global health patterns

### Documentation required

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| Research papers, grants, patent designs | Applicants can provide evidence of participation in: <ul style="list-style-type: none"><li>• research relevant to current practice, if undertaken, (supported by a summary or abstract of the research if unpublished or, if published, the first page of the relevant published paper)</li></ul> |
| Publications within specialty field     | Applicants can provide evidence of participation in publications (supported by a copy of the first page of all published papers)  |

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| Presentations, poster presentations | Evidence of presenting poster presentations.  |
| Evaluation of research              | <p>Applicants should provide evidence of evaluation of research, e.g.:</p> <ul style="list-style-type: none"> <li>• participation in a departmental Journal Club, including leadership of the discussion about a scientific paper (supported by a copy of the presentation, or minutes of meetings)</li> <li>• acting as a reviewer for a scientific journal (supported by acknowledgement from the Editor)</li> <li>• publication of a review article in a scientific journal (supported by a copy of the first page)</li> </ul> |
| Audits undertaken by applicant      | Applicants can provide evidence of participation in complete and ongoing internal (e.g. hospital) and external audit activities undertaken together with conclusion and effect on practice, (supported by evidence of any published audit, authenticated by the head of department or laboratory manager or equivalent).  |

## Curriculum learning outcome 6: Acting as a teacher and clinical supervisor.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates effective teaching and training to medical students, junior doctors, laboratory staff and other healthcare professionals
- Demonstrates ability to deliver effective feedback to trainees, with appropriate action plan
- Demonstrates ability to effectively supervise healthcare professionals, including medical staff, in earlier stages of training
- Demonstrates ability to act as a clinical supervisor to healthcare professionals, including medical staff, in earlier stages of training

### Documentation required

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| Teaching timetables                            | Applicants must provide evidence of timetables of teaching having worked in appropriate posts, e.g. member of university staff, educational or research supervisor (supported by letter confirming role e.g. from Dean's office or academic head of department or equivalent or timetable of teaching schedule).   |
| Lectures                                       | Applicants must provide evidence of the following: <ul style="list-style-type: none"><li>• involvement in postgraduate Chemical Pathology and other medical specialty teaching and lecturing (supported by letter from clinical director or postgraduate tutor or postgraduate dean or equivalent)</li><li>• research (see <a href="#">Good Clinical Care</a> for examples of evidence required)</li></ul> |
| Feedback or evaluation forms from those taught | Evaluation forms/ feedback in a form of letter/email.  |

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| Letters from colleagues   | Letters confirming role in teaching/supervision activity  |
| Attendance at teaching or appraisal courses                         | <p>Applicants must provide evidence of the following:</p> <ul style="list-style-type: none"> <li>• attendance at relevant teaching courses (supported by certificates of attendance)</li> <li>• talks, presentations or teaching sessions given (supported by most recent evidence of meeting timetables and/or teaching programmes, authenticated by head of department or clinical tutor or postgraduate tutor or equivalent)</li> <li>• appraisal courses</li> </ul> |
| Participation in assessment or appraisal and appointments processes | Applicants may provide evidence of involvement in conducting appraisal of others (supported by letter of confirmation from Chief Executive or Medical Director or others).  |

## Specialty CiPs

### Curriculum learning outcome 7: Able to lead and manage a laboratory.

#### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

#### Descriptors:

- Describes and explains the structure of healthcare laboratories
- Describes and explains relevant legislation, including that related to Health and Safety
- Demonstrates awareness of developments, both scientific and managerial, that may affect the organisation and delivery of pathology services.
- Demonstrates awareness of the costing and financing of pathology services
- Describes and explains principles of methods for biochemical analysis, and of potential interferences
- Demonstrates ability to select appropriate tests and methods for clinical investigation
- Demonstrates understanding of method validation
- Demonstrates ability to effectively use Internal Quality Control and External Quality Assurance information to diagnose and resolve analytical problems
- Describes and explains Laboratory Information Management Systems and other healthcare IT systems, including understanding the legislation surrounding information governance
- Demonstrates ability to work effectively within a multidisciplinary framework within the laboratory
- Demonstrates effective clinical leadership
- Demonstrates ability to work effectively as a member of a multidisciplinary team within pathology, the hospital and the local healthcare economy
- Demonstrates motivation for continual improvement and development of laboratory services

## Documentation required

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| Medical reports                                      | <p>Applicants will need to submit robust evidence of clinical activity to meet the appropriate standards of knowledge, skills and attitudes as defined in the Chemical Pathology curriculum in:</p> <ul style="list-style-type: none"><li>• induction</li><li>• laboratory competencies</li><li>• laboratory management competencies</li><li>• clinical governance and audit competencies</li><li>• competencies in the Chemical Pathology of disease</li><li>• competencies in the interpretation of laboratory data</li><li>• competencies in research and development</li><li>• competencies in direct patient care.</li></ul> |
| Working in multidisciplinary teams                   | <p>Applicants should provide evidence of participation in multidisciplinary or clinicopathological meetings/MDTs, service improvement meetings (supported by evidence of attendance lists, minutes of meetings, action points directly involving the applicant), departmental or directorate meetings (see <a href="#">Good Clinical Care</a> for examples of evidence required).</p>   |
| Service Improvement and clinical governance meetings | <p>Applicants should provide evidence of attendance at local or national external quality assurance (EQA) scheme (supported by evidence of participation in quality assurance, e.g. a letter).</p>  |
| Management and leadership experience                 | <p>Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality service, including staff management (supported by evidence from clinical director/medical director or equivalent).</p>  |

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| Chairing meetings and leading projects | Applicants should provide evidence of meetings attended, chaired or organised by applicant (supported by letter of confirmation and copies of relevant page from minutes confirming role). |
| Data protection                        | <ul style="list-style-type: none"><li>• certificate</li><li>• evidence of course attendance</li></ul>  |

## Curriculum learning outcome 8: Able to use the laboratory service effectively in the investigation, diagnosis and management of disease.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates professional behaviour with regard to patients, laboratory users and laboratory staff
- Describes and explains normal human biochemistry and physiology, and recognises pathological deviations from this
- Recognises and gives appropriate advice on pre-analytical factors which affect biochemical tests
- Describes and explains national and other systems to provide advice on the use of tests and technologies
- Selects appropriate repertoire of tests for the laboratory, according to clinical requirements
- Indicates appropriate turnaround time for investigations, as required for management of individual patients
- Demonstrates ability to effectively advise laboratory users appropriately on the choice of investigations for individual patients
- Uses biochemical and other data effectively to form a differential diagnosis
- Demonstrates ability to effectively advise laboratory users appropriately on the interpretation of laboratory results
- Demonstrates understanding of criticality of some investigations to patient management and has ability to add clarifying tests to assist interpretation and clinical management
- Describes and explains reasoning behind investigational and diagnostic advice clearly to clinicians and to laboratory staff
- Recognises the need to liaise effectively with specialty services and refers where appropriate

### Documentation required

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| Management and leadership experience | Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality service, including staff management (supported by evidence from clinical director/medical director or equivalent). |
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| <p>Laboratory experience</p>   | <p>Applicants will need to submit evidence of experience in the selection, validation and interpretation of laboratory tests, including:</p> <ul style="list-style-type: none"> <li>• experience as Duty Biochemist</li> <li>• liaison with clinicians</li> <li>• participation in Multidisciplinary or clinicopathological meetings/MDTs</li> </ul> <p>Examples of evidence could include:</p> <ul style="list-style-type: none"> <li>• a validated logbook of cases covering the range of conditions seen</li> <li>• medical reports across the breadth of your practice, following the Academy of Medical Royal Colleges and NHS agreed format</li> <li>• communications with clinical colleagues advising them or answering queries regarding a report issued</li> <li>• minutes of MDT meetings</li> <li>• evidence of participation in interpretive EQA, either individually or as part of a team, with evidence of reflection upon performance</li> </ul> |
| <p>Consolidation, cumulative data sheets, summary lists and annual caseload statistics</p> | <p>Applicants will need to submit evidence of departmental statistics in relation to the workload and turnaround time to account for the appropriate standards of knowledge, skills and attitudes as outlined in the chemical pathology curriculum.</p>  |
| <p>Medical reports</p>   | <p>Applicants will need to submit robust evidence of clinical activity to meet the appropriate standards of knowledge, skills and attitudes as defined in the Chemical Pathology curriculum in:</p> <ul style="list-style-type: none"> <li>• induction</li> <li>• laboratory competencies</li> <li>• laboratory management competencies</li> <li>• clinical governance and audit competencies</li> <li>• competencies in the Chemical Pathology of disease</li> <li>• competencies in the interpretation of laboratory data</li> <li>• competencies in research and development</li> <li>• competencies in direct patient care.</li> </ul>   |

## Curriculum learning outcome 9: Able to manage a multi-disciplinary team effectively.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates effective management and team working skills, including influencing, negotiating, continually re-assessing priorities and effectively managing complex, dynamic situations
- Identifies and supports effective continuity and coordination of patient care through the appropriate transfer of information
- Practises patient centred care including shared decision making
- Recognises the importance of prompt and accurate information sharing with the team primarily responsible for the care of the patient

### Documentation required

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| Working in multidisciplinary teams | Applicants should provide evidence of participation in the last year in multidisciplinary clinical teams, multidisciplinary or clinicopathological meetings/MDTs, service improvement meetings; including evidence of leadership of some meetings (supported by evidence of attendance lists, minutes of meetings, action points directly involving the applicant). |
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## Curriculum learning outcome 10: Contributes effectively to the management of medical problems in patients in other specialties.

### Standard expected

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

Descriptors:

- Demonstrates effective consultation skills (including when in challenging circumstances)
- Demonstrates provision of appropriate advice about patients under the care of other specialties
- Demonstrates appropriate and timely liaison with other medical specialty services when required
- Demonstrates the ability to collaborate across specialties in developing and implementing guidelines

### Documentation required

|            |   |
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| Colleagues | Applicants should provide evidence of the following: <ul style="list-style-type: none"><li>• multi-source feedback (including pathology and non-pathology colleagues) or external or peer-review reports</li><li>• a portfolio documenting evidence of life-long learning or CPD or CME</li><li>• letters produced by applicants requesting a second opinion</li><li>• letters of appreciation from colleagues regarding involvement in patient management</li><li>• communications with clinical colleagues advising them or answering questions regarding a report issued</li></ul> |
| Patients   | Applicants should provide evidence of the following: <ul style="list-style-type: none"><li>• risk assessments</li><li>• handling complaints from patients – please provide the complaint and the response. You may also provide evidence of a hypothetical complaint</li><li>• letters of appreciation from patients or patients</li><li>• multi-source feedback (including feedback from patients) or external or</li></ul>  |

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|  | peer-review reports |
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## **Curriculum learning outcome 11: Able to lead and manage a clinical service, including the management of patients in an outpatient clinic, inpatient, ambulatory or community setting, and the management of long-term conditions.**

### **Standard expected**

Applicants will be required to provide evidence that they have attained the minimum standard to be entrusted to act unsupervised in the areas described below.

#### Descriptors:

- Demonstrates professional behaviour with regard to patients, carers, colleagues and others
- Practises patient centred care including shared decision making
- Demonstrates effective consultation skills
- Formulates an appropriate diagnostic and management plan, taking into account patient preferences
- Demonstrates the ability to use evidence-based medicine and remain up to date on national and international guidance in order to provide the most appropriate clinical care
- Demonstrates awareness of the costing and financing of clinical services
- Demonstrates effective management and team working skills in a multidisciplinary environment
- Demonstrates effective leadership of a clinical service
- Demonstrates motivation for continual improvement and development of clinical services
- Describes and explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues
- Demonstrates ability to manage comorbidities in outpatient clinic, ambulatory or community setting
- Identifies patients with limited reversibility of their medical condition and determines palliative and end of life care needs
- Demonstrates effective consultation skills in challenging circumstances
- Demonstrates compassionate professional behaviour and clinical judgement
- Demonstrates awareness of the quality of patient experience
- Recognises and works within limit of personal competence, and refers to other specialties when required

## Documentation required

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| Direct clinical care | <p>Applicants will need to provide evidence of the following:</p> <ul style="list-style-type: none"><li>• Participation in the direct clinical care of patients with conditions across the range of Chemical Pathology, in particular:<ul style="list-style-type: none"><li>○ Lipidology and cardiovascular risk management</li><li>○ Disorders of calcium metabolism, metabolic bone disease and renal stone disease</li><li>○ Nutrition</li><li>○ Diabetes Mellitus (out-patient care)</li><li>○ Inherited Metabolic Disease in adults</li></ul></li><li>• Management and/or development of a clinical service</li></ul> <p>Evidence may include:</p> <ul style="list-style-type: none"><li>• a validated logbook of patients seen with different conditions</li><li>• copies of clinical correspondence</li><li>• medical reports across the breadth of your practice</li><li>• records of management meetings recording service developments.</li></ul> |
| Colleagues           | <p>Applicants should provide evidence of the following:</p> <ul style="list-style-type: none"><li>• multi-source feedback (including pathology and non-pathology colleagues) or external or peer-review reports</li><li>• a portfolio documenting evidence of life-long learning or CPD or CME</li><li>• letters produced by applicants requesting a second opinion</li><li>• letters of appreciation from colleagues regarding involvement in patient management</li><li>• communications with clinical colleagues advising them or answering questions regarding a report issued</li></ul>  |

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| Patients                               | <p>Applicants should provide evidence of the following:</p> <ul style="list-style-type: none"> <li>• risk assessments</li> <li>• handling complaints from patients – please provide the complaint and the response. You may also provide evidence of a hypothetical complaint</li> <li>• letters of appreciation from patients or patients</li> <li>• letters of appreciation from patients or patients</li> <li>• multi-source feedback (including feedback from patients) or external or peer-review reports</li> </ul> |
| Working in multidisciplinary teams     | <p>Applicants should provide evidence of participation in multidisciplinary clinical teams, multidisciplinary or clinicopathological meetings/MDTs, service improvement meetings (supported by evidence of attendance lists, minutes of meetings, action points directly involving the applicant).</p>  |
| Management and leadership experience   | <p>Applicants must provide evidence of management activities, e.g. developing, delivering and managing a high-quality clinical service, including staff management (supported by evidence from clinical director/medical director or equivalent).</p>   |
| Chairing meetings and leading projects | <p>Applicants should provide evidence of meetings attended, chaired or organised by applicant (supported by letter of confirmation, copies of relevant page from minutes confirming role).</p>  |
| Honesty and integrity                  | <p>Applicants should refer to the Chemical Pathology curriculum and can provide evidence of Chemical Pathology:</p> <ul style="list-style-type: none"> <li>• certificate of good standing</li> <li>• disciplinary procedures or adverse outcomes</li> <li>• health statement/declaration</li> <li>• a portfolio documenting evidence of life-long learning or CPD or CME</li> <li>• letters of appreciation</li> </ul>  |

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| Understanding your limitations/capabilities  | Demonstrating awareness of your own limitations and understanding when and who to refer on to or seek professional advice from. Reflection on limitations and capabilities.  |
| Equality and human rights (including disability, human rights, race, religion and ethnicity awareness and equal opportunities) | Suggested evidence could be: <ul style="list-style-type: none"><li>• a personal reflection about your work</li><li>• any learning needs you have identified and reflection on your learning</li><li>• equality and diversity training certificates</li><li>• multi-source feedback</li></ul> |
| Data protection  | <ul style="list-style-type: none"><li>• certificate</li><li>• evidence of course attendance</li></ul>  |