The Royal College of Pathologists

Pathology: the science behind the cure

Curriculum for specialty training in Paediatric and Perinatal Pathology

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INTRODUCTION

Paediatric and perinatal pathology in the UK is a CCT specialty in its own right. The specialty requires a component of basic histopathology training (at least satisfactory completion of Stages A and B) encompassing surgical pathology, autopsy and cytopathology. This curriculum replaces the previous approved subspecialty curriculum of paediatric and perinatal pathology.

The award of the Certificate of Completion of Training (CCT) or the Certificate of Eligibility for Specialist Registration (CESR) through the Combined Programme (CP) route will require evidence of satisfactory completion of training in both *Good Medical Practice* and the core aspects of paediatric and perinatal pathology training, which are outlined in this curriculum. Doctors who are applying for entry to the Specialist Register via the award of a Certificate of Eligibility for Specialist Registration (CESR) will be evaluated against the *Good Medical Practice* and core aspects of the curriculum.

The curriculum and assessment system meets the General Medical Council's (GMC) Standards for Curricula and Assessment Systems (revised April 2010). In addition, the curriculum complies with the training framework *A Reference Guide for Postgraduate Specialty Training in the UK, The Gold Guide*, Section 7.

For trainees with an NTN or NTN(A) in an approved UK training programme, the curriculum is integrated with and supported by the following documents in order to produce a coordinated training package for the award of the CCT. The relevant package includes:

- a blueprint for the paediatric and perinatal pathology training assessment system (this demonstrates how the College assessments and examinations test the structure of the curriculum)
- regulations and guidelines for workplace-based assessment
- information regarding multi-source feedback
- information regarding the Year 1 Histopathology Assessment
- regulations and guidelines for Fellowship exams
- access to e-learning mapped to the histopathology curriculum
- a competency-based framework for graded responsibility
- access to the Learning Environment for Pathology Trainees (LEPT) which provides an electronic means of recording progress in training
- Annual Review of Competence Progression (ARCP) guidance

Transitional arrangements for existing subspecialty trainees to be able to transfer to the new curriculum will be made available separately.

Doctors applying for a CESR in paediatric and perinatal pathology training must be able to demonstrate equivalence to the requirements for the award of a paediatric and perinatal pathology CCT. Such doctors are strongly advised to read the information available on the GMC website. In addition, the following guidance is available from the College and should also be carefully followed in the preparation of a CESR application:

- general guidance on evidence to submit with applications for a CESR (Article 14) in paediatric and perinatal pathology training (specialty-specific guidance)

- guidance for CESR applicants in specialties and subspecialties overseen by The Royal College of Pathologists
- CESR curriculum vitae guidance.

Entry requirements

Trainees are eligible for entry to a paediatric and perinatal pathology training programme at ST3 level following satisfactory completion of at least Stages A and B of the histopathology programme including passes in the Year 1 Histopathology assessment and Part 1 FRCPath examination i.e. normally at ST3 level. They are also eligible to enter the programme immediately following satisfactory completion of a UK foundation training programme or after demonstrating equivalent competencies, although actual training in paediatric pathology will not commence until ST3; the training up to that point will be the same as for histopathology. Information regarding entry to ST1 training schools in England and Wales is available from the NHS Histopathology Training Schools. Scottish and Northern Irish ST1 trainees do not enter specific training schools, but the programme is otherwise identical.

Duration of training

The Royal College of Pathologists anticipates that three years would normally be required satisfactorily to complete the paediatric & perinatal pathology curriculum plus two to two and a half years of general histopathology training (see below) to the required depth and breadth and achieve a CCT or CESR(CP). The minimum duration of training as identified in Schedule 3 of the General and Specialist Medical Practice (Education, Training and Qualification) Order 2003 is four years.

The CCT in paediatric and perinatal pathology will be awarded on the recommendation of The Royal College of Pathologists following:

- evidence of satisfactory completion of the paediatric and perinatal pathology curriculum and the minimum training period
- satisfactory outcomes in the requisite number of workplace-based assessments (including multi-source feedback)
- attainment of the College's Year 1 Histopathology Assessment
- FRCPath by examination in paediatric and perinatal pathology
- acquisition of Annual Review of Competence Progression (ARCP) outcome 6.

Further detailed information about the annual progression points including assessment requirements that will enable progression at each ARCP, as well as the completion of the CCT or CESR(CP) is available on the College website.

STAGES OF TRAINING AND LEARNING

The curriculum is divided into four stages, A–D. Stage A and B is in general histopathology training. Training in paediatric and perinatal pathology begins in stage C. Trainees may not progress to the next stage of training until they have satisfactorily completed the preceding stage. Trainees should gain appropriate experience within their programme to achieve all necessary curricular objectives.

Throughout training, trainees should maintain a training portfolio; this is available online in the form of the RCPath Learning Environment for Pathology Trainees (LEPT).

Stage A

Stage A of training is 12 months whole-time equivalent.

The aims of this stage are to provide:

- a structured introduction to histopathology (including cytopathology and autopsy pathology)
- a short practical introduction to paediatric pathology (either stage A *or* B, recommended 2 weeks total)
- a short practical introduction to neuropathology (either stage A *or* B, recommended 2 weeks total).

Competences required to exit stage A:

- independent cut-up of most simple specimens (e.g. appendicectomy, cholecystectomy, skin biopsies, etc.)
- independent cut-up of common larger specimens (e.g. colectomy for cancer, simple nephrectomy, breast lumpectomy, etc.)
- ability to write an appropriate report for a wide range of histopathology and cytopathology specimens (common biopsies, common cancer resections, e.g. colorectal carcinoma, fine needle aspiration specimens)
- ability to demonstrate time management and task prioritisation (e.g. prioritisation of specimens for cut-up and reporting, timely turn-around of reporting histopathology or cytopathology specimens, keeping LEPT entries up to date)
- independent evisceration and dissection of a straightforward autopsy
- ability to write an autopsy report including appropriate clinicopathological correlation for a straightforward case.

Minimum practical experience:

• surgical histopathology	500 cases
• cytopathology	150 cervical and 150 non-cervical cytopathology cases, which may either be new screening or diagnostic cases, or be seen in the context of teaching sets with appropriate structured feedback from an experienced trainer
• autopsy pathology	20 autopsies
• audit	completion of 1 audit.

Assessments:

• workplace-based assessments	18 in total, 12 directed (see Appendix 6)
• multi-source feedback	1 completed and satisfactory
• year 1 assessment	pass
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (1 or 2).

Stage B

Stage B of training is a minimum of 12 months and a maximum of 18 months whole time equivalent, unless extended training is required.

The aims of this stage are to:

- broaden experience and understanding of histopathology
- broaden understanding of subspecialty pathology including all subspecialties
- provide a short practical introduction to paediatric pathology (either stage A *or* B, recommended 2 weeks total)
- provide a short practical introduction to neuropathology (either stage A *or* B, recommended 2 weeks total)
- develop a basic knowledge base in cytopathology and autopsy pathology.

Competencies required to exit stage B:

- independent cut-up of all simple specimens (see above for examples)
- independent cut-up of all common larger specimens (including mastectomy, prostatectomy, complex hysterectomy specimens, etc)
- ability to primary screen cervical samples
- ability to write an appropriate report for a wide range of histopathology and cytopathology specimens (including more complex specimens than those described for stage A above)
- ability to demonstrate effective time management and task prioritisation
- independent evisceration and dissection of more complex autopsies (see those described as 'Complex post-mortems for observation' in stage A curriculum content, page 37)
- ability to write an autopsy report including appropriate clinicopathological correlation for a more complex case (as described above).

Minimum practical experience (based on 12 months spent in stage; increased pro rata for extended stage):

• surgical histopathology	750 cases
• cytopathology	200 cervical and 200 non-cervical cytopathology cases, which may either be new screening or diagnostic cases, or be seen in the context of teaching sets with appropriate structured feedback from an experienced trainer
• educational supervisor's report	20 adult autopsies, 2 paediatric/ perinatal autopsies
• ARCP	satisfactory outcome (1 or 2).

Assessments:

• workplace-based assessments	18 in total, 12 directed (see Appendix 6)
• FRCPath Part 1	pass (can be attempted any time after entry to stage b)
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (1 or 2).

Stage C

Stage C of training is 24 months in duration, unless extended training is required.

The aims of this stage are

- To develop increasing levels of confidence and the ability to work in appropriate contexts without direct supervision in paediatric and perinatal pathology including competencies required to exit stage C
- Independent cut-up of all specimens
- Ability to report most paediatric histopathology specimens
- Ability appropriately to refer for specialist/second opinion
- Ability to demonstrate appropriate time management and task prioritisation for the stage of training

Minimum practical experience (per 12 month period in stage: increased pro rata for extended stage)

• Paediatric surgical histopathology	1000 cases
• Autopsy	100 cases including early fetal loss, intrauterine deaths, neonatal, infant and child deaths
• Audit	Completion of 1 audit during stage

Assessments

• workplace-based assessments	18 in total, 12 directed (during stage)
• Multi-source feedback	1 completed (during year 3) and satisfactory
• FRCPath Part 2	Pass (earliest opportunity at 21 months in stage)
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (1 or 2).

Stage D

Stage D of training is a minimum of 12 months whole time equivalent.

In order to complete stage D of paediatric and perinatal pathology training, trainees must have:

- satisfactorily completed a total of at least 60 months of training (whole-time equivalent
- satisfactorily completed all areas of the paediatric and perinatal pathology curriculum

The aims of this stage are achieved by following a specific training plan to be formulated by the local Training Committee and require trainees to:

- demonstrate a level of knowledge and skill consistent with practice as a consultant in that specialty in the National Health Service
- demonstrate the ability to report independently
- explore specialist interest or more in-depth general reporting
- develop experience of teaching paediatric and perinatal pathology trainees

- develop experience of involvement in MDTs
- demonstrate evidence of the above achievements in a training portfolio

Competencies required to exit stage D (which must show development beyond stage C):

- to demonstrate a level of knowledge and skill consistent with practice as a consultant in Paediatric & Perinatal Pathology in the National Health Service
- to demonstrate the ability to report independently
- to explore specialist interest or more in-depth general reporting to develop experience of teaching paediatric & perinatal pathology trainees
- to develop experience of involvement in MDTs
- to demonstrate evidence of the above achievements in a training portfolio

Practical experience per 12-month period in stage (increased pro rata for extended stage):

• Paediatric surgical histopathology	1000 cases suggested (dependent on specialist interest)
• Autopsy	100 cases
• Audit	Completion of 1 audit during stage

Assessments

• workplace-based assessments	12 in total (all directed in training plan, see Appendix 6)
• Multi-source feedback	1 completed (during year 5) and satisfactory
• FRCPath Part 2	Pass (earliest opportunity at 21 months in stage)
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (6).

Training programmes

Training programmes will be quality assured by the GMC. Training posts and programmes will be recommended for approval by the relevant Postgraduate Deanery with input from The Royal College of Pathologists.

Training programmes should include suitable rotational arrangements to cover all the necessary areas of the curriculum and an appropriate balance between teaching hospitals, district general hospitals and specialist units, such that each trainee gains the breadth of training required for satisfactory completion of the curriculum. The exact rotational arrangements will vary according to the size of the departments in the various training hospitals, the number of placements on the training scheme and the number of other trainees on the training programme. The training programme should be organised in such a way as to give each trainee some experience in most recognised areas of subspecialisation.

The structure and operation of the training programme is the responsibility of a Specialty Training Committee (STC), which will ensure that every trainee is provided with an appropriate range of educational experience to complete their training.

The local programme director is responsible for the overall progress of the trainee and will ensure that the trainee satisfactorily covers the entire curriculum by the end of the programme.

Each trainee should have an identified educational supervisor at every stage of their training. The educational supervisor is the consultant under whose direct supervision the trainee is working. A trainer is any person involved in training the trainee [e.g. consultant, clinical scientist, senior biomedical scientist (BMS)]. A trainee may be trained by a number of trainers during their training.

If there is a breakdown of relationship between a trainee and their educational supervisor, the trainee should, in the first instance seek advice from their training programme director. If the matter is not resolved to the trainee's satisfaction, then he/she should seek further advice from the head of pathology school. As a last resort, trainees can seek advice from the College through the appropriate College specialty advisors.

Training regulations

This section of the curriculum outlines the training regulations for paediatric pathology. In line with the GMC, this reflects the regulation that only training that has been prospectively approved by the GMC can lead towards the award of the CCT. Training that has not been prospectively approved by the GMC can still be considered but the trainee's route of entry to the Specialist Register changes to CESR through the CP route.

Less than full-time training

Less than full-time training is the term used to describe doctors undertaking training on a basis that is less than full-time, normally between five and eight sessions per week. The aim of less than full-time training is to provide opportunities for doctors in the NHS who are unable to work full time. Doctors can apply for less than full-time training if they can provide evidence that 'training on a full-time basis would not be practicable for well-founded individual reasons'.

Less than full-time trainees must accept two important principles:

- part-time training shall meet the same requirements (in depth and breadth) as full-time training
- the total duration and quality of part-time training of specialists must be not less than those of a full-time trainee.

In other words, a part-time trainee will have to complete the minimum training time for their specialty pro rata.

Prior to beginning their less than full-time training, trainees must inform the Training Department at The Royal College of Pathologists in order that the Pre/Perinatal/Paediatric Pathology SAC can ensure that their less than full-time training programme will comply with the requirements of the CCT. The documentation towards a less than full-time training application will be collected and checked to ensure compliance and a revised provisional CCT date issued. It must also be ensured that the less than full-time training post is approved as part of a GMC approved training programme. Separate guidance and an application form are available on the College website for this purpose.

Time Out of Training

The GMC have provided guidance on the management of absences from training and their affect on a trainee's Certificate of Completion of Training (CCT) date. The GMC guidance states that, from 1 April 2013, within each 12 month period where a trainee has been absent for a total of 14 days or more (when a trainee would normally be at work), a review to determine if the trainee's CCT date should be extended is triggered. The absence includes all forms of absence such as sickness, maternity, compassionate paid/unpaid leave etc but does not include study or annual leave or prospectively approved Out of Programme Training/ research. The administration of the absence and any extension to training will be undertaken by the relevant deanery in consultation with the relevant College/Faculty where necessary. The GMC support Deaneries implementing this guidance flexibly to reflect the nature of the absence, the timing and the affect of the absence on the individuals' competence. Each trainee's circumstances is to be considered on an individual basis and that any changes to CCT date will reflect the trainee's demonstration of competence.

Research

Some trainees may wish to spend a period of time in research after entering paediatric and perinatal pathology training as out-of-programme research (OOPR).

Research undertaken prior to entry to a paediatric and perinatal pathology training programme

Trainees who have undertaken a period of research that includes *clinical work directly relevant to* the paediatric and perinatal pathology curriculum prior to entering a paediatric and perinatal pathology training programme can have this period recognised towards an entry on the Specialist Register. However, as the research is unlikely to have been prospectively approved by GMC, their route of entry to the Specialist Register will be through the CESR.

Research undertaken during a paediatric and perinatal pathology training programme

Trainees who undertake a period of out-of-programme research (OOPR) after entering a paediatric and perinatal pathology training programme and obtaining their National Training Number (NTN) can have up to 1 year accepted by the Pre/Perinatal/Paediatric Pathology Specialty Advisory Committee (SAC) towards their CCT. In order to be eligible to have this period of research recognised towards the award of the CCT, trainees must have their OOPR approved prospectively by the GMC before beginning their research. **Prior to beginning the period of research, trainees must agree the OOPR with their Deanery and inform the Training Department at The Royal College of Pathologists in order that the Pre/Perinatal/Paediatric Pathology SAC can ensure that the trainee will comply with the requirements of the CCT programme**. The period of research must include clinical work directly relevant to the paediatric and perinatal pathology curriculum. The documentation towards a CCT recommendation will be collected by the Training Department at the College, checked to ensure compliance and a revised provisional CCT date issued. It must be ensured that, following deanery agreement and acceptance from the Pre/Perinatal/Paediatric Pathology SAC, the GMC prospectively approve the OOPR in order that the period can count towards a CCT. Separate guidance and an application form are available on the College website for this purpose.

Academic trainees

Trainees who intend to pursue a career in academic or research medicine may undertake specialist training in paediatric and perinatal pathology. Such trainees will normally be clinical lecturers and hold an NTN(A). It is expected that such trainees should complete the requirements of the paediatric and perinatal pathology curriculum in addition to their academic work. However, the content of their training, while meeting the requirements of the curriculum, will have to take into account their need to develop their research and the provisional CCT date should be amended accordingly. NTN(A) holders in paediatric and perinatal pathology should consult the Training Department at the College on an individual basis with regard to the agreement of their provisional CCT date.

Overseas training

Overseas training undertaken prior to entry to a paediatric and perinatal pathology training programme

Some trainees may have undertaken a period of paediatric and perinatal pathology training overseas prior to entering a paediatric and perinatal pathology training programme in the UK. Such trainees must enter a histopathology training programme at ST1. Trainees can have this period recognised towards an entry on the Specialist Register but their route of entry to the Specialist Register will be through the CESR.

Overseas training undertaken during entry to a paediatric and perinatal pathology training programme

Some trainees may wish to spend a period of training overseas as out-of-programme training (OOPT) after entering a paediatric and perinatal pathology training programme in the UK. **In order to be eligible to have this period of training recognised towards the award of the CCT, trainees must have their OOPT overseas training approved prospectively by the GMC before beginning their overseas training.** Prior to beginning the period of overseas training, trainees must agree the OOPT with their Deanery and inform the Training Department at The Royal College of Pathologists that they will be undertaking overseas training in order that the Pre/Perinatal/Paediatric Pathology SAC can ensure that the trainee will comply with the requirements of the CCT programme. The documentation towards a CCT recommendation will be collected by the

Training Department at the College, checked to ensure compliance and a revised provisional CCT date issued. It must be ensured that, following Deanery agreement and acceptance from the Pre/Perinatal/Paediatric Pathology SAC, the GMC prospectively approves the OOPT in order that the period can count towards a CCT. Separate guidance and an application form are available on the College website for this purpose.

Related clinical training

During their paediatric and perinatal pathology training, some trainees may wish to spend a period of training in a related clinical specialty such as paediatrics, neurology or oncology, etc. This is acceptable and should be undertaken as out of programme clinical experience (OOPE). However, such a period of training – although useful to the individual trainee in broadening their understanding of the relationship between paediatric and perinatal pathology and the clinical specialties – will not be approved by the SAC towards the requirements of the CCT.

RATIONALE

Purpose of the curriculum

The purpose of the curriculum for specialty training in paediatric and perinatal pathology is to set the standards required by The Royal College of Pathologists and the GMC for attainment of the award of the CCT or CESR(CP) in paediatric and perinatal pathology and to ensure that trainees are fully prepared to provide a high quality service at consultant level in the NHS. In addition, the curriculum also sets the standards against which CESR applicants will be judged.

The educational programme provides:

- experience of the diagnostic techniques required to become technically competent in practical work, and to master the underlying analytical and clinical principles
- the opportunity to gain knowledge of specialist areas such as forensic pathology, and paediatric neuropathology, in order to be able to make appropriate referrals for specialist advice
- training in the communication and teaching skills necessary for effective practice
- the opportunities to develop to the required standard the ability to provide specialist opinion in paediatric & perinatal pathology
- opportunities to acquire the management skills to lead a department providing an effective service
- experience of research and development projects and critical assessment of published work so as to contribute in a team and individually to the development of the service
- the framework for continued professional development (CPD) including life-long habits of reading, literature searches, consultation with colleagues, attendance at scientific meetings and the presentation of scientific work
- practical experience of clinical governance and audit (specialist and multidisciplinary) through evaluation of practice against the standards of evidence-based medicine.

In Paediatric & Perinatal pathology, trainees must become familiar with the lines of accountability, quality improvement programmes, clinical audit, evidence-based practice, clinical standards and guidelines, managing risk and quality assurance programmes. Training in these areas will continue throughout all stages of the curriculum. The award of a CCT or CESR(CP) will indicate suitability for independent professional practice. During training, trainees will be able to use the curriculum and feedback from assessments to monitor their progress towards this goal. All assessments and examinations will be based on curricular objectives and competencies.

Aims and objectives

On completion of the Paediatric & Perinatal pathology training programme, the trainee must have acquired and be able to demonstrate:

- Proficiency in diagnostic surgical pathology techniques in the investigation of disease in the fetus and child
- Proficiency in the autopsy examination of fetus, stillbirths, infants and children
- The ability to provide specialist opinion in paediatric & perinatal pathology

The award of a CCT or CESR(CP) will indicate suitability for independent professional practice as a consultant Paediatric & Perinatal Pathologist. During training, trainees will be able to use the curriculum and feedback from assessments to monitor their progress towards this goal. All assessments and examinations will be based on curricular objectives and competencies.

Curriculum development

This curriculum was originally developed in 2005 (with subsequently review and amendments made in 2007 and 2008) by the Histopathology CATT and the Curriculum Review Group, with input from the Specialty Advisory Committees (SAC) Paediatric Pathology Examination Panel of The Royal College of Pathologists, who have also had the same input into this version. In addition, the College's Lay Advisory Committee (LAC) and Trainee Advisory Committee (TAC) were consulted and a draft version of the curriculum was published on the College website for consultation with College Fellows and Registered Trainees.

Lay representation is included in all College committees related to education and training. Patient groups were consulted during the process of applying for specialty status for paediatric and perinatal pathology.

The content of this curriculum was derived from current UK hospital practice in paediatric and perinatal pathology. Educational supervisors and trainees were involved in its development via their representation on various College committees such as the Histopathology CATT, SAC on paediatric and perinatal pathology, and the Trainees Advisory Committee (TAC).

This version of the curriculum is designed to be trainee-focused and to allow trainees to take control of their own learning and to measure achievement against objectives. It will help in the formulation of a regularly updated education plan in conjunction with an educational supervisor and the local specialty training committee.

The curriculum was agreed the GMC on 19 October 2012 and formally published in February 2013.

CONTENT OF LEARNING

The curriculum details the level of knowledge and its application, skill and professional behaviour that a trainee should acquire and demonstrate in practice to provide a high quality service at consultant level in the NHS. The professional practice aspect of the curriculum aims to ensure that doctors in the NHS trained to the Royal College of Pathologists' curriculum in paediatric and perinatal pathology are competent practitioners, partners and leaders. It also aims to ensure an understanding of issues of inequality around health and healthcare. Doctors must take the opportunity positively to influence health determinants and to combat inequalities.

The general professional and specialty-specific content of the curriculum is outlined below.

1. Basic knowledge and skills
2. Clinical in paediatric and perinatal pathology including surgical pathology and autopsy
3. Subspecialist areas of in paediatric and perinatal pathology.
4. Generic skills required for in paediatric and perinatal pathology, in accordance with *Good Medical Practice* (see Appendix 7).

The curriculum outlines the knowledge, skills, behaviours and expertise that a trainee is expected to obtain in order to achieve the award of the CCT.

For training in ST3–5, it is expected that every trainee should undertake the core training outlined in pages 58 - 96 but it is recognised that the sequencing of learning and experience will differ according to the programme. The curriculum maps components of *Good Medical Practice* against the clinical components of in paediatric and perinatal pathology. The recommended learning experiences are listed on page 19 - 20.

The Royal College of Pathologists is committed to supporting self-care, promoting well-being and community engagement, prevention and early intervention with services designed around the patient/service user rather than the needs of the patient/service user being obliged to fit with the services offered. Therefore, the following common core principles of self-care are supported:

These are:
Principle 1: Empower people service users to make informed choices to manage their condition and care needs effectively
Principle 2: Communicate effectively to enable service users to develop confidence in their self-care skills
Principle 3: Enable and support service users to use technology to support self-care
Principle 4: Enable and support service users to develop skills in self-care
Principle 5: Enable and support service users to participate in service planning and to access support networks.

Further details are available in *Supporting People with Long Term Conditions to Self Care: A guide to developing local strategies and best practice* (2005).

Upon satisfactory completion of the paediatric and perinatal pathology training programme, the trainee must have acquired and be able to demonstrate:

- appropriate professional behaviour to be able to work as a consultant
- good working relationships with colleagues and the appropriate communication skills required for the practice of paediatric and perinatal pathology
- the knowledge, skills and attitudes to act in a professional manner at all times
- the knowledge, skills and behaviours to provide appropriate teaching and to participate in effective research to underpin paediatric pathology practice
- an understanding of the context, meaning and implementation of clinical governance
- a knowledge of the structure and organisation of the NHS
- management skills required for the running of a paediatric and perinatal pathology laboratory
- familiarity with health and safety regulations, as applied to the work of a paediatric and perinatal pathology department.

Purpose of assessment

The Royal College of Pathologists' mission is to promote excellence in the practice of pathology and to be responsible for maintaining standards through training, assessments, examinations and professional development.

The purpose of The Royal College of Pathologists' assessment system in paediatric and perinatal pathology is to:

- indicate suitability of choice at an early stage of the chosen career path
- indicate the capability and potential of a trainee through tests of applied knowledge and skill relevant to the specialty
- demonstrate readiness to progress to the next stage(s) of training having met the required standard of the previous stage
- provide feedback to the trainee about progress and learning needs
- support trainees to progress at their own pace by measuring a trainee's capacity to achieve competencies for their chosen career path
- help to identify trainees who should change direction or leave the specialty
- promote and encourage learning
- enable the trainee to collect all necessary evidence for the ARCP
- gain Fellowship of The Royal College of Pathologists
- provide evidence for the award of the CCT
- assure the public that the trainee is ready for and capable of unsupervised professional practice.

A blueprint of the paediatric and perinatal pathology assessment system is available on the GMC website.

Methods of assessment

Trainees will be assessed in a number of different ways during their training. Satisfactory completion of all assessments and examinations will be monitored as part of the ARCP process and will be one of the criteria upon which eligibility to progress will be judged. Passes in the Year 1 paediatric and perinatal pathology Assessment and the FRCPath examination are required as part of the eligibility criteria for the award of the CCT.

Year 1 Histopathology Assessment

Trainees must pass the Year 1 Histopathology Assessment as one of the requirements for satisfactory completion of Stage A of training.

Workplace-based assessment

Trainees will be expected to undertake workplace-based assessment throughout their training in paediatric and perinatal pathology. In general, workplace-based assessments are designed to be formative in nature; as such they are best suited to determine educational progress in different contexts. To this end, it is strongly recommended that workplace-based assessment be carried out regularly throughout training to assess and document a trainee's progress. However, a minimum number of 'satisfactory' workplace-based assessments should be completed during each stage of training.

These will include:

- case-based discussion (CbD)
- directly observed practical skills (DOPS)
- evaluation of clinical events (ECE)
- multi-source feedback (MSF) (minimum of 3 during training).

Specific guidance for each stage and the optional packages of training is provided in Appendix 6.

Further separate guidance is provided about the method and required frequencies of these assessments.

FRCPath examination

The major summative assessments will occur during Stage B (FRCPath Part 1 examination in histopathology) and towards the end of Stage C (FRCPath Part 2 examination in paediatric pathology).

The results of workplace-based assessments and examinations are evaluated by the SAC on paediatric and perinatal pathology with the Training Department as part of their role in monitoring training. Examination results are evaluated after each session and an annual review of validity and reliability is undertaken and reported to the Examinations Committee.

EVIDENCE OF COMPETENCE

Annual Review of Competence Progression (ARCP)

The ARCP is an annual opportunity for evidence gathered by a trainee, relating to the trainee's progress in the training programme, to document the competences that are being gained. Evidence of competence will be judged based on a portfolio of documentation, culminating in an Educational Supervisors Structured Report.

Separate ARCP guidance is available on the College website. A copy of all ARCP forms issued to the trainee must be provided to The Royal College of Pathologists prior to recommendation for the award of the CCT. Lack of progress, identified by the issue of an ARCP outcome 3 or 5 and necessitating additional training to rectify deficiencies will lead to the extension of training. Training leading to the issue of an ARCP 3 or 5 and necessitating additional training will not be recognised towards the award of the CCT. Evidence of ARCP outcome 6 is required as part of the evidence for the award of the CCT.

MODELS OF LEARNING

The models of learning can be applied to any stage of training in varying degrees. Most of the curriculum will be delivered through work-based experiential learning, but the environment within the department should encourage independent self-directed learning and make opportunities for relevant off-the-job education by making provision for attendance at local, national and, where appropriate, international meetings and courses.

Independent self-directed learning should be encouraged by, for example, making use of the e-learning tool or providing reference text books etc. It is the trainee's responsibility to seek opportunity for experiential learning. The rotas should also be arranged in such a way that trainees have time available for participation in research projects as part of their training. More academically inclined trainees will be encouraged to take time out from the training time to include a more sustained period of grant-funded research, working towards an MD or PhD. Learning for knowledge, competence, performance and independent action will be achieved by assessment and graded responsibility for reporting, allowing trainees at various stages of training to acquire responsibility for independent reporting. Assessment will be set by The Royal College of Pathologists in the form of workplace-based assessment including multi-source feedback and the FRCPath examination.

LEARNING EXPERIENCES

The following teaching/learning methods will be used to identify how individual objectives will be achieved.

a. **Routine work:** the most important learning experience will be day-to-day work. Histopathology and paediatric and perinatal pathology trainees are amongst the most closely supervised groups in postgraduate medical training. This close supervision allows frequent short episodes of teaching, which may hardly be recognised as such by trainees.
b. **Textbooks:** histopathology/paediatric pathology departments have a wide range of reference texts available. These allow trainees to 'read around' routine cases that they are reporting. Histopathology and paediatric and perinatal pathology are subjects requiring a great deal of

background learning and reading, as well as the practical experience gained within day-to-day working, and trainees should take every advantage to 'read around' their subject.

c. **Private study:** more systematic reading of textbooks and journals will be required in preparation for examinations.
d. **'Black box' and other departmental teaching sessions:** these occur on a regular basis in most departments.
e. **Regional training courses:** these are valuable learning opportunities. Trainees should be released from service duties to attend.
f. **National training courses:** these are particularly helpful during preparation for the FRCPath Part 2 examination. In addition to providing specific teaching, they also allow trainees to identify their position in relation to the curriculum and their peers.
g. **Scientific meetings:** research and the understanding of research are essential to the practice of histopathology and paediatric and perinatal pathology. Trainees should be encouraged to attend and present their work at relevant meetings.
h. **Discussion with BMS:** BMS staff can provide excellent training, particularly in relation to laboratory methods, health and safety, service delivery, procurement and human resources.
i. **Multidisciplinary team meetings (MDTs):** attendance at and contribution to MDTs and clinicopathological conferences offers the opportunity for trainees to develop an understanding of clinical management and appreciate the impact of histopathological diagnosis on patient care. The MDT is also an important arena for the development of inter-professional communication skills.
j. **Attachment to specialist departments:** attachments of this kind will be required if a training programme cannot offer the full range of specialist experience needed to complete the curriculum. They will also be beneficial for those trainees in their final year of training who wish to develop a special interest before taking up a consultant post.
k. **E-learning.**

SUPERVISION AND FEEDBACK

Specialist training must be appropriately supervised by the senior medical and scientific staff on a day-to-day basis under the direction of a designated educational supervisor and an STC that links to the appropriate Postgraduate Deanery.

Supervision has more than one meaning in paediatric and perinatal pathology. Trainees will work under consultant supervision in the surgical pathology and autopsy services, gradually widening their knowledge and experience in each area so that by the time they have passed the FRCPath Part 2 examination they are able to work largely independently. The day-to-day supervised training will be supplemented by more formal teaching such as 'black box' sessions and on regionally and nationally organised training courses (see above).

If a histopathology or paediatric and perinatal pathology report generated by the trainee states that they have been supervised by a consultant, this is usually taken to mean that the consultant has examined that report with the trainee. It also implies that the consultant accepts not only the microscopic but also any macroscopic description as accurate, even if the supervisor has not personally reviewed the specimen. However, there is also a more general level of supervision in day-to-day work. A trainee may ask for assistance at any time if a specimen with whom they are dealing is unfamiliar or unusual. In the mortuary, a trainee competent in basic autopsy practice will be able to seek advice if an unusual or unexpected finding is encountered. Supervision also extends to working relationships and communication within and beyond the pathology department.

Educational supervision is a fundamental conduit for delivering teaching and training in the NHS. It takes advantage of the experience, knowledge and skills of educational supervisors/trainers and their familiarity with clinical situations. It ensures interaction between an experienced clinician and a doctor in training. This is the desired link between the past and the future of medical practice, to guide and steer the learning process of the trainee.

Clinical supervision is also vital to ensure patient safety and the high quality service of doctors in training.

The College expects all doctors reaching the end of their training to demonstrate competence in clinical supervision before the award of the CCT. The College also acknowledges that the process of gaining competence in supervision starts at an early stage in training with foundation doctors supervising medical students and specialty registrars supervising more junior trainees.

The role of the educational supervisor is to:

- have overall educational and supervisory responsibility for the trainee in a given post
- ensure that the trainee is familiar with the curriculum relevant to the year/stage of training of the post
- ensure that the trainee has appropriate day-to-day supervision appropriate to their stage of training
- ensure that the trainee is making the necessary clinical and educational progress during the post
- ensure that the trainee is aware of the assessment system and undertakes it according to requirements
- act as a mentor to the trainee and help with both professional and personal development
- agree a training plan (formal educational contract) with the trainee and ensure that an induction (where appropriate) has been carried out soon after the trainee's appointment
- discuss the trainee's progress with each trainer with whom a trainee spends a period of training
- undertake regular formative/supportive appraisals with the trainee (two per year, approximately every 6 months) and ensure that both parties agree to the outcome of these sessions and keep a written record
- regularly inspect the trainee's training record, inform trainees of their progress and encourage trainees to discuss any deficiencies in the training programme, ensuring that records of such discussions are kept
- keeps the STC Chair informed of any significant problems that may affect the individual's training.

In order to become an educational supervisor, a consultant must have a demonstrated interest in teaching and training, appropriate access to teaching resources, be involved in and liaise with the appropriate regional training committees and be involved in annual reviews and liaise closely with the Specialty Training Committee. Educational supervisors are expected to keep up-to-date with developments in postgraduate medical training (e.g. by attending Deanery and national training the trainer courses), have access to the support and advice of their senior colleagues regarding any issues related to teaching and training and to keep up-to-date with their own professional development.

MANAGING CURRICULUM IMPLEMENTATION

The curriculum outlines the minimum paediatric and perinatal pathology training requirements for delivery in a regional training programme. It guides educational supervisors as to what is required to deliver the curriculum and guides trainees in the learning and assessment methods required for satisfactory completion of training.

It is the responsibility of the Training Programme Director and their Deanery/Postgraduate School, with the assistance of the regional STC and supported by the Regional Specialty Advisor, to ensure that the programme delivers the depth and breadth of paediatric and perinatal pathology outlined in the curriculum. The Programme Director must ensure that each post or attachment within the programme is approved by the GMC. Heads of Pathology School (HOPS) have a strategic overview of training in the Pathology specialties. They are responsible for ensuring that the delivery of education and training meets the College- and GMC-agreed curriculum and is provided to the standards set by the College and the GMC.

It is the responsibility of the GMC and Deaneries to quality assure training programmes to ensure training programmes across the UK are able to deliver a balanced programme of training.

It is the responsibility of the educational/clinical supervisor of a particular post or attachment within a programme to ensure that the training delivered in their post meets the requirements of the relevant section(s) of the curriculum. The educational supervisor must undertake regular educational appraisal with their trainee, at the beginning, middle and end of a section of training, to ensure structured and goal-oriented delivery of training.

Trainees must register with The Royal College of Pathologists on appointment to a paediatric and perinatal pathology training programme. It is the trainee's responsibility to familiarise themselves with the curriculum and assessment requirements both for the satisfactory completion of each stage of training and the award of the CCT or CESR(CP). They must be familiar with all aspects of the assessment system; workplace-based assessment including multi-source feedback, the Year 1 Histopathology Assessment and the FRCPath examination. It is the trainee's responsibility to ensure that they apply in good time for any assessments and examinations that demand an application. Trainees must also make appropriate use of the LEPT system and e-learning.

CURRICULUM REVIEW AND UPDATING

The curriculum will be evaluated and monitored by The Royal College of Pathologists as part of continuous feedback from STCs, Programme Directors, trainers and trainees.

The curriculum will be formally reviewed in the first instance by the Paediatric and Perinatal Pathology SAC within 2 years of publication. In reviewing the curriculum, opinions will be sought from the College's SAC on paediatric and perinatal pathology, the Trainees Advisory Committee, the Lay Advisory Committee and its Fellows and Registered Trainees.

Any significant changes to the curriculum will need the approval of The Royal College of Pathologists' Council and the GMC.

EQUALITY AND DIVERSITY

Extract from The Royal College of Pathologists' *Diversity and Equality Policy and Approach*. A full copy of the policy is available on the College website.

The Royal College of Pathologists is committed to the principle of diversity and equality in employment, membership, academic activities, examinations and training. As part of this commitment we are concerned to inspire and support all those who work with us directly and indirectly.

Integral to our approach is the emphasis we place on our belief that everyone should be treated in a fair, open and honest manner. Our approach is a comprehensive one and reflects all areas of diversity, recognising the value of each individual. We aim to ensure that no one is treated less favourably than another on the grounds of sex, race, age, sexual orientation, gender reassignment, disability, pregnancy & maternity, religion and belief and marriage and civil partnership. Our intention is to reflect not only the letter but also the spirit of equality legislation.

Our policy will take account of current equality legislation and good practice as outlined in the Equality Act 2010 which supersedes/includes all previous legislation.

The Training Department collects information about the gender and ethnicity of trainees as part of their registration with the College. This information is recorded by the College and statistics published on an annual basis in the annual report. Further information about the monitoring activities of the College trainees, candidates and Fellows are available in the College policy.

ACKNOWLEDGEMENTS

Dr Michael Ashworth (Chair, Specialty Advisory Committee on Pre/Perinatal/Paediatric Pathology), Dr Marion Malone (Consultant Paediatric Pathologists), Dr David Bailey (current Director of Training and Assessment).

APPENDIX 1 GENERAL HISTOPATHOLOGY CURRICULUM

All trainees are expected to undertake training in the basic knowledge and skills of histopathology. This includes surgical pathology, basic autopsy (during stages A and B) and cytopathology (including cervical cytology in stages A and B and non-cervical cytology throughout training). The trainee should also acquire the generic skills required for histopathology, in accordance with *Good Medical Practice*.

Trainees are also expected to have some exposure to forensic pathology, neuropathology and paediatric pathology as part of their general histopathology training.

Expected training during Stage A/ST1 of training

There is no intention to use this appendix as a measure of aptitude or achievement. It is simply an indication of the range and level of experience that could be reasonably expected of a trainee in Stage A. In serving as an indicator, the surgical pathology list should be interpreted in the light of workload and case-mix in the training department. Surgical specimens considered 'routine' in some departments, e.g. an oesophagectomy, would be infrequent in others. Thus, its inclusion in the list does not mean that experience of this specimen type is mandatory, only that a Stage A trainee should be familiar with the handling and reporting of similar major resection specimens from cancer cases. Naturally, some cancer specimens (e.g. pancreatectomy or laryngectomy) are considered too complex for a Stage A trainee to dissect independently.

Some experience of specialised areas of pathology is also expected during Stage A and trainees should spend a short period of attachment to neuropathology and paediatric pathology.

The level of knowledge gained within each of the areas described below will vary between trainees. However, for each disease process listed, it is recommended that the trainee possesses at least a basic level of knowledge within the following eight categories.

- Epidemiology
- Aetiology
- Pathogenesis
- Clinical features
- Pathological features (macroscopic and microscopic)
- Natural history
- Management options
- Major complications of therapy.

It is important that sufficient basic knowledge of major pathological processes is gained at this early stage. This should include topics such as: causes of and responses to cellular injury, acute and chronic inflammation, neoplasia, the effects of genetics and the environment in health and disease, infections and the basics of immunology.

Surgical pathology

System	Macroscopic pathology	Microscopy	Knowledge base
General	Correctly identify patient details relevant to each specimen Correctly orientate specimens Open fresh specimens Correctly obtain fresh tissue for touch preparation, freezing, electron microscopy etc Ink excision margins Lymph node anatomy and dissection in cancer specimens	Sets up a microscope correctly Recognise normal histology and normal variations of common tissue types Select/identify appropriate histochemical stains for glygogen, fat, mucins and amyloid Familiarity with basic immunohistochemical markers for major tissue and tumour types and interpretation of a basic panel of immunohistochemical markers on an undifferentiated tumour	Normal anatomy and histology Pathological basis of disease Common pathological abnormalities
Breast	Mastectomy. Wide local excision for macroscopic tumour Axillary lymph node dissection Screening specimen for microcalcification	Diagnose invasive cancer on needle biopsy Report mastectomy or wide local excision specimens	Ductal carcinoma *in situ*, invasive ductal carcinoma, invasive lobular carcinoma, fibrocystic change, fibroadenoma

System	Macroscopic pathology	Microscopy	Knowledge base
Upper gastrointestinal tract	Radical oesophagectomy Radical gastrectomy Antrectomy	Recognise *Helicobacter* associated gastritis; oesophageal and gastric malignancy on biopsy Report oesophageal and gastric malignancy resection specimens	*Helicobacter* associated gastritis, reactive gastritis, Barrett's oesophagus, oesophageal carcinoma, gastric carcinoma, coeliac disease, duodenitis
Lower gastrointestinal tract	Colectomy/proctectomy for cancer or inflammatory bowel disease Appendicectomy Polypectomy	Recognise colorectal carcinoma on biopsy Identify presence of inflammatory bowel disease (IBD) and attempt to classify type on biopsy Distinguish hyperplastic (metaplastic) from adenomatous polyps Recognise high-grade dysplasia Report colorectal carcinoma resection specimens	Appendicitis, inflammatory bowel disease. Not otherwise specified (NOS), hyperplastic polyp, adenomatous polyp, high-grade dysplasia, colorectal carcinoma
Respiratory	Bronchial biopsies Open biopsy of lung Pneumonectomy or lobectomy Pleural biopsy specimens	Recognise presence of the common subtypes of primary lung cancer in biopsies Recognise the presence of metastatic cancer in the lung Report lung cancer resection specimens Describe the features of non-neoplastic lung disease Recognise the various types of mesothelioma	Squamous cell carcinoma, small cell carcinoma, adenocarcinoma, metastatic carcinoma, vasculitis, interstitial pneumonia Mesothelioma

System	Macroscopic pathology	Microscopy	Knowledge base
Skin	Accurate gross description of skin lesions Appropriate handling of orientated or complex skin specimens	Diagnose basic skin cancer types including squamous cell carcinoma, basal cell carcinoma and typical cases of melanoma Recognise presence of severely atypical features in naevi Adequate morphological description of features seen in an inflammatory skin biopsy	Basal cell carcinoma, squamous cell carcinoma, melanoma, melanocytic naevi, haemangioma, seborrhoeic keratosis, actinic keratosis, chronic dermatitis NOS, epidermal inclusion cysts, dermatofibroma
Lymphoreticular pathology	Lymph node for neoplastic and non-neoplastic disease Gain experience of examining bone marrow trephine biopsies, where locally available Taking tissue for supplementary techniques (e.g. flow cytometry)	Screen lymph node dissections and marrow biopsies for metastatic tumour Recognise common reactive node patterns including follicular hyperplasia and sinus histiocytosis Detect high-grade lymphoma, common types of low-grade lymphoma and Hodgkin's disease in lymph node specimens and marrow biopsies	Follicular hyperplasia, sinus histiocytosis, high-grade lymphoma, common types of low-grade lymphoma, Hodgkin's disease, granulomatous diseases, metastatic carcinoma
ENT **Head and neck**	Mucosal biopsy Tonsillectomy Nasal polypectomy Salivary gland tumour	Recognise reactive changes in tonsils; distinguish from high-grade lymphoma Identify main types of salivary gland tumour	Simple nasal polypi, pleomorphic adenoma, adenocarcinoma, Warthin's tumour

System	Macroscopic pathology	Microscopy	Knowledge base
Female genital tract	Hysterectomy and/or salpingo-oophorectomy for malignant or benign disease Cervical loop/cone biopsy	Recognise leiomyomata, secretory and proliferative endometrium, endometrial and cervical carcinoma Report hysterectomy and/or salpingo-oophorectomy	Leiomyoma, secretory and proliferative endometrium, endometrial atrophy, endometrial carcinoma, cervical carcinoma, chronic cervicitis, ovarian cystic follicles/theca cysts, ovarian cystadenoma, ovarian cystadenocarcinoma
Liver and gall bladder	Open biopsy of liver Resections for metastatic tumour Cholecystectomy	Report cholecystectomies Recognise normal liver on needle biopsy. Value of special stains Identify presence of cirrhosis, hepatitis or metastatic tumour in needle biopsy	Chronic cholecystitis, cholesterolosis Steatosis, cirrhosis NOS, chronic hepatitis NOS, metastatic carcinoma
Cardiovascular system	Blood vessels, including temporal artery biopsy	Recognise inflammation in temporal artery specimen	For example, temporal arteritis, atheroma
Male genital tract	Vas deferens Prostate biopsies and chippings Orchidectomy and prostatectomy specimens	Report normal vas deferens Recognise presence of cancer in prostatic needle biopsies Report orchidectomy Recognise seminoma, embryonal carcinoma	Prostatic adenocarcinoma, benign prostatic hyperplasia Germ cell tumours
Endocrine pathology	Thyroidectomy Parathyroidectomy	Recognise normal thyroid and parathyroid Recognise nodular colloid goitre	Nodular colloid goitre Know main types of carcinoma

System	Macroscopic pathology	Microscopy	Knowledge base
Soft tissue	Soft tissue tumour resection, simple (i.e. lumpectomy)	Recognise morphological features suggestive of main subtypes of tumours (i.e. lipomatous, fibromatous, myomatous, neural, vascular characteristics)	Lipoma, angiolipoma, neurofibroma, dermatofibroma Recognise high-grade sarcoma Knowledge of immunohistochemical techniques to apply Understand value of cytogenetics
Neuropathology	Neurosurgical tumour resection and biopsy specimens	Distinguish intrinsic from metastatic tumours of the brain Recognise benign tumours of the meninges and peripheral nerves	Knowledge of the classification of tumours of the central nervous system Understand the value of immunohistochemistry in the diagnosis of CNS tumours
Renal and urological pathology	Renal biopsies Bladder biopsies Nephrectomy specimens	Assess deviation from normal histology Recognise presence of cancer in bladder biopsies Recognise glomerular changes that might indicate glomerulonephritis, e.g. hypercellularity, crescent formation Report nephrectomy	Bladder carcinoma, renal cell carcinoma, chronic pyelonephritis Understand the value of immunohistochemistry and electron microscopy in the diagnosis of glomerulonephritis
Osteoarticular pathology	Handling a trephine bone-biopsy Use of calcified versus de-calcified sections	Normal bone Normal synovium	Osteoporosis versus osteomalacia Main types of primary bone tumours

System	Macroscopic pathology	Microscopy	Knowledge base
Paediatric pathology	Description and processing of biopsy specimens Examination, description and sampling of placentas Examination, description and sampling of other specimens only under direct consultant supervision	Recognise common inflammatory and neoplastic conditions occurring in childhood	Common paediatric tumours, e.g. neuroblastoma, nephroblastoma, rhabdomyosarcoma Awareness of special stains in paediatric pathology Understand value of cytogenetics

Autopsy pathology

It is envisaged that trainees will perform at least 20 autopsies during Stage A. Stage A trainees should begin to understand the level of certainty with which macroscopic features can be interpreted at autopsy and when histological examination of autopsy tissues is important. They should begin to recognise histological changes that occur due to post-mortem artefact.

Systems	**Anatomical features and dissection technique** **Trainees should be able to demonstrate:**	**Clinicopathological knowledge base**
General	Methods for identification of the patient External examination including breast examination Removal of organs Organ weights	Procedures for obtaining consent for autopsy. Workings of the coroner's (or procurator fiscal's) system Full details of current practice for retention of organs and tissues Familiarity with current College *Guidelines on Autopsy Practice,* 2002 Knowledge of normal organ weights
Cardiovascular	Excision of heart Master one technique for the dissection of the heart Anatomy of the coronary arteries, their ostia and branches Dissection of aorta and major abdominal branches	Normal, age-related and pathological abnormalities of cardiac valves Identification of acute and healed myocardial infarcts, macroscopically and histologically Assessment of ventricular thickness and atrial and ventricular dilatation Pulmonary embolism
Respiratory system	Removal of lungs from mediastinum Dissection of pulmonary vessels and major bronchi Dissection of individual lobes	Identification of respiratory tract infection and pneumonia Assessment of chronic bronchitis, emphysema and lung fibrosis Appearances of primary and secondary lung tumours
Upper	Removal and dissection of oesophagus, stomach and	Range of appearances due to autolysis in stomach.

gastrointestinal tract	duodenum in continuity Identification of ampulla of Vater	Identification of oesophageal varices, gastric erosions and peptic ulcers Assessment of pyloric stenosis
Lower gastrointestinal tract	Identification and dissection of superior mesenteric artery Examination of intestinal mucosal surface	Identification of colonic diverticula Identification of bowel necrosis and distinction from autolysis or post-mortem change
Hepatobiliary system	Removal of liver and its dissection Identification of portal and hepatic veins Dissection of gall bladder, common bile duct, and pancreatic ducts	Assessment of hepatic congestion and dilatation of hepatic veins Appearances of intra- and extra-hepatic ducts Identification of secondary tumours Identification of hepatic cirrhosis
Nervous system	Removal of brain Dissection of circle of Willis and venous sinuses One method for sectioning of cerebral and cerebellar hemispheres and brain stem	Sites of berry aneurysms Identification of old and recent cerebral infarcts Assessment of cerebral and cerebellar atrophy Taking of 'key' blocks for histological examination
Urogenital system	Dissection of renal arteries and veins and ureters Removal of kidneys, examination of cut surfaces and renal pelvices Examination of bladder mucosa and identification of ureteric orifices Examination of the prostate gland	Estimation of degree of cortical atrophy Identification and assessment of cortical scarring and cyst formation. Hydronephrosis and ureteric dilatation Prostatic disease

	Examination of the testes and female genital system	
Endocrine system	Removal of pituitary Identification of parathyroid glands and dissection of thyroid Removal of adrenal glands	Size and overall appearance of thyroid gland Size of parathyroid glands Adrenal cortical hyperplasia or adrenal atrophy
Lympho-reticular system	Examine all lymph node groups (e.g. mediastinal or para-aortic) for evidence of lymphadenopathy Examination of the spleen Exposure of vertebral bone marrow	Significance of lymphadenopathy in different anatomical sites Clinical explanation for splenic enlargement or atrophy Identification of secondary deposits in vertebral bone marrow
Musculoskeletal system	Identify fractures Explore sites of recent internal fracture fixation	Osteoporosis
Report	Preparation of report according to consultant's protocol and with reference to College's *Guidelines on Autopsy Practice,* 2002 and *Best Practice Scenarios*, 2005 Include the cause of death in the Office of National Statistics (ONS) format and a clear clinicopathological summary	Detailed list of all macroscopic abnormalities Summary relating abnormalities to aspects of clinical history (wherever possible) Appropriate tissue blocks for histology (with appropriate consent)

Complex post-mortem examinations

These autopsies and special techniques are not part of the Stage A curriculum. However Stage A trainees may take the opportunity to observe or assist in these examinations should the opportunity arise.

Assessment of traumatic injury, e.g. after road traffic accident
Methods of sampling for toxicology, e.g. in suicide, drug overdose
HIV, HCV and tuberculosis infected persons
Maternal deaths
Removal of eyes, dissection of middle ear
Removal of spinal cord
Post-mortem examination in haemopoietic malignancy, including sampling of bone marrow from iliac crests and femur
Post-mortem examination of a decomposed body
Post-mortem examination in a case of suspected drowning
External examination of a body by a forensic pathologist
Post-mortems in patients dying after complex cardiothoracic surgery
Assessment of the changes following complicated gastrointestinal surgery
Paediatric/perinatal autopsy

Cytopathology: General cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
General cytology	Microscopy	Set up a microscope How to screen a slide
	Technical aspects	Sampling devices used and the fixation of specimens Seen and has a basic knowledge of the range of methods for converting a raw sample into a slide
	Confidentiality	The importance of confidentiality in cytology practice PIAG guidance
	Morphology	The components of a cell The differences in morphology in air dried and fixed preparations The nuclear features used to diagnose malignancy Features used to determine differentiation of a neoplasm The appearances of common organisms

Cytopathology: Cervical cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
Cervical cytology	Cervical screening	The pathogenesis of cervical carcinoma The process by which cervical screening prevents the development of cervical carcinoma The roles of the various disciplines involved in delivering the cervical screening programme, e.g. General Practitioners, Public Health, Laboratories, Colposcopy Units, Gynaecologists The numerical reporting system, patient call and recall mechanisms, failsafe
	Technical aspects	Liquid-based cytology techniques
	Normal	Recognise normal cellular components in cervical specimens
	Adequacy	The methods and rationale for sampling the cervix The principles of assessing adequacy of a cervical specimen
	Benign cellular changes	The physiology and recognition of squamous metaplasia Iatrogenic changes which may occur in the cervix Recognise common morphological changes seen in inflammation
	Borderline nuclear changes	Circumstances in which this category is used and the implications of its use
	Cervical intraepithelial neoplasia (CIN, CGIN) and dyskaryosis	Criteria for diagnosis of dyskaryosis Features used to grade dyskaryosis Typical examples of dyskaryosis Criteria for diagnosis of glandular abnormality

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
Cervical cytology (cont'd)	Squamous carcinoma and adenocarcinoma	Criteria for diagnosis of possibly invasive lesions
	Management of women with abnormal smears and colposcopy	The implications of reporting abnormal smears, and awareness of the role of colposcopy in the diagnosis and management of cervical disease
	Quality assurance including internal quality control (IQC), external quality assurance (EQA) and audit	Quality Assurance procedures involved in cervical screening, including internal quality control (IQC), external quality assurance (EQA) and audit Current national quality standards and indicators

Cytopathology: Non-cervical cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
Non-cervical cytology	Interpretation Reporting	Recognise normal cell populations and the typical patterns of the common benign and malignant neoplasms seen in the respiratory tract, effusions and urine The role of needle aspirate samples from lung, breast, thyroid, salivary gland, lymph node and other sites The structuring of reports and have an appreciation of the clinical uses of cytopathology and the consequence of reports – positive and negative Correlation with histology where available

GENERAL CURRICULUM CONTENT FOR STAGES B/ ST2

1. GOOD CLINICAL CARE

Objective: to demonstrate adequate knowledge and skills and appropriate attitudes in routine clinical work.
New specialists will:

- have the breadth of knowledge and skills to take responsibility for safe clinical decisions
- have the self-awareness to acknowledge where the limits of their competence lie and when it is appropriate to refer to other senior colleagues for advice
- have the potential (or the ability) to take responsibility for clinical governance activities, risk management and audit in order to improve the quality of service provision.

SURGICAL PATHOLOGY

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Basic knowledge	Possess sufficient general clinical knowledge including major changes in trends of diagnosis and treatment Possess sufficient knowledge of normal anatomy, physiology and pathophysiology Possess the knowledge contained in and be able to operate within the tissue pathways and datasets documents produced by the Royal College of Pathologists and any updates of these documents	Develop the ability to solve complex clinical (and research, when applicable) problems by applying sound knowledge of basic principles without the requirement always to rely on 'pattern matching'	Understand importance of integration of clinical and pathological data for accurate diagnosis

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Surgical cut-up ('General')	Understand principles of specimen dissection, macroscopic description and block selection in neoplastic and non-neoplastic disease Stages B–D: understand principles of dissection of all major cancer resection specimens and tissue sampling to enable completion of RCPath's *Standards and Datasets for Reporting Cancers* Stage A: See *Appendix 1*	Possess sufficient manual dexterity to perform dissection safely and accurately, without damage to tissues	Understand importance of accuracy and requirement for attention to detail during specimen description and block selection Understands importance of ensuring that request form and specimen identification is accurate and the requirement to identify and resolve any errors or discordance
Laboratory processes	Understand the principles of laboratory processing within surgical pathology and cytopathology	Stage A: one week's or equivalent experience of laboratory processing including section cutting	Respect the work of the technical staff in preparing slides for viewing
Surgical reporting ('General')	Understand the principles of microscopy Knowledge of the microscopic features of the range of normality within tissues as well as the major common pathological processes and patterns of disease Stage A: See *Appendix 1* Stages B–D: develop a special interest in one or more diseases or organ systems May remain generalised or become specialised in one or more areas	Be able to set up a microscope with ergonomic safety and operate it effectively Be able to recognise the microscopic features of tissue structure in normality and disease, as appropriate to one's level of experience Able to complete RCPath *Standards and Datasets for Reporting Cancers*	Understand requirement for attention to detail during surgical reporting and the need for correlation with the clinical situation Demonstrate an understanding of the importance of surgical pathology to clinicians and patients (e.g. timeliness and accuracy of reporting)
Special techniques	Understand principles of 'special' histochemical and immunohisto-chemical methods	Know when to resort to special techniques	Understand cost–benefit issues when considering the use of additional techniques

	Understand principles of common molecular pathology techniques Understand principles of electron microscopy	Be able to recognise histological features of histochemical and immunohisto-chemical stains in normal and diseased tissues	Stages B–D: initiate special techniques in preparation of cases

MOLECULAR PATHOLOGY

This section lists the required basic knowledge in molecular methods and their applications, both potential and actual, within Histopathology. The section is focussed on DNA- and RNA-based techniques.

Subject	Knowledge	Skills and knowledge application	Attitudes
Fundamentals of molecular biology	Understanding of the origins and consequences of germline variation and somatic mutations, including DNA methylation and gene expression changes	Ability to understand origins of and justifications for molecular tests	Ability to understand and explain the underlying principles of molecular genetics and molecular pathology
Fundamentals of databases and bioinformatics	Knowledge of basic molecular databases	Ability to retrieve relevant data from public sources	Appreciation of state of knowledge and how to update that knowledge
Sample preparation	Knowledge of how histological samples are taken AND prepared, and how nucleic acids are extracted from them	Ability to undertake the appropriate sample collection, retrieval and preparation for the common molecular tests, whether performed on extracted nucleic acid or *in situ*	Ability to relate histological sample types and availability to the molecular analyses which might be performed on them
Molecular techniques	The principles of the most up-to-date molecular methods	Knowledge of sequencing, PCR, microarrays (DNA and RNA), *in situ* hybridisation, mutation detection	Appreciation of the available technologies
Available tests	Knowledge of molecular tests currently performed on histological samples, including the limitations of those tests, and of tests which are anticipated in the near future	Ability to assess the demand for molecular tests and the modes of supply	Appreciation of how molecular methods can contribute to patient care and could do so in the future

BASIC AUTOPSY

This section of the curriculum incorporates the basic autopsy practice competences that all trainees will acquire. It will come from apprenticeship training, reading, formal tuition and the practical experience from the minimum 20 adult autopsies per annum and 2 Paediatric/Perinatal autopsies that all trainees will undertake until satisfactory completion of Stage B. Ideally, most of these autopsies would be consented clinical autopsies, where histopathological and other analyses can be pursued to explore the pathologies and pathogeneses that lead to death. In practice, most of the autopsies will probably be medico-legal, with a lower level of diagnostic stringency implied, the identification and exclusion of unnatural causes of death paramount, and less opportunity to observe relevant histopathology. Because the availability of autopsy training opportunities is variable geographically, the educational supervisors and programme directors have a significant role in ensuring that adequate experience is obtained by all trainees.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Pathological basis of disease	A wide knowledge of the pathological basis of disease and the macroscopic/microscopic pathology of various types of death	Basic standard of practice in the techniques used for identifying morphological abnormalities at autopsy examination	A desire to learn about common disease processes through the autopsy
General	Possess knowledge of anatomy, macroscopic features of major disease processes and common tissue dissection techniques relevant to autopsy practice Have some understanding of the training undertaken by anatomical pathology technologists (APTs) and the role that they can appropriately play within all aspects of the mortuary function (see www.aaptuk.org)	Demonstrate manual dexterity sufficient to perform autopsies safely and to demonstrate the major abnormalities Liaise with the APTs to maximise the autopsy learning opportunities	Be able to identify and address the questions and issues raised by the death Welcome clinicians and other appropriate visitors to the mortuary to share knowledge Demonstrate an understanding of the importance of autopsy findings to clinicians and relatives

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Clinical liaison	Have an understanding of the use of clinical information and the health record in autopsy examination	Be able to interrogate the clinical and laboratory records and understand the utility and limitations associated with various types of investigation including imaging, microbiology and biochemistry Be able to identify issues to be addressed by the autopsy examination	Be conversant with current clinical practice Be able to liaise with clinical colleagues in order to obtain clinical information prior to autopsy
External examination	Familiarity with the RCPath's *Guidelines on Autopsy Practice,* 2002 and *Best Practice Scenarios*, 2005		Not to authorise an evisceration by others without personally examining the body first
Autopsy technique	Have knowledge of, and the ability to perform, autopsies in a variety of situations, such as the following: • cardiac disease of uncertain cause • endocrine/metabolic death • hepatic disease of unknown cause • intra-abdominal disease of unknown cause • neurological disease of unknown cause • renal disease of unknown cause • respiratory disease of unknown cause	Carry out a normal full evisceration Dissect the internal organs Describe the appearances accurately and succinctly Interpret the findings in the light of the clinical information available Present the findings to clinicians either immediately or later at a clinical meeting	

Deaths in the community	Have a basic knowledge of the aims of the autopsy and investigations required where death occurs in the community and there are no suspicious circumstances		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Microbiology	Knowledge of those areas of microbiology that are relevant to autopsy practice, e.g. sepsis, meningitis, pneumonia, endocarditis, tuberculosis, viral hepatitis	Ability to take appropriate samples	Ability to think laterally
Histopathology	Knowledge of the autopsy histological appearances of various common fatal conditions	Ability to select appropriate tissue blocks	Ability to think laterally
Other investigations	Knowledge of those areas of haematology, biochemistry, medical genetics and other investigative modalities that are relevant to autopsy practice	Ability to take appropriate samples	Ability to think laterally
Consent	Be conversant with current policy in relation to consent for autopsies and for tissue or organ retention Be conversant with current policy in relation to tissue or organ donation Understand the legal basis of consent to autopsy examination and the circumstances in which consent is not required	Be able to obtain consent for autopsies and for further investigation of tissue or whole organs	Be able to give explanation to families of the reasons for, and – if requested – details of, the investigations required by an autopsy examination Be able to explain to families when tissue or organs may need to be sent away for expert review and options for funeral, disposal, etc Understand issues of autopsy consent, tissue/organ retention and Coroners'/Procurator Fiscals' practice Be aware of religious and cultural sensitivities relating to autopsy

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Health and safety	Be conversant with relevant protocols and documentation of departmental working practices, and be familiar with the practicalities of mortuary practice Have a working knowledge of the regulatory aspects of health and safety issues Be familiar with the documents: *Safe Working and Prevention of Infection in the Mortuary and Autopsy Suite* (Health Services Advisory Commission) *Guidelines on Autopsy Practice* (RCPath, 2002)	Be able to work in the mortuary in a safe way	Care for the safety of all staff and visitors in the mortuary
Medico-legal issues	Be familiar with the duty to report deaths to the Coroner, the preliminary enquiries that may take place through the Coroner system and entitlement to attend autopsy examination by interested parties Be conversant with current legislation and regulations relating to medico-legal autopsies and related matters Attend some inquests to gain passive experience	A working knowledge of the law relating to death, the investigation of death and disposal of the dead (for those in Scotland, relevant documents in the Crown Office and Procurator Fiscal Service	

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Reports	Familiarity with the RCPath's *Guidelines on Autopsy Practice*, 2002 and *Best Practice Scenarios*, 2005	Write a final gross and microscopic report with suitable summaries, according to the RCPath's *Guidelines on Autopsy Practice*, 2002 Produce finished reports in a timely way	
Teaching	Be aware of the value of the autopsy as a teaching aid	Appropriate teaching skills	Be prepared to teach at every available opportunity
Feedback to families and other interested parties		Communication skills required to inform clinical colleagues and other non-clinical professionals involved in inquiries into deaths and assist in multidisciplinary mortality review	An ability to interpret autopsy findings in the context of past medical history, clinical progression of disease or injury and circumstances of death and an ability to communicate those findings and opinions fully, clearly and simply to those who need explanation of them

CYTOPATHOLOGY

Cervical and non-cervical cytopathology will be part of the general histopathology curriculum and assessment processes for stages A and B of training. Following successful completion of these stages, cervical cytopathology will be available as an optional training package, equivalent to 3 months of training. Histopathology relating to cervical screening and non-cervical cytopathology will continue to be part of the higher stages of the general histopathology curriculum and assessment processes.

Cervical cytology (Stage B)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Cervical screening programme	Rationale, methodology and organisation of the CSP Basic understanding of roles of component organisations, failsafe	Ability to source information on the CSP	Understand the importance of the CSP to the population
Specimen adequacy	Knowledge of features that are assessed to determine the adequacy of a cervical sample	Understand difficulties in producing rigid criteria for adequacy. Ability to recognise inadequate specimens	
Infections	Knowledge of features of infections in cervical samples.	Recognise typical morphological appearances of specific organisms commonly seen in cervical specimens, e.g. *Trichomonas*, *Candida*, herpes simplex, human papilloma virus, actinomyces	Understanding of the psychological effects on women of diagnosis of infections
Borderline nuclear changes	Understanding of criteria for diagnosis of borderline nuclear changes		Understanding of significance of diagnosis to women Awareness of uncertainty in diagnosis in some cases Awareness of the dangers of overcalling and undercalling

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Dyskaryosis	Understand criteria for diagnosis and grading of squamous and glandular dyskaryosis	Recognise typical examples of mild, moderate and severe squamous dyskaryosis and endocervical cellular abnormalities	
Squamous carcinoma and adenocarcinoma	Knowledge of criteria for diagnosis of possibly invasive lesions	Recognise typical malignant cells of squamous, endocervical, endometrial and ovarian origin	
New technologies in cervical screening	Basic knowledge of automated screening devices and HPV testing Be aware of the process involved in approving new technologies for use in cervical screening		

Histopathology relating to cervical screening (Stage B)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Management of women with cervical smear abnormalities	Understanding of the NHS screening programmes as a patient centred multidisciplinary approach		
Audit (specific to screening programmes)	Knowledge of process of audit in cervical and breast screening Basic knowledge of guidelines for audit of invasive cervical cancer Awareness of quality assurance team	Demonstrate the ability to undertake clinical audit, normally by performing at least one clinical audit project per stage of training	Ethos of audit, openness and disclosure in cervical screening
New technologies	Keeping up with new developments through journals and other media		Culture of lifelong learning

Non-cervical cytology (Stage B)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Technical aspects	Knowledge of preparation and staining techniques for common specimen types Knowledge of use of special techniques, e.g. immunocytochemistry	Ability to recognise faults and artefacts of preparation, e.g. air-drying Panels of antibodies for particular diagnostic applications, e.g. mesothelioma	Ability to work with BMS staff
Diagnosis	Features of malignancy in sites commonly investigated with cytopathology Features of specific non-malignant diagnoses, e.g. infection	Ability to diagnose malignancy in specimens from breast, gastrointestinal (GI) tract, respiratory tract, urinary tract, head and neck, lymphoreticular system, serous fluids and thyroid Ability to integrate clinical information and histology or other investigations into diagnosis Ability to recognise when definitive diagnosis is beyond capability	Care and attention to detail Acknowledgement of personal limitations Awareness of work within a multidisciplinary team Able to investigate discrepancies between histology and cytology findings
Reporting	Requirements for a report Relevant datasets Nationally recognised coding systems	Ability to write an accurate report that gives clinicians the information they need Knowledge of the likely outcome in terms of further investigation or management of the patient	Understand multidisciplinary approach to diagnosis and management Able to present cytological findings at a multidisciplinary team meeting

Health determinants and inequalities (Stages B to D)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Nationality and culture	Recognise that good health includes both mental and physical health Recognise the relationship between health inequalities and wealth inequalities Be aware of social and cultural issues and practices such as: • the impact of cultural beliefs and practices on health outcomes • health determinants that affect patients and communities • the effects of social and cultural issues on access to healthcare, including an understanding of health issues of migrants and refugees Be aware of the national and international situation regarding the distribution of disease, the factors that determine health and disease, and major population health responses Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these Be aware of the impact on health of armed conflict, natural disasters and other social upheavals	Communicate effectively with patients from diverse backgrounds and those with special communication needs, such as the need for interpreters, etc Communicate effectively and respectfully with parents, carers, etc	Recognise issues of health that are related to social class

Subject	**Knowledge**	**Skills and knowledge application**	**Attitudes and behaviours**
Inequality and discrimination/ stigmatising	Be aware of the impact on health of armed conflict, natural disasters and other social upheavals Understand the implications of disability discrimination legislation for healthcare Recognise how health systems can discriminate against patients from diverse backgrounds, and how to work to minimise this discrimination. For example in respect of age, gender, race, culture, disability, spirituality, religion, and sexuality Recognise the stigmatising effects of some illnesses and work to help in overcoming stigma Recognise that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support; be aware of the role of doctors and other services in combating this inequality Recognise the effects of exclusion and discrimination on physical and mental health	Respect diversity and recognise the benefits it may bring, as well as associated stigma Be aware of the possible influence of and sensitively include questions about socio-economic status, household poverty, employment status and social capital in taking a medical history Assess the patient's ability to access various services in the health and social system and offer appropriate assistance Help to empower patients and negotiate complex systems to improve health and welfare including, where appropriate, the right to work Where values and perceptions of health and health promotion conflict, facilitate balanced and mutually respectful decision-making Identify and communicate effectively with influential decision-makers/facilitators of change	Respect diversity of status and values in patients and colleagues Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Personal beliefs and biases	Recognise that personal beliefs and biases exist and understand their impact (positive and negative) on the delivery of health services Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these Be aware of similarities and distinctions between the beliefs and values of the doctor, the patient and the policy-makers	Recognise in routine practice the doctor's role as advocate and manager Advocate and facilitate appropriate self-care Recognise and be able to address the social, biological and environmental determinants of health (the bio-psycho-social model or the bio-socio-psycho-existentialist model) and collaborate with other professionals	Be confident and positive in one's own professional values Accept uncertainty Be aware of one's own behaviour and how it might impact on patients' health issues

Values, ethics and law	Ensure that all decisions and actions are in the best interests of the patient and the public good Be familiar with and uphold the rights of children and vulnerable adults Be familiar with and uphold the rights of disabled people to participate in healthy and rewarding employment Practise in accordance with an appropriate knowledge of contemporary legislation Act with appropriate professional and ethical conduct in challenging situations	Seek out and utilise opportunities for health promotion and disease prevention Based on an understanding of risk, be able to apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations Recognise important issues in preventative healthcare, for example in sexual health, substance abuse etc, and take opportunities to raise these issues in health promotion. For example, explain to parents who smoke the health risk that this poses to their children, including the effects of smoking on those exposed *in utero*	Respond to people in an ethical, honest, and non-judgmental manner Use appropriate methods of ethical reasoning to come to a balanced decision where complex and conflicting issues are involved

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Policy, research and change	Be aware of current UK screening programmes Be aware of issues that might affect health inequalities that are currently under debate regarding changes in the NHS, including the public policy process Be aware of and maintain an up to date knowledge of research evidence regarding the most important determinants of health Know how to access and use local health data Know how to access resources for community action and advocacy (e.g. resources, legislation, policy documents)	Be able to access and make use of appropriate population, demographic, socio-economic and health data Conduct an assessment of community health needs, and where appropriate apply these in practice	

APPENDIX 2: PAEDIATRIC AND PERINATAL PATHOLOGY CURRICULUM CONTENT FOR STAGES C TO D/ST3 – 6

1. GOOD CLINICAL CARE

Objective: to demonstrate adequate knowledge and skills and appropriate attitudes in routine clinical work.

New specialists will:

- have the breadth of knowledge and skills to take responsibility for safe clinical decisions
- have the self-awareness to acknowledge where the limits of their competence lie and when it is appropriate to refer to other senior colleagues for advice
- have the potential (or the ability) to take responsibility for clinical governance activities, risk management and audit in order to improve the quality of service provision.

PAEDIATRIC SURGICAL PATHOLOGY

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Basic knowledge	Possess sufficient general paediatric and perinatal clinical knowledge including major changes in trends of diagnosis and treatment Possess sufficient knowledge of normal anatomy, development, physiology and pathophysiology Possess the knowledge contained in (and be able to operate within) the tissue pathways and datasets documents produced by the Royal College of Pathologists and any updates of these documents	Develop the ability to solve complex clinical problems by applying sound knowledge of basic principles without the requirement always to rely on 'pattern matching'	Understand importance of integration of clinical and pathological data for accurate diagnosis
Surgical cut-up	Understand principles of specimen dissection, macroscopic description and block selection in neoplastic and nonneoplastic disease	Possess sufficient manual dexterity to perform dissection safely and accurately, without damage to tissues	Understand the importance of accuracy and requirement for attention to detail during specimen description and block selection

	Understand the principles of dissection of the placenta and selection of appropriate tissue blocks Understand principles of dissection of all major cancer resection specimens and tissue sampling to enable completion of RCPath's *Standards and Datasets for Reporting Cancers* and other tumour protocols such as SIOP		Understand the importance of ensuring that request form and specimen identification is accurate and the requirement to identify and resolve any errors or discordance
Laboratory processes	Understand the principles of laboratory processing within paediatric surgical pathology and cytopathology	Be able to cut and stain frozen sections	Respect the skill of the technical staff in preparing slides for viewing
Paediatric Surgical reporting	Understand the principles of microscopy Knowledge of the microscopic features of the range of normality within tissues at different ages Understand the major common pathological processes and patterns of disease, especially (but not only) malformation, inflammation and neoplasia and how they interact with normal development Understand the specific childhood diseases especially (but not only) metabolic disease, bowel dysmotility disorders and children's tumours and their specific diagnostic features Understand developmental disorders and syndromes and their presentation in surgical pathology Understand the specific microscopic features associated with organ (including bone marrow)	Be able to set up a microscope with ergonomic safety and operate it effectively Be able to recognise the microscopic features of normal tissue structure in development and its alteration with disease, as appropriate to one's level of experience Able to complete appropriate RCPath *Standards and Datasets for Reporting Cancers*	Understand requirement for attention to detail during surgical reporting and the need for correlation with the clinical situation Demonstrate an understanding of the importance of surgical pathology to clinicians and patients [e.g. timeliness and accuracy of reporting]

	transplantation in children Develop a special interest in one or more diseases or organ systems		
Special techniques	Understand principles of 'special' histochemical and immunohisto-chemical methods Understand principles of common molecular pathology techniques Understand principles of electron microscopy as applied to paediatric tumours, renal biopsies and other paediatric specimens	Know when to resort to special techniques Be able to recognise histological features of histochemical and immunohisto-chemical stains in normal and diseased tissues	Understand cost-benefit issues when considering the use of additional techniques Initiate special techniques in preparation of cases
Placenta	Understand gestational development of the placenta, its normal structure and function Understand its alterations in multiple pregnancies and in disease	Be able to dissect and select blocks for histology in singleton and twin placenta	Understand the importance of placental examination to clinicians and patients Understand the importance of attention to detail, timeliness of reports

MOLECULAR BIOLOGY

This section lists the required basic knowledge in molecular methods and their applications, both potential and actual, within Histopathology. The section is focused on DNA- and RNA-based techniques.

Subject	Knowledge	Skills	Attitudes
Fundamentals of molecular biology	Understanding of the origins and consequences of germline variation and somatic mutations, including DNA methylation and gene expression changes	Ability to understand origins of and justifications for molecular tests	Ability to understand and explain the underlying principles of molecular genetics and molecular pathology
Fundamentals of databases and	Knowledge of basic molecular databases	Ability to retrieve relevant data from public sources	Appreciation of state of knowledge and how to update that knowledge

bioinformatics			
Sample preparation	Knowledge of how histological samples are taken prepared and of how nucleic acids are extracted from them	Ability to undertake the appropriate sample collection, retrieval and preparation for the common molecular tests, whether performed on extracted nucleic acid or *in situ*	Ability to relate histological sample types and availability to the molecular analyses which might be performed on them
Molecular techniques	The principles of the most up-to-date molecular methods	Knowledge of sequencing, PCR, microarrays (DNA and RNA), *in situ* hybridisation, mutation detection	Appreciation of the available technologies
Available tests	Knowledge of molecular tests currently performed on histological samples, especially in relation to paediatric tumours, including the limitations of those tests, and of tests which are anticipated in the near future	Ability to assess the demand for molecular tests and the modes of supply, even in small fetuses	Appreciation of how molecular methods can contribute to patient care, particularly in relation to childhood cancer, and could do so in the future

PAEDIATRIC, PERINATAL AND FETAL AUTOPSY

This section of the curriculum details the autopsy practice competences that all paediatric and perinatal trainees will acquire. It will come from apprenticeship training, reading, formal tuition, and graded independent practice. Ideally, most of these autopsies would be consented clinical autopsies, where histopathological and other analyses can be pursued to explore the pathologies and pathogeneses that lead to death. Many autopsies will probably be medicolegal, with a lower level of diagnostic stringency implied, the identification and exclusion of unnatural causes of death paramount, and less opportunity to observe relevant histopathology. Because the availability of autopsy training opportunities is variable geographically, the educational supervisors and programme directors have a significant role in ensuring that adequate experience is obtained by all trainees. Attachment to another unit may be required to gain experience in the full range of autopsy pathology.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Pathological basis of disease	A wide knowledge of the pathological basis of disease and the macroscopic/ microscopic pathology of various types of death Understand normal growth, how it is assessed and of prenatal and postnatal growth restriction A knowledge of normal pregnancy and labour and the causes of fetal loss A knowledge of the common syndromes associated with fetal malformation Knowledge of the literature relating to controversial issues and to difficulties in interpreting subjective changes is necessary Understand iatrogenic diseases relevant to the management of paediatric diseases particularly in relation to neonatal intensive care and paediatric oncology	Basic standard of practice in body measurement, assessment of growth and the techniques used for identifying morphological abnormalities at autopsy examination Understand the principles of classification of fetal and perinatal death Be aware of the scope of national audit studies Practice at integrating multiple co-morbidities to explain a death	A desire to learn about common disease processes through the autopsy Acceptance of uncertainty in determining the cause of death in some cases Willingness to discuss difficult cases with colleagues to optimise the diagnostic outcome
General	Possess knowledge of anatomy, fetal and infant development, macroscopic features of major disease processes and common tissue dissection techniques relevant to autopsy	Demonstrate manual dexterity sufficient to perform autopsies safely and to demonstrate the major abnormalities, even in small fetus	Be able identify and address the questions and issues raised by the death Be responsible for identification of

	practice		the deceased and take ultimate responsibility for this
Mortuary Staff	Have some understanding of the training undertaken by anatomical pathology technologists (APTs) and the role that they can appropriately play within all aspects of the mortuary function (see http://www.aaptuk.org/	Liaise with the APTs to maximise the autopsy learning opportunities	Welcome clinicians and other appropriate visitors to the mortuary to share knowledge Demonstrate an understanding of the importance of autopsy findings to clinicians, coroners' officers, police and relatives
Clinical liaison	Have an understanding of the use of clinical information and the health record in autopsy examination	Be able to interrogate the clinical and laboratory records and understand the utility and limitations associated with various types of investigation including imaging, microbiology and biochemistry. All these investigation modalities and others can provide useful positive or negative clues in the diagnostic process Be able to identify issues to be addressed by the autopsy examination	Be conversant with current clinical practice Be able to liaise with clinical colleagues in order to obtain clinical information prior to autopsy Know the main side effects of common treatments and the major complications of most paediatric surgical procedures
External examination	Familiarity with the RCPath's *Guidelines on Autopsy Practice,* 2002 and *Best Practice Scenarios*, 2005. And the Kennedy protocol for the Investigation for Investigation of SUDI	The ability to describe succinctly and correctly the different forms of injury, look for external signs of natural and unnatural death and distinguish between genuine lesions and postmortem artifact Practice at evaluating the morphological effects of resuscitation	Not to authorise an evisceration by others without personally examining the body first.

Autopsy technique	Have knowledge of, and the ability to perform, autopsies in a variety of situations, such as the following: • early fetal loss • spontaneous mid trimester abortion • termination of pregnancy for fetal abnormality • late stillbirth • intrapartum death • sudden unexpected death in infancy • cardiac disease of uncertain cause • endocrine /metabolic death • hepatic disease of unknown cause • intra-abdominal disease of unknown	Carry out a normal full evisceration Dissect the internal organs Describe the appearances accurately and succinctly Interpret the findings in the light of the clinical information available Present the findings to clinicians either immediately or later at a clinical meeting Have skills in techniques used in perioperative autopsies and autopsies following death in hospital, in a variety of situations such as: • iatrogenic death • intraoperative deaths • neurosurgical deaths • post-abdominal surgery deaths • post-cardiac surgery deaths • sudden unexpected death in hospital	
Deaths in the community	Have a basic knowledge of the aims of the autopsy and investigations required where death occurs in the community and there are no suspicious circumstances	Understand the importance of ancillary investigations including radiology, microbiology, biochemistry and toxicology in the investigation of sudden infant death	Understand the importance of child death review meetings
Non-accidental Injury	Knowledge of the patterns of fatal non-accidental injury in children.	The ability to recognize that a case may be one of non-accidental injury and to involve appropriate	Understand the importance of collaboration with colleagues in forensic pathology in the

		personnel.	investigation of these deaths.
Histopathology	Knowledge of the autopsy histological appearances of various common fatal conditions	Ability to select appropriate tissue blocks	Ability to think laterally
Microbiology	Knowledge of those areas of microbiology that are relevant to autopsy practice e.g. sepsis, meningitis, pneumonia, endocarditis, tuberculosis, viral hepatitis.	Ability to take appropriate samples	Appreciate the importance of consulting a clinical microbiologist in interpretation of post-mortem bacteriology
Other investigations	Knowledge of those areas of haematology, biochemistry, medical genetics and other investigative modalities that is relevant to autopsy practice	Ability to take appropriate samples	Appreciation of the necessity to take advice from the appropriate professional group in the interpretation of investigations
Radiology	Knowledge of the normal skeletal appearance at differing gestational and developmental ages Knowledge of newer radiological techniques e.g. PM MRI	Ability to request radiology appropriate to the case	Appreciate the importance of obtaining expert radiological opinion
Consent	Be conversant with current policy in relation to consent for autopsies and for tissue or organ retention Be conversant with current policy in relation to tissue or organ donation Understand the legal basis of consent to autopsy examination and the circumstances in which consent is not required	Be able to obtain consent for autopsies and for further investigation of tissue or whole organs	Be able to give explanation to families of the reasons for, and – if requested – details of, the investigations required by an autopsy examination Be able to explain to families when tissue or organs may need to be sent away for expert review and options for funeral, disposal etc Understand issues of autopsy consent, tissue/organ retention and Coroners'/Procurator Fiscals'

			practice Be aware of religious and cultural sensitivities relating to autopsy
Health & Safety	Be conversant with relevant protocols and documentation of departmental working practices, and be familiar with the practicalities of mortuary practice Have a working knowledge of the regulatory aspects of health and safety issues Be familiar with the documents: • *Safe Working and Prevention of Infection in the Mortuary and Autopsy Suite* (Health Services Advisory Commission) • *Guidelines on Autopsy Practice* (RCPath, 2002)	Be able to work in the mortuary in a safe way	Care for the safety of all staff and visitors in the mortuary
Medico-legal issues	Be familiar with the duty to report deaths to the coroner, the preliminary enquiries that may take place through the coroner system and entitlement to attend autopsy examination by interested parties Be conversant with current legislation and regulations relating to medico-legal autopsies and related matters Attend some inquests to gain passive experience	A working knowledge of the law relating to death, the investigation of death and disposal of the dead (for those in Scotland, relevant documents in the Crown Office and Procurator Fiscal Service.	An impartial stance and a commitment to justification of any opinion from a balanced interpretation of medical literature. A commitment to best autopsy practice
Reports	Familiarity with the RCPath's *Guidelines on Autopsy Practice*, 2002 and *Best Practice Scenarios*, 2005	Write a final gross and microscopic report with suitable summaries, according to the RCPath's	

		Guidelines on Autopsy Practice, 2002 Produce finished reports in a timely way	
Teaching	Be aware of the value of the autopsy as a teaching aid	Appropriate teaching skills	Be prepared to teach at every available opportunity
Feedback to families and other interested parties		Communication skills required to inform clinical colleagues and other nonclinical professionals involved in inquiries into deaths and assist in multidisciplinary mortality review	An ability to interpret autopsy findings in the context of past medical history, clinical progression of disease or injury and circumstances of death and an ability to communicate those findings and opinions fully, clearly and simply to those who need explanation of them
Photography	Knowledge of Home Office and RCPath Guidelines on Autopsy Practice	Be able to use a digital or optical camera and download and manipulate images	Awareness of confidentiality issues
Audit (specific to autopsy)	Have knowledge of the role of confidential enquiries in the investigation of certain categories of death – National Confidential Enquiry into Patient Outcome and Death (NCEPOD),) Centre for Maternal and Child Enquiries (CMACE) and Confidential Enquiry into Suicide and Homicide (CESH) – and the role of the autopsy within those investigations is necessary	Know where to find relevant information from the UK and other professional pathology associations elsewhere in the world Develop a critical approach to autopsy reports and how well they address the questions raised by a death	Facilitates provision of information for mortality review, for open investigation and for the provision of information

Health determinants and inequalities

Subject	Knowledge	Skills	Attitudes
Nationality and culture	Recognise that good health includes both mental and physical health Recognise the relationship between health inequalities and wealth inequalities Be aware of social and cultural issues and practices such as: • The impact of cultural beliefs and practices on health outcomes • Health determinants that affect patients and communities • The effects of social and cultural issues on access to healthcare, including an understanding of health issues of migrants and refugees Be aware of the national and international situation regarding the distribution of disease, the factors that determine health and disease, and major population health responses Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these Be aware of the impact on health of armed conflict, natural disasters and other social upheavals	Communicate effectively with patients from diverse backgrounds and those with special communication needs, such as the need for interpreters etc Communicate effectively and respectfully with parents, carers etc	Recognise issues of health that are related to social class

Inequality and discrimination/ stigmatising	Understand the implications of disability discrimination legislation for healthcare Recognise how health systems can discriminate against patients from diverse backgrounds, and how to work to minimise this discrimination. For example in respect of age, gender, race, culture, disability, spirituality, religion, and sexuality Recognise the stigmatising effects of some illnesses and work to help in overcoming stigma Recognise that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support; be aware of the role of doctors and other services in combating this inequality. Recognise the effects of exclusion and discrimination on physical and mental health	Respect diversity and recognise the benefits it may bring, as well as associated stigma Be aware of the possible influence of and sensitively include questions about socio-economic status, household poverty, employment status and social capital in taking a medical history Assess the patient's ability to access various services in the health and social system and offer appropriate assistance Help to empower patients and negotiate complex systems to improve health and welfare including, where appropriate, the right to work Where values and perceptions of health and health promotion conflict, facilitate balanced and mutually respectful decision-making	Respect diversity of status and values in patients and colleagues Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centered
Personal beliefs and biases	Recognise that personal beliefs and biases exist and understand their impact (positive and negative) on the delivery of health services Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these	Recognise in routine practice the doctor's role as advocate and manager Advocate and facilitate appropriate self-care Recognise and be able to address the social, biological and	Be confident and positive in one's own professional values Accept uncertainty Be aware of one's own behaviour and how it might impact on patients' health issues

	Be aware of similarities and distinctions between the beliefs and values of the doctor, the patient and the policy-maker	environmental determinants of health (the biopsycho- social model or the bio-sociopsycho- existentialist model), and collaborate with other professionals exposed to the effects of smoking in *utero*	
Values, ethics and law	Ensure that all decisions and actions are in the best interests of the patient and the public good Be familiar with and uphold the rights of children and vulnerable adults Be familiar with and uphold the rights of disabled people to participate in healthy and rewarding employment Practise in accordance with an appropriate knowledge of contemporary legislation Act with appropriate professional and ethical conduct in challenging situations	Seek out and utilise opportunities for health promotion and disease prevention Based on an understanding of risk, be able to apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations Recognise important issues in preventative healthcare, for example in sexual health, substance abuse etc, and take opportunities to raise these issues in health promotion. For example, explain to parents who smoke the health risk that this poses to their children	Respond to people in an ethical, honest, and non-judgmental manner Use appropriate methods of ethical reasoning to come to a balanced decision where complex and conflicting issues are involved
Policy, research and change	Be aware of current UK screening programmes Be aware of issues that might affect health inequalities that are currently under debate regarding changes in mthe NHS, including the public policy process Be aware of and maintain an up to date knowledge of research evidence regarding	Be able to access and make use of appropriate population, demographic, socio-economic and health data Conduct an assessment of community health needs, and where appropriate apply these in practice	

	the most important determinants of health Know how to access and use local health data Know how to access resources for community action and advocacy (e.g. resources, legislation, policy documents)		

2. MAINTAINING GOOD MEDICAL PRACTICE

Objective: to keep knowledge and skills and appropriate attitudes up to date.

New specialists will:

- take responsibility for and keep up-to-date in their own relevant professional and self-development, and facilitate that of others
- acknowledge that the balance of their skills and expertise will change as their careers progress and they specialise in certain areas of clinical
- practice.
- Trainees should hold at least one position of responsibility during training and attend at least one management course.

Subject	Knowledge	Skills and Knowledge application	Attitudes and Behaviours
Overall clinical judgement	Possess sufficient clinical and pathology knowledge to enable integration of clinical data and pathological features	Correct interpretation of pathological features in the context of available clinical information	Understand the quantity and quality of clinical information required for accurate diagnosis in most situations **Other curricula have used:** Critical appraisal of the available clinical and laboratory data in coming to diagnostic/treatment decisions
Recognise own limitations	Know the extent of one's own limitations and know when to ask for advice		Be willing to consult and to admit mistakes
Written records	Possess knowledge of the appropriate content of reports Understand the principles of diagnostic coding and report archiving Understand the problems faced by people for whom English is not a first language	Produce accurate reports with clear conclusions and other written correspondence	Appreciate the importance of timely dictation, cost-effective use of medical secretaries and the growing use of electronic communication Be aware of the need for prompt and accurate communication with clinicians

	Know the relevance of data protection pertaining to patient confidentiality		Show courtesy towards medical secretaries and clerical staff.
Decision making	Understand clinical priorities for investigation and management	Analyse and manage clinical problems effectively	Be flexible and willing to change in the light of changing conditions Be willing to ask for help
Life-long learning	Understand the importance of continuing professional development.	Recognise and use learning opportunities Use the potential of study leave to keep one up to date Able to maintain a professional portfolio Monitor own performance through audit and feedback	Be self-motivated and eager to learn Show willingness to learn from colleagues and to accept constructive feedback
Good use of information technology	Understand use of email, internet, fax and the telephone Know the principles of how to retrieve and use data held in clinical computer systems Understand the principles of health care related coding systems e.g. diagnostic coding within histopathology reports Know the principles of literature searching using medical databases Demonstrate an understanding of the range of possible uses for clinical data and information and appreciate the advantages and disadvantages of aggregating clinical	Demonstrate competent use of database, word processing and statistics programmes Know how to find and evaluate and access websites and health-related databases (including literature searches) Apply the principles of confidentiality in the context of IT Be able to use digital imaging devices effectively and manage image resolution and colour-space Be able to use videoconferencing	Be prepared to use IT tools within a diagnostic and, where relevant, research setting e.g. videoconferencing and telepathology systems Demonstrate an understanding of the importance of accurate diagnostic coding Understand the importance of keeping up-to-date with new developments within IT that are pertinent to histopathology Be prepared to invest time and effort in learning new IT skills as

	data Define the main features, responsibilities and liabilities in the UK and Europe pertaining to confidentiality Know the principles of videoconferencing and telepathology – including the strengths and pitfalls of these systems the pathology	and telepathology equipment when necessary Use data encryption and passwords appropriately Be able to use coding systems effectively	appropriate to one's role Be aware of ethical issues that might arise during the use of IT tools such as patient databases
The organizational framework for clinical governance and its application in practice	Possess an understanding of the important aspects of clinical governance: • medical and clinical audit • research and development • integrated care pathways • evidence-based practice • clinical effectiveness • clinical risk systems • to define the procedures and the effective action when things go wrong • in one's own practice or that of others • complaints procedures • risk assessments Understand the benefits a patient might reasonably expect from clinical governance	Be an active participant in clinical Governance Be able to undertake medical and clinical audit Be actively involved in audit cycles Be active in research and development Critically appraise medical data research Practise evidence-based medicine Aim for clinical effectiveness (best practice) at all times Educate self, colleagues and other healthcare professionals Be able to handle and deal with complaints in a focused and constructive manner Learn from complaints	Make the care of your patient your first concern Respect patients' privacy, dignity and confidentiality Be prepared to learn from mistakes, errors and complaints Recognise the importance of teamwork Share best practice with others

Risk management	Possess knowledge of such matters as health and safety policy, policies on needle stick injuries, note keeping, communications and staffing numbers Possess knowledge of risk management issues pertinent to laboratory processing Possess knowledge of risk assessment, perception and relative risk Know the complications and side effects of treatments and investigations	Confidently and authoritatively discuss relevant risks with patients and to obtain informed consent Able to balance risks and benefits with patients	Willingness to respect and accept patients' views and choices Willingness to be truthful and to admit error to patients, relatives and colleagues
Evidence	Know and understand: • the principles of evidence-based • medicine • the types of clinical trial • the types of evidence	Able to critically appraise evidence Ability to be competent in the use of databases, libraries and the internet Ability to discuss the relevance of evidence with individual patients or their families	Display a keenness to use evidence in the support of patient care and own decisions therein
Clinical audit	Know and understand the audit cycle, data sources and data confidentiality Understand the principles of internal and external quality assurance	Involvement in ongoing audit Able to initiate and complete at least one clinical audit project per year.	Consider the relevance of audit to benefit patient care and individual performance (i.e. to clinical governance)
Guidelines	Know the advantages and disadvantages of guidelines.	Demonstrate the ability to utilize guidelines Be able to contribute to the evolution of guidelines	Show regard for individual patient needs when using guidelines Show willingness to use guidelines as appropriate
Structure of the NHS	Know the structure of the NHS, primary care	Develop skills in managing change	Show an awareness of equity in

and the principles of management including change management	groups and hospital Trusts Know the local Trust's management structure (including chief executives, medical directors, clinical directors and the pathology laboratory) Know finance issues in general in the NHS, especially budgetary management and commissioning Understand the importance of a health service for the population	and managing people Develop interviewing techniques and those required for performance reviews Be able to build a business plan Be able to utilise one's position in the NHS to best effect	healthcare access and delivery Demonstrate an understanding of the importance of a health service for the population Show respect for others, ensuring equal opportunities
Relevance of outside bodies	Know the role and have an understanding of the relevance to professional life of: • the medical royal colleges • General Medical Council (GMC) • Postgraduate Dean and deaneries • defence unions • British Medical Association (BMA) • specialist societies Know of central government health regulatory agencies (e.g. National Institute for Health and Clinical Excellence [NICE], Healthcare Commission [HCC], NHS Quality Improvement Scotland, National Patient Safety Agency [NPSA])	Recognise situations when appropriate to involve these bodies and individuals	Be open to constructive criticism Accept professional regulation
News Media awareness	Know the importance of news media awareness and public communications training and where to obtain it	Recognise situations when it may be appropriate to implement such training and/or seek further advice from the Trust	Act professionally Be willing to ask for help

Planning	Demonstrate knowledge of: • The structure, financing, and operation of the NHS and its constituent organizations • Ethical and equality aspects relating to management and leadership e.g. approaches to use of resources/ rationing; approaches to involving the public and patients in decision making • Business management principles: priority setting and basic understanding of how to produce a business plan • The requirements of running of a department, unit or practice relevant to the specialty • Understand the concept of and principles behind good information governance • Understand the concepts and good practice necessary to maintain information security, including use of passwords and data encryption • Have an appreciation of the range of pathology-related material available on the Internet – be able to find and evaluate specific resources including molecular, image and text data • Be aware of web-based IT tools	Demonstrate the ability to: • Develop protocols & guidelines and implementation of these • Analyse feedback and comments and, integrate them into plans for the service	Demonstrate: • An awareness of equity in healthcare access and delivery
Managing resources	Demonstrate knowledge of: • Efficient use of clinical resources in • order to provide care • Commissioning, funding and	Demonstrate the ability to: • Use clinical audit with the purpose of highlighting resources required	Demonstrate: • Commitment to the proper use of public money. Showing a commitment to

	contracting arrangements relevant to the specialty • How financial pressures experienced by the specialty department and organisation are managed	• Manage time and resources effectively in terms of delivering services to patients	taking action when resources are not used efficiently or effectively • Awareness that in addition to patient specific clinical records, clinical staff also have responsibilities for other records (e.g. research)
Managing people	Demonstrate knowledge of: • Relevant legislation (e.g. Equality and Diversity, Health and Safety, Employment Law) and local Human Resource policies • The duties, rights and responsibilities of an employer, and of a co-worker (e.g. looking after occupational safety of fellow staff) • Individual performance review purpose, techniques and processes, including difference between appraisal, assessment and revalidation	Demonstrate the ability to: • Prepare rotas; delegate; organize and lead teams • Contribute to the recruitment and selection of staff • Contribute to staff development and training, including mentoring, supervision and appraisal	Demonstrate: • A willingness to supervise the work of less experienced colleagues • Commitment to good communication whilst also inspiring confidence and trust
Managing performance	Demonstrate knowledge of: • Organisational performance management techniques and processes • How complaints arise and how they are managed	Demonstrate the ability to: • Use and adhere to clinical guidelines and protocols, morbidity and mortality reporting systems, and complaints management systems • Improve services following evaluation / performance	Demonstrate: • Responding constructively to the outcome of reviews, assessments or appraisals of performance • Understanding the needs and priorities of nonclinical staff

		management	
Identifying the contexts for change	Demonstrate knowledge of: • The responsibilities of the various Executive Board members and Clinical Directors or leaders • The function and responsibilities of national bodies such as DH, HCC, NICE, NPSA, NCAS; Royal Colleges and Faculties, specialty specific bodies, representative bodies; regulatory bodies; educational and training organizations	Demonstrate the ability to: • Discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty • Identify trends, future options and strategy relevant to the specialty and delivering patient services	Demonstrate: • Compliance with national guidelines that influence healthcare provision • Willingness to articulate strategic ideas and use effective influencing skills
Applying knowledge and evidence	Demonstrate knowledge of: • Patient outcome reporting systems within the specialty, and the organisation and how these relate to national programmes • Research methods and how to evaluate scientific publications including the use and limitations of different methodologies for collecting data	Demonstrate the ability to: • Compare and benchmark healthcare services • Use a broad range of scientific and policy publications relating to delivering healthcare services	Demonstrate: • The ability to understand issues and potential solutions before acting
Making decisions	Demonstrate knowledge of: • How decisions are made by • individuals, teams and the organisation • Effective communication strategies within organisations	Demonstrate the ability to: • Prepare for meetings – reading agendas, understanding minutes, action points and background research on agenda items • Work collegiately and collaboratively with a wide	Demonstrate: • Appreciating the importance of involving the public and communities in developing health services • Willingness to participate in decision making processes beyond the immediate

		range of people outside the immediate clinical setting	clinical care setting.
Evaluating impact	Demonstrate knowledge of: • Impact mapping of service change • Barriers to change • Qualitative methods to gather the experience of patients and carers	Demonstrate the ability to: • Evaluate outcomes and re-assess the solutions through research, audit and quality assurance activities • Ability to understand the wider impact of implementing change in healthcare provision and the potential for opportunity costs	Demonstrate: • Commitment to implementing proven improvements in clinical practice and services • Obtaining the evidence base before declaring effectiveness of changes • Attitudes and behaviours that assist dissemination of good practice •

3. TEACHING AND TRAINING, APPRAISING AND ASSESSING

Objective: to demonstrate the knowledge, skills and attitudes to provide appropriate teaching and to participate in effective research.
New specialists will:

- be able to demonstrate the potential to teach and train effectively at all levels of undergraduate and postgraduate education where required
- demonstrate skills and strategies in the process of feedback to colleagues and trainees, ensuring positive and constructive outcomes
- be capable of judging competence and professional attributes in others.

Subject	Knowledge	Skills and knowledge application	Attitudes & Behaviours
To have the skills, attitudes and practices of a competent teacher	To have the skills, attitudes and practices of a competent teacher	Identify adult learning principles Identify learner needs Structure of a teaching activity Varied teaching strategies Identify learning styles Principles of evaluation	Facilitate learning process Identify learning outcomes Construct educational objectives Design and deliver an effective teaching event Communicate effectively with the Learners Use effective questioning techniques Teach large and small groups effectively Select and use appropriate teaching resources Give constructive effective feedback Evaluate programmes and events Use different media for teaching

			that are appropriate to the teaching Setting
To be able to plan and analyse a research project	Know the principles of performing a research study Know how to use appropriate statistical Methods Know the principles of research ethics and the structure and function of local research ethics committees Know how to write a scientific paper Understand the principles of research funding and how to obtain it	Undertake systematic critical review of scientific literature Ability to frame questions to be answered by a research project Develop protocols and methods for research Be able to use databases Be able to accurately analyse data Be able to write a scientific paper Have good written and verbal presentation skills Be able to participate as part of a team involved in a research project or two case reports by the end of training, and be able to demonstrate their role in its publication or presentation	Demonstrate curiosity and a critical spirit of enquiry Ensure patient confidentiality Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research Humility
Appraisal and assessment	Understand the concepts of appraisal and assessment Understand how to conduct an appraisal interview or assessment	Able to maintain an appraisal portfolio Develop the ability to undertake an effective appraisal or assessment	Demonstrate a positive attitude to Appraisal Be aware of equality and diversity issues as they relate to appraisal

4. RELATIONSHIPS WITH PATIENTS

Objective: to ensure that the trainee has the knowledge, skills and attitudes to act in a professional manner at all times. New specialists will:

- be skilled in building relationships of trust with patients and their families, through effective interpersonal skills, a courteous and compassionate approach, and respect for their privacy, dignity and cultural and religious beliefs
- follow the principles and legal aspects of consent and confidentiality
- be able to manage difficult and complex situations with patients and their families, to advise them appropriately and to manage complaints effectively.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Patient safety	Understand the issues around patient safety and the role of the NPSA Be aware of the NPSA National Reporting and Learning System	Demonstrate awareness of patient safety in a practical situation	Show regard for patient safety
Continuity of care	Understand the relevance of continuity of care	Ensure satisfactory completion of reasonable tasks at the end of the shift/day with appropriate handover Ensure appropriate documentation of/for handover Make adequate arrangements to cover leave	Recognise the importance of punctuality and attention to detail Recognise the importance of communication with patients/carers
Informed consent	Know the process for gaining informed consent Understand the principles of consent issues as relating to cellular pathology clinical practice and research Know how to gain consent for a research Project	Give appropriate information in a manner patients understand and be able to gain informed consent from patients Demonstrate appropriate use of written material	Respect for patients' and relatives' points of view and wishes Consider the patient's needs as an individual

Confidentiality	Know how to structure the interview to identify the patient's: • concerns/problem list/priorities • expectations • understanding • acceptance	Listen Use 'open' questions followed by appropriate 'closed' questions Avoid jargon and use familiar language Be able to communicate both verbally and in writing to patients whose first language may not be English in a manner that they understand Use interpreters appropriately Give clear information and feedback to patients and share information with relatives when appropriate Reassure 'worried well' patients	Demonstrate an understanding of the need for: • involving patients in decisions • offering choices • respecting patients views • dress and appearance that is appropriate to the clinical situation and patient
Breaking bad news	Know how to structure the interview and where it should take place Be aware of the normal bereavement process and behavior Have awareness of organ donation procedures and role of local transplant coordinators	Be able to break bad news in steps appropriate to the understanding of the individual and be able to support distress Avoid jargon and use familiar language Encourage questions Maintain appropriate hope whilst avoiding inappropriate optimism	Act with empathy, honesty and sensitivity

Complaints	Have awareness of the local complaints procedures Have an awareness of systems Have awareness of the local complaints procedures	Manage dissatisfied patients/relatives Anticipate potential problems	Manage dissatisfied patients/relatives Anticipate potential problems
Doctor-patient relationship	Understand all aspects of a professional relationship Establish the limiting boundaries surrounding the consultation Deal with challenging behaviour in patients that transgress those boundaries, e.g. aggression, violence, racism and sexual harassment	Help the patient appreciate the importance of cooperation between patient and doctor Develop the relationship that facilitates solutions to patient's problems Deal appropriately with behaviour falling outside the boundary of the agreed doctor-patient relationship in patients, e.g. aggression, violence, sexual harassment	Adopt a non-discriminatory attitude to all patients and recognise their needs as individuals Seek to identify the healthcare belief of the patient Acknowledge patient rights to accept or reject advice
Educating patients about: • **disease** • **investigations** • **therapy**	Know investigation procedures including possible alternatives and choices Be aware of strategies to improve adherence to therapies	Give information to patients clearly in a manner that they can understand, including written information Encourage questions Negotiate individual treatment plans including action to be taken if patient deteriorates or improves	Give information to patients clearly in a manner that they can understand, including written information Encourage questions Negotiate individual treatment plans including action to be taken if patient deteriorates or improves
Environmental and lifestyle risk factors	Understand the risk factors for disease including: • diet	Advise on lifestyle changes Involve other healthcare workers as appropriate	Suppress any display of personal judgement

	• exercise • social deprivation • occupation • substance abuse • behavior		
Epidemiology and screening	Know the methods of data collection and their limitations Know diseases that are notifiable Know principles of primary and secondary prevention and screening	Assess an individual patient's risk factors Encourage participation in appropriate disease prevention or screening programmes	Consider the: • positive and negative aspects of prevention • importance of patient confidentiality Respect patient choice
Legal issues	Understand the legal issues relating to paediatric and perinatal pathology Know the legal responsibilities of completing death certificates Understand the legal framework of the coronial/ procurator fiscal system, including the types of deaths that should be referred to the coroner/procurator fiscal	Liaison with the coroner/procurator fiscal	Act with compassion at all times.
Ensuring patient safety	Demonstrate knowledge of: • Risk management issues pertinent to specialty, understands potential sources of risk and risk management tools, techniques and protocols How healthcare governance influences patient care, research and educational activities at a local, regional and national level	Demonstrate the ability to: • Report clinical incidents • Assess and analyse situations, services and facilities in order to minimise risk to patients and the public • Monitor the quality of equipment and safety of environment relevant to the specialty	Demonstrate: • Actively seeking advice/assistance whenever concerned about patient safety • Willingness to take responsibility for clinical governance activities, risk management and audit in order to improve the quality

			of the service
Critically evaluating	Demonstrate knowledge of: • Quality improvement methodologies including a range of methods of obtaining feedback from patients, the public and staff The principles and processes of evaluation, audit, research and development, clinical guidelines and standard setting in improving quality	Demonstrate ability to: • Undertake an audit project • Contribute to meetings which cover audit; critical incident reporting, patient outcomes	Demonstrate: • Listening to and reflecting on the views of patients and carers, dealing with complaints in a sensitive and co-operative manner • Acting as an advocate for the service
Encouraging innovation	Demonstrate knowledge of: • A variety of methodologies for developing creative solution to improving services	Demonstrate the ability to: • Question existing practice in order to improve services • Apply creative thinking approaches (or methodologies or techniques) in order to propose solutions to service issues	Demonstrate: • Being open minded to new ideas • A proactive approach to new technologies and treatments • Supporting colleagues to voice ideas
Facilitating transformation	Demonstrate knowledge of: • The implications of change on systems and people • Project management methodology	Demonstrate the ability to: • Provide medical expertise in situations beyond those involving direct care • Show effective presentation skills (written and verbal)	Demonstrate: • Being positive about improvement and change • Striving for continuing improvement in delivering patient care services

5. WORKING WITH COLLEAGUES

Objective: to demonstrate good working relationships with colleagues and appropriate communication skills.
New specialists will:

- strive for continuing improvement in all aspects of their work and that of colleagues while mindful of priorities and high standards
- have effective interpersonal skills which enable them to bring out the best in colleagues, to resolve conflicts when they arise and to develop working relationships within the team
- Support teams that bring together different professions and disciplines and other agencies, to provide high quality healthcare.
- Develops an understanding of leadership by drawing on values, strengths and abilities to deliver high standards of care.

Subject	Knowledge	Skills & Knowledge Application	Attitudes and Behaviours
Working with clinical teams	Understand how a team works Understand the roles and responsibilities of team members, especially within the department and within multidisciplinary teams Know how a team works effectively. Know the roles of other clinical specialties and their limitations Demonstrates knowledge of a wide range of leadership styles and approaches and the applicability to different situations and people	Be able to communicate effectively Seek advice if unsure Recognise when input from another specialty is required for individual patients Be able to work effectively with other health care professionals, including demonstration of material at MDT meetings Respect skills and contribution of colleagues Recognise own limitations Recognise when to delegate Show leadership and supervise safely Stages B-D: Delegate, show leadership and supervise safely	Show respect for others opinions Be conscientious and work Cooperatively Respect colleagues, including nonmedical professionals and recognize good advice. Recognise own limitations Demonstrate: Showing recognition of a team approach and willingness to consult and work as part of a team

		Demonstrate the ability to: • Enable individuals, groups and agencies to implement plans and decisions • Identify and priorities tasks and responsibilities including to delegate and supervise safely	
Communication with colleagues	Know: • how to communicate with other members of the pathology department, other departments and other members of the multidisciplinary team • how to communicate in writing, through letters and reports • when to phone a general practitioner (GP) •	Use appropriate language Select an appropriate communication Method	Be prompt and respond courteously and fairly
Complaints	Have awareness of the local complaints and procedures Have an awareness of systems of independent review	Anticipate potential problems Manage dissatisfied colleagues	Act with honesty and sensitivity and promptly Be prepared to accept responsibility
Interactions between: • **hospital and GP** • **hospital and other agencies, e.g. social services** • **medical and**	Know the roles and responsibilities of team members Know how a team works effectively Know the roles of other clinical specialties and their limitations	Delegate, show leadership and supervise safely Be able to communicate effectively Handover safely	Show respect for others opinions Be conscientious and work cooperatively Respect colleagues, including nonmedical professionals, and recognize good advice.

surgical specialties		Seek advice if unsure Recognise when input from another specialty is required for individual patient Be able to work effectively with GPs, other medical and surgical specialists and other healthcare professionals	Recognise own limitations
Creating an environment in which mistakes and mismanagement of patients can be openly discussed and lessons learned		Be aware of the advantages and disadvantages of guidelines Report and investigate critical incidents Take appropriate action if you suspect you or a colleague may not be fit to practice	
Self awareness	Demonstrate knowledge of : • Ways in which individual behaviours impact on others; personality types, group dynamics, learning styles, leadership styles • Methods of obtaining feedback from others	Demonstrate the ability to: • Maintain and routinely practice critical self awareness, including able to discuss strengths and weaknesses with supervisor, recognising external influences and changing behavior accordingly • Show awareness of and sensitivity to the way in which cultural and religious beliefs affect approaches and decisions, and to respond respectfully	Demonstrate: Adopting a patient-focused approach to decisions that acknowledges the right, values and strengths of patients and the public Recognising and showing respect for diversity and differences in others

Self management	Demonstrate knowledge of: • Tools and techniques for managing stress • The role and responsibility of occupational health and other support networks • The limitations of self professional competence	Demonstrate the ability to: • Recognise the manifestations of stress on self and others and know where and when to look for support • Balance personal and professional roles and responsibilities. Prioritise tasks, having realistic expectations of what can be completed by self and others.	Demonstrate: • Being conscientious, able to manage time and delegate • Recognising personal health as an important issue
Self development	Demonstrate knowledge of: • Local processes for dealing with and learning from clinical errors • The importance of best practice, transparency and consistency	Demonstrate the ability to: • Use a reflective approach to practice with an ability to learn from previous experience • Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs	Demonstrate: • Being prepared to accept responsibility • Showing commitment to continuing professional development which involves seeking training and self development opportunities, learning from colleagues and accepting constructive criticism
Acting with integrity	Demonstrate knowledge of: • The professional, legal and ethical codes of the GMC , e.g. Fitness to Practice and any other codes pertaining to the trainee's specialty • Prejudice and preferences within self, others, society and cultures	Demonstrate the ability to: • Recognise, analyse and know how to deal with unprofessional behaviours I clinical practice, taking into account local and national regulations • Create open and non-	Demonstrate: • Acceptance of professional regulation • Promotion of professional attitudes and values • Probity and the willingness to be truthful and to admit errors

		discriminatory professional working relationships with colleagues awareness of the need to prevent bullying and harassment	
Developing networks	Demonstrate knowledge of: • The role of team dynamics in the way a group, team or department functions • Team structures and the structure, roles and responsibilities of the multidisciplinary teams within the broader health context relevant to the specialty, including other agencies	Demonstrate the ability to: • Take on differing and complementary roles within the different communities of practice within which they work • Support bringing together different professionals disciplines, and other agencies, to provide high quality healthcare •	Demonstrate: • Interacting effectively with professionals in other disciplines and agencies • Respecting the skills and contributions of colleagues
Building and maintaining relationships	Demonstrate knowledge of: • Specific techniques and methods that facilitate effective and empathic communication	Demonstrate the ability to: • Develop effective working relationships with colleagues and other staff through good communication skills , building rapport and articulating own view • Communicate effectively in the resolution of conflicts, providing feedback, and identifying and rectifying team dysfunction	Demonstrate: • Recognising good advice and continuously promoting values based non prejudicial practice • Using authority appropriately an assertively; willing to follow when necessary
Encouraging contribution	Demonstrate knowledge of: • Facilitation and conflict resolution	Demonstrate the ability to: • Enable individuals, groups	Demonstrate: • Showing recognition of a

	methods	and agencies to implement plans and decisions • Identify and prioritise tasks and responsibilities including to delegate and supervise safely	team approach and willingness to consult and work as part of a team • Respecting colleagues, including non-medical professionals.
Identifying the contexts for change	Demonstrate knowledge of: • The responsibilities of the various Executive Board members and Clinical Directors or leaders • The function and responsibilities of national bodies such as DH, HCC, NICE, NPSA, NCAS; Royal Colleges and Faculties, specialty specific Demonstrate the ability to: • Discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty • Identify trends, future options and strategy relevant to the specialty and delivering patient services Demonstrate: • Compliance with national guidelines that influence healthcare provision • Willingness to articulate strategic ideas and use effective influencing skills, representative bodies; regulatory bodies; educational and training organizations bodies, representative bodies; regulatory bodies; educational and training organizations	Demonstrate the ability to: • Discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty • Identify trends, future options and strategy relevant to the specialty and delivering patient services	Demonstrate: • Compliance with national guidelines that influence healthcare provision • Willingness to articulate strategic ideas and use effective influencing skills

Applying knowledge and evidence	Demonstrate knowledge of: • Patient outcome reporting systems within the specialty, and the organisation and how these relate to national programmes • Research methods and how to evaluate scientific publications including the use and limitations of different methodologies for collecting data	Demonstrate the ability to: • Compare and benchmark healthcare services • Use a broad range of scientific and policy publications relating to delivering healthcare services	Demonstrate: • The ability to understand issues and potential solutions before acting

6 HEALTH

Objective: to understand the importance of the personal health of the doctor.

New specialists will:

- act quickly and effectively if they have reason to believe that their own or a colleague's conduct, performance or health may put patients at risk.

Subject	Knowledge	Skills & knowledge Application	Attitudes and behaviours
Personal health	Know of occupational health services Know of one's responsibilities to the Public Know not to treat oneself or one's family	Recognise when personal health takes priority over work pressures and to be able to take the necessary time off	Recognise personal health as an important issue
Stress	Know the effects of stress Have knowledge of support facilities for Doctors	Develop appropriate coping mechanisms for stress and ability to seek help if appropriate	Recognise the manifestations of stress on self and others

7. PROBITY

Objective: to be able to demonstrate probity in all aspects of professional practice.

New specialists will:

- always act in their personal and professional lives to maintain public trust in the profession
- undertake duties such as writing reports, giving evidence and completing and signing documents in a timely, honest and conscientious way
- through their leadership encourage the development and practice of these qualities in their colleagues.

Subject	Knowledge	Skills & Knowledge Application	Attitudes and Behaviours
Service information	Legal framework for advertisements		Recognise absolute importance of accuracy and impartiality
Writing reports and giving evidence			Honesty and integrity Timeliness
Research		Obtain ethical approval	Put safety and care of patients first Conduct research with honesty and integrity
Financial dealings			Not induce patients to accept private medical care Manage funds for the purpose for which they are intended Declare conflicts of interest

APPENDIX 3 Directed Workplace-Based Assessments by Stages of Training

Stage A (18 in stage, 12 directed)
Directly Observed Practical Skills (DOPS) (six from the following): **Set up and use microscope** **Autopsy**: • performing a straightforward evisceration • dissection of single organ / system **Cut-up:** • completion of a simple cut up session (e.g. simple skins, gall bladders, appendices) • macroscopic description and block taking of a major cancer resection (e.g. colonic cancer) **Microscopy**: • demonstrate ability to recognise normal histology • demonstrate ability to recognise straightforward pathological entities (e.g. basal cell carcinoma, adenocarcinoma in biopsies, acute appendicitis) **Cytology:** • screen a gynae cytology slide and correctly identify various cells Comment: all six DOPS undertaken in Stage A will be taken from this list
Evaluation of Clinical Events (ECEs) (three from the following): **Histology/cytology:** • present a case with ancillary investigations to a consultant trainer **Autopsy:** • presentation to trainer or clinicians of findings in straightforward cases (e.g. bronchopneumonia, myocardial infarction, pulmonary embolus, cerebrovascular accident) **Audit:** • present at audit meeting and lead discussion, having discussed findings with trainer beforehand **Poster presentation:** • show a poster at the Pathological Society meeting or similar **Teaching event for medical students or demonstration of interesting case to other trainees:** • to be observed by trainer **Referral letter:** • write a draft letter on a case for referral

Comment: three further ECEs in stage A may be taken from outside this list.

Case-Based Discussions (CBDs) (three from the following):

Autopsy:
- write an appropriate post-mortem report with clinicopathological correlation and cause of death

Histology/non-cervical cytology:
- present a case with ancillary investigations (e.g. additional levels, blocks or immuno- or histo-chemical stains, review of previous samples) to a consultant trainer, indicating the relevance of the ancillary investigations
- write an appropriate report for a major cancer resection (with appropriate TNM staging and prognostic information)

Cytology:
- present and discuss a case of cervical dyskaryosis (including appropriate follow-up and clinical management)

Comment: three further CBDs in stage A may be taken from outside this list.

Stage B (18 in stage, 12 directed)

Directly Observed Practical Skills (DOPS) (four from the following):

Autopsy:
- performing an evisceration (not including complex case, e.g. post-operative)
- dissection of single organ/system

Cut-up:
- completion of a whole cut-up session
- macroscopic description and block taking of a major cancer resection (e.g. radical prostatectomy or hysterectomy for cancer)

Microscopy:
- demonstrate ability to recognise pathological entities (e.g. ulcerative colitis, small cell carcinoma of the lung, urothelial carcinoma *in situ*)

Cytology:
- screen a gynae cytology slide and correctly grade the degree of dyskaryosis
- demonstrate the ability to recognise simple pathological entities in non-cervical cytology samples (e.g. fibroadenoma, Warthin's tumour, non-small cell carcinoma of the lung)

Photography:
- macro or microscopic specimens

Comment: two further DOPS undertaken in stage B may be taken from outside this list.

Evaluation of Clinical Events (ECEs) (four from the following):

Histology/cytology:
- present a case with ancillary investigations to a consultant trainer

Autopsy:
- presentation to trainer or clinicians of findings (e.g. carcinomatosis, road traffic accident, gastrointestinal haemorrhage, cirrhosis)

Audit:
- present at audit meeting and lead discussion, having discussed findings with trainer beforehand

Poster presentation:
- show a poster at the Pathological Society or similar

Teaching event for medical students or demonstration of interesting case to other trainees:
- to be observed by trainer

Referral letter:
- write a draft letter on a case for referral

MDTs
- demonstrate a case that the trainee has reported at MDT or other clinicopathological meeting

Comment: two further ECEs in stage B may be taken from outside this list.

Case-Based Discussions (CBDs) (four from the following):

Autopsy:
- write an appropriate post-mortem report with clinicopathological correlation and cause of death

Histology/non-cervical cytology:
- present a case with ancillary investigations (e.g. additional levels, blocks or immuno- or histo-chemical stains, review of previous samples) to a consultant trainer, indicating the relevance of the ancillary investigations
- write an appropriate report for a major cancer resection (with appropriate TNM staging and prognostic information)

Cytology:
- present and discuss a case of cervical dyskaryosis (including appropriate follow-up, clinical management and histocytological correlation)
- present and discuss a non-cervical cytology case (with appropriate follow-up, clinical management and histocytological correlation)

Comment: two further CBDs in stage B may be taken from outside this list.

Stage C (18 in stage, 12 directed)

Directly Observed Practical Skills (DOPS) (4 from the following):

Cut Up:

- Supervision and training of more junior trainees undertaking cut up, observed by trainer
- Cut up of complex case (e.g. Nephrectomy for tumour, pneumonectomy, bowel resection for Hirschsprung disease)

Microscopy:

- Demonstrate ability to recognize pathological entities (e.g. medical renal or liver biopsies, inflammatory skin biopsies)

Photography:

- Macro or microscopic specimens for presentation / publication
- Comment: 2 further DOPS undertaken in stage C may be taken from outside this

Evaluation of Clinical Events (ECEs) (4 from the following):

Histology:

- Present a case with ancillary investigations to a consultant trainer

Audit:

- Present at audit meeting and lead discussion, having discussed findings with trainer beforehand

Poster presentation:

- Show a poster at the PPS or similar

Teaching event for medical students or other trainees:

- To be observed by trainer

Referral letter:

- Write a draft letter on a case for referral

MDT's

- Review and present case(s) at MDT or other clinicopathological meeting
- Comment: 2 further ECEs in stage C may be taken from outside this list.

Case-Based Discussions (CBDs) (4 from the following):

Histology:

- Present a case with ancillary investigations (e.g. additional levels, blocks or immuno- or histochemical stains, review of previous samples) to a
- consultant trainer, indicating the relevance of the ancillary investigations
- Write an appropriate report for a major cancer resection (with appropriate staging and prognostic information)

Management

- Clinical incident reporting (draft formulation and discussion of report)
- Involvement in business planning of a clinical development
- Comment: 2 further CBDs in stage C may be taken from outside this list.

Stage D (12 in stage, all directed)

Evaluation of Clinical Events (ECEs) (6 from the following):

Audit:

- Present at audit meeting and lead discussion, having discussed findings with trainer beforehand

Poster or Oral presentation:

- Present a poster or supervise the composition of a poster presentation by a more junior trainee

Teaching event for medical students or other trainees:

- To be observed by trainer

Referral letter:

- Initiate the referral of and write a referral letter for a complex case requiring a second opinion

MDT's

- Review cases for and present a complete MDT or other clinicopathological meeting

Case-Based Discussions (CBDs) (6 from the following):

Histology:

Present a complex case to a consultant trainer, indicating the relevance of any ancillary investigations
Write an appropriate report for a complex special interest case of the trainee's choice

Management

- Clinical incident reporting (draft formulation and discussion of report)
- Involvement in business planning of a clinical development
- Participation in an appropriate departmental or other management meeting, with a demonstration of an understanding of the issues discussed therein
- Demonstration of an understanding of the management and financial issues affecting the National Health Service outside of as well as within
- Histopathology (e.g. in the context of an observed presentation to more junior trainees on one or more of these subjects / issues)

Autopsy

Directly Observed Practical Skills (DOPS) (2 from the following):

- Removal of spinal cord
- Dissection of heart to examine and sample histologically the conduction system
- Taking blood cultures
- Taking peripheral blood for toxicology screen
- Removal of femur or similar long bone in a case of skeletal dysplasia

Evaluation of Clinical Events (ECEs) (2 from the following):

- Interpretation of a positive illicit drug-related death toxicology results, in conjunction with relevant histopathology
- Interpretation of a complex neonatal death following a period of time on special carer baby unit.
- Head injury examination and interpretation

Case-Based Discussions (CBDs) (2 from the following):

- Clinicopathological evaluation of a perioperative death
- Clinicopathological evaluation of an intrapartum death
- Clinicopathological evaluation of a sudden unexpected death in infancy
- Mock inquest - presenting evidence
- Presentation of autopsy gross and histopathology findings to a mortality review meeting with clinicians
- Presentation of an autopsy in real time to visiting ambulance/Police trainees coming to the mortuary

Earliest opportunity for Year 1 Assessment

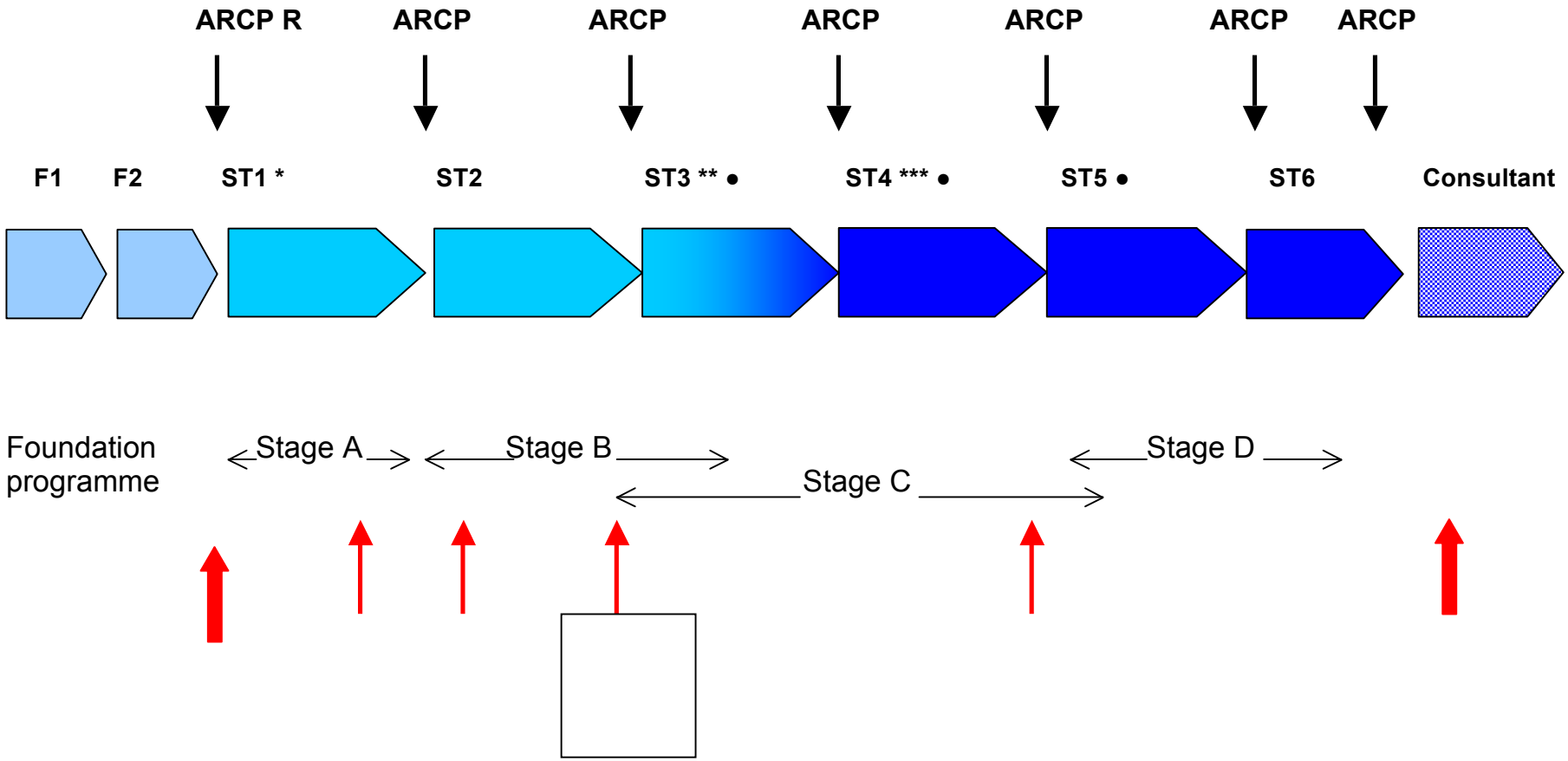
Earliest opportunity for FRCPath Part 1

Earliest opportunity for entry to PP

Normal Earliest opportunity for FRCPath Part 2

Certificate of Completion of Training (CCT) or Certificate confirming Eligibility for Specialist Registration

APPENDIX 4: ILLUSTRATIVE EXAMPLE OF PAEDIATRIC AND PERINATAL PATHOLOGY TRAINING



* Trainees must have passed the ST1 RCPath Assessment by the end of Stage A/ST1.
Failure to pass the Year 1 Assessment will prevent the trainee from progressing to Stage B.

** Trainees must have passed the FRCPath Part 1 examination by the end of Stage B.
Failure to pass the Part 1 examination by month 30 will prevent the trainee from progressing to Stage C.

*** Trainees must have passed the FRCPath Part 2 examination by the end of Stage C.

APPENDIX 5 ILLUSTRATIVE TIMETABLE OF PAEDIATRIC AND PERINATAL PATHOLOGY TRAINING

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
ST1	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
	Begin Stage A. NTN awarded							RCPath Year 1 Assessment		RCPath Year 1 Assessment		Earliest opportunity to end Stage A
ST2	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24
	Earliest opportunity to begin Stage B	Part 1 FRCPath opportunity		Part 1 FRCPath results				Part 1 FRCPath opportunity		Part 1 FRCPath results		Earliest opportunity to exit Stage B
ST3	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	Month 31	Month 32	Month 33	Month 34	Month 35	Month 36
	Earliest opportunity to begin Stage C	Part 1 FRCPath opportunity	Part 2 FRCPath opportunity	Part 1 & 2 FRCPath results		Second opportunity to exit Stage B	Second opportunity to begin Stage C		Part 2 FRCPath opportunity	Part 2 FRCPath results		
ST4	Month 37	Month 38	Month 39	Month 40	Month 41	Month 42	Month 43	Month 44	Month 45	Month 46	Month 47	Month 48
			Part 2 FRCPath opportunity	Part 2 FRCPath results					Part 2 FRCPath opportunity	Part 2 FRCPath results		Earliest opportunity to exit Stage C
ST5	Month 49	Month 50	Month 51	Month 52	Month 53	Month 54	Month 55	Month 56	Month 57	Month 58	Month 59	Month 60
	Earliest opportunity to begin stage D		Part 2 FRCPath opportunity	Part 2 FRCPath results		Second opportunity to exit Stage C	Second opportunity to begin stage D					First opportunity to exit stage D
ST6	Month 61	Month 62	Month 63	Month 64	Month 65	Month 66	Month 67	Month 68	Month 69	Month 70	Month 71	Month 72
						Second opportunity to exit stage D						

APPENDIX 6 ACRONYMS

AIDS	Acquired immune deficiency syndrome
ARCP	Annual Review of Competence Progression
BMA	British Medical Association
BMS	Biomedical scientist
BSP	Breast Screening Programme
CATT	College Advisory Training Team
CbD	Case-based discussion
CCT	Certificate of Completion of Training
CEMACH	Confidential Enquiry into Maternal and Child Health
CESH	Confidential Enquiry into Suicide and Homicide
CESR	Confirming Eligibility for Specialist Registration
CHAT	Certificate of Higher Autopsy Training
CHCCT	Certificate of Higher Cervical Cytology Training
CNS	Central nervous system
CPD	Continuing professional development
CSF	Central spinal fluid
CSP	Cervical Screening Programme
DMJ	Diploma of Medical Jurisprudence
DOPS	Directly observed practical skills
ECE	Evaluation of clinical events
EQA	External Quality Assurance
FNA	Fine needle aspiration
FRCPath	Fellowship of the Royal College of Pathologists
GI	Gastrointestinal
GMC	General Medical Council
GP	General Practitioner
HCC	Healthcare Commission
HOPS	Head of Pathology School

HPV	Human papilloma virus
IBD	Inflammatory bowel disease
IQC	Internal quality control
JCPT	Joint Committee on Pathology Training
LBC	Liquid-based cytology
MDT	Multidisciplinary team meeting
MSF	Multi-source feedback
NCEPOD	National Confidential Enquiry into Patient Outcome and Death
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NOS	Not otherwise specified
NPSA	National Patient Safety Agency
NTN	National Training Number
NTN(A)	National Training Number (Academic)
ONS	Office of National Statistics
OOPR	Out-of-programme research
OOPT	Out-of-programme training
PIAG	Patient Information Advisory Group
QAT	Quality assurance testing
SAC	Specialty Advisory Committee
SIDS	Sudden infant death syndrome
SOP	Standard operating procedure
ST	Specialty training
STC	Specialty Training Committee
SUDI	Sudden unexpected death in infancy
TEM	Tubo-endometrioid metaplasia
UK	United Kingdom
WHO	World Health Organization

APPENDIX 7 GOOD MEDICAL PRACTICE

The following table indicates where the *Good Medical Practice* headings can be found in the curriculum.

Good Medical Practice	**Page number**
Good clinical care	58
Maintaining good medical practice	72
Teaching and training, appraising and assessing	81
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Working with colleagues	88
Health	95
Probity	96