

SPECIALTY TRAINING CURRICULUM

FOR

GASTROENTEROLOGY

MAY 2007

Joint Royal Colleges of Physicians Training Board

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The Curriculum for Gastroenterology is based on the Eight PMETB Standards

The curriculum has been revised to conform to the new PMETB guidelines for curricula. It is intended that the format will be useful to both trainers and trainees in planning a training programme. It is written under the following headings:

1. Rationale
2. Content of learning
3. Model of learning
4. Learning experience
5. Supervision and feed back
6. Managing curriculum implementation
7. Curriculum review and updating
8. Equality and diversity

1 RATIONALE

Entry to specialist training will take place usually following a period of foundation training. Thus the trainee will be expected to have achieved foundation programme competencies, or the equivalent. The first two years of specialty training (ST1, ST2) will be in a core training programme (core medical training – CMT or acute care common stem training (medicine) – ACCS(M)). During core training physicians will be expected to have achieved level 1 acute medicine competencies for which the MRCP Part 1 or an equivalent exam is the knowledge based assessment. Thus before being allowed to proceed to specialty training year 3, trainees must have achieved these level 1 competencies. An average trainee should be able to achieve these within a 2 year core training programme. They will then be allocated to the next stage of specialty training, and at this stage will commence their gastroenterology training. Most trainees will continue to acquire acute medical competencies to level 2 (see General Internal Medicine (Acute) curriculum), unless training in gastroenterology alone or gastroenterology and hepatology. If progress is uncomplicated they will proceed to Certificate of Completion of Training (CCT) in gastroenterology but their level 2 competencies in acute medicine will be acknowledged. Thus this will enable medical directors in acute trusts to appoint gastroenterologists with acute medicine skills sufficient to oversee the running of the acute medical take. During gastroenterology training a number of assessments are required (see later). All trainees must have completed MRCP Parts 1 and 2 and a knowledge based assessment in gastroenterology prior to CCT.

The general gastroenterologist must have expertise in the management and diagnosis of gastrointestinal and hepatological diseases, and in the diagnosis and treatment of intra abdominal malignancy. This includes a basic need to be proficient in diagnostic and therapeutic upper GI endoscopy and Flexible sigmoidoscopy. While training for this basic proficiency gastroenterologists develop subspecialty expertise including colonoscopy, pancreaticobiliary disease with Endoscopic Retrograde Cholangiopancreatography (ERCP), hepatology and specialised endoscopy. It is expected that the majority will continue to do colonoscopy but only limited numbers will have the opportunity to further specialise in hepatology or advanced endoscopy which will include ERCP and such specialised techniques as endoscopic ultrasound. Thus the curriculum

for training emphasises the basic principles and it is likely that subspecialty curricula will be developed over time to define the necessities for training in those areas. (The subspecialty in hepatology already exists and is included in this document)

This curriculum deals with the training required to enable a doctor to have the necessary skills to participate at Consultant level in a general gastroenterology service. New working practices within the NHS make it important that the skills of team working and leadership are included as are all the generic skills required for consultant behaviour in any specialty.

The original curriculum was published in 1996 by the Speciality Advisory Committee (SAC) in Gastroenterology and this was updated in 2003 where major changes were made in the details of the subject matter and more importantly in the method of assessment of the levels of achievement and competencies. It was recognised that these changes would impact upon supervision provided by trainers and this revision continues the developmental process. A programme of visits by PMETB to all training regions is being developed and this will help ensure that adequate time is allocated to trainer's job plans so that appropriate supervision can take place.

This curriculum has been developed by the SAC. Membership is drawn from the college, the Joint Committee on Higher Education (JRCPTB), the British Society of Gastroenterology (BSG) training committee, the Chairman of JAG and has an SpR representative thus a wide spread of opinion was obtained.

The curriculum will continue to be reviewed as changes in technique and direction develop over time.

Entry Requirements

Applicants for specialist training in gastroenterology should have acquired level 1 acute medicine competencies. A period of experience in Gastroenterology at core training level is considered desirable, although not essential

Duration and organisation of Training

Although this curriculum is competency based, the duration of training must meet the European minimum of 4 (four) years for post registration in full time training adjusted accordingly for flexible training (EU directive 93/16/EEC requires that flexible training can be no less than 50% whole time equivalent). The SAC has advised that training from ST1 will usually be completed in 6 (six) years in full time training for trainees not wishing to obtain level 2 competencies in General Internal Medicine (Acute), but more usually training will be completed in 7 (seven) years. Thus the duration of speciality training in Gastroenterology is four or five years.

There will be a number of different pathways from ST3:

General Gastroenterology including Acute Medicine to Level 2.	Total 5 years
General Gastroenterology including Acute Medicine to Level 2 + Hepatology 2 years	Total 5 years
General gastroenterology alone without Acute Medicine	Total 4 years

General Gastroenterology + 2 years Hepatology without Acute Medicine	Total 4 years
*(General gastroenterology including Acute Medicine 4 years + 1 year Specialised endoscopy.	Total 5 years)

It is envisaged that the majority of trainees will follow the first pathway

* This pathway is still in a developmental stage and not as yet available

Linkages

Core training follows on from Foundation training and trainees will be allocated into gastroenterology specialty training from core training. Training then runs through to CCT, assuming satisfactory performance.

Generic Curriculum

This specialty curriculum is complementary to the generic curriculum which applies to all 28 physicianly specialities. The generic curriculum follows the headings of good medical practice and runs through from core training to CCT (see fig 1). Trainees should read and understand both their specialty curriculum and the generic curriculum. Both curricula should be seen as integrated so that generic competencies are acquired at all stages of specialty training. Some generic components are also further expanded and deepened for some specialties (eg palliative medicine). When planning specialty programmes, deaneries and trainers should ensure that both specialty and generic competencies can be acquired and assessed.

General Internal Medicine (Acute) curriculum

The new curriculum for General Internal Medicine (Acute) is split into 3 parts.

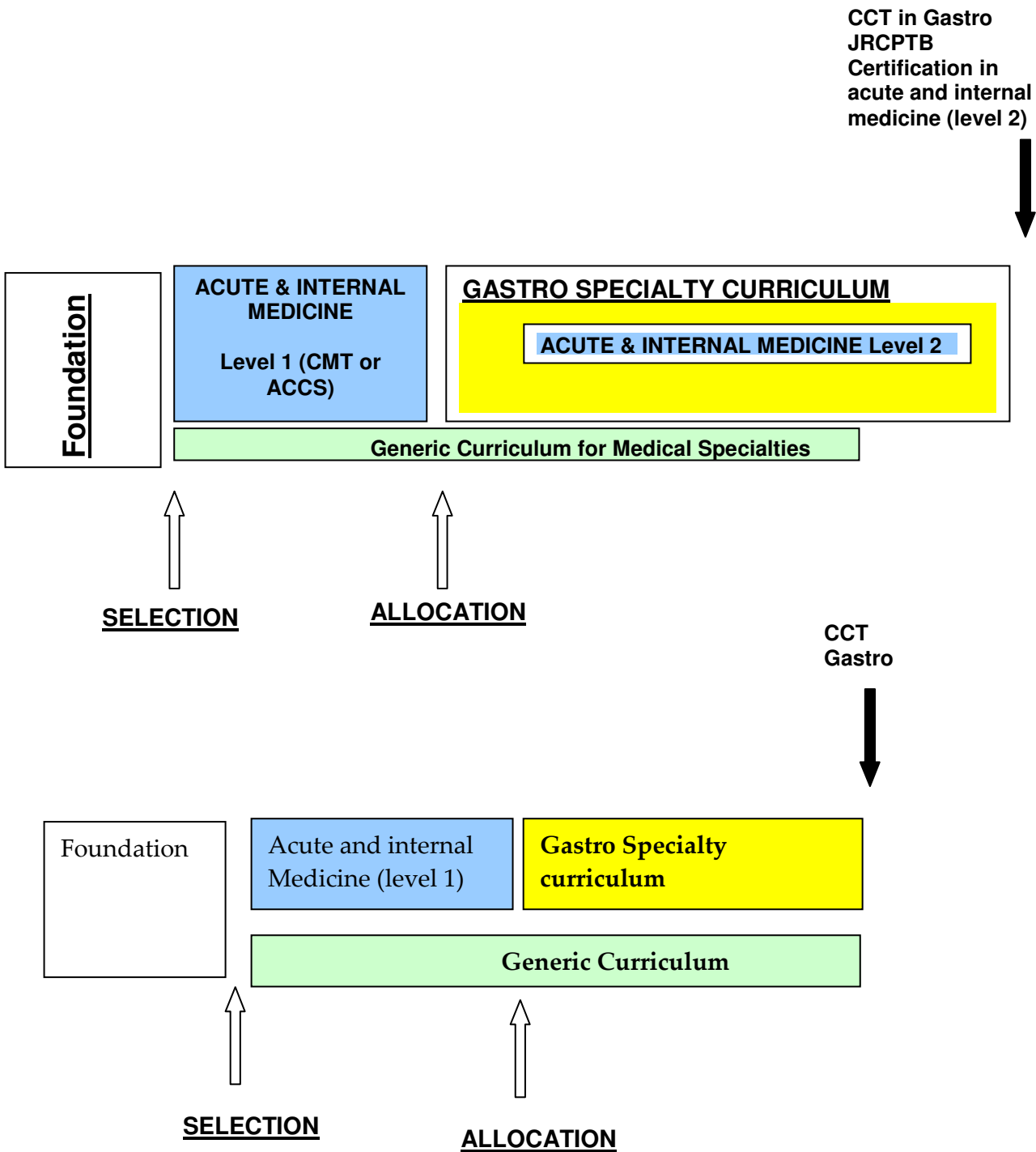
Level one competencies will be achieved by all physicianly trainees during core training (core medical training – CMT, or acute care common stem – ACCS) and must be achieved before progression to specialty training.

To participate in the acute medical take and to be responsible for the care of unselected acutely ill patients as a senior medical appointment a clinician requires a CCT in a medical specialty, such as gastroenterology, and a certificate in GIM (Acute). The Level 2 GIM (Acute) training programme ensures a trainee's ability to provide acute medical care in the acute setting. Upon successful attainment of Level 2 competencies, the trainee will be certificated in GIM (Acute). The SAC in acute and general medicine has advised that it will generally be necessary for a trainee to spend a further two years in general and acute medicine from entry into ST3 in order to deliver the competencies required, for instance a dedicated period of acute medicine may deliver these competencies, or alternatively training in the specialty can continue in parallel with exposure to acute medicine.

Level 3 competencies will usually only be achieved by those wishing to CCT in GIM (acute) medicine and practice as an acute physician.

Dual Accreditation

Trainees who wish to achieve a CCT in GIM (Acute) must have applied for and successfully entered a training programme which was advertised openly as a dual training programme. This programme will need to achieve the competencies as described in both the gastroenterology and GIM (Acute) curricula and there must be jointly agreed assessments (proposed by both SACs and approved by PMETB). Postgraduate deans wishing to advertise such programmes should ensure that they meet the requirements of both SACs.



Relationships of training experience

Until 2007 the first two years will be rotating SHO posts in various specialties. The subsequent gastroenterology specialty training posts will rotate through teaching and non-teaching hospitals. After August 2007 these will be described as specialty training years 1 to 7. The first 2 years will be spent rotating through general posts which deliver acute medicine competencies (ST1 and ST2 - core training) and the latter 5 years will be through gastroenterology posts in teaching and non-teaching hospitals (ST3 – ST7 - gastroenterology specialty training). Where necessary sub-specialist posts such as hepatology will be put in place. Over time it is intended to develop other specialist posts such as Specialist Endoscopy, nutrition and other sub-specialist areas. These however have not been developed for this iteration of the curriculum.

Lecturer posts

Lecturers will be required to spend at least one year outside their parent unit preferably in a DGH. In general it is expected that 50% of the training period in a lecturer post will count towards CCT reflecting the lower clinical and higher research component of such posts.

Flexible Training

Trainees who are unable to work full-time are entitled to opt for flexible training programmes. EC Directive 93/16/EEC requires that:

- Part-time training shall meet the same requirements as full-time training, from which it will differ only in the possibility of limiting participation in medical activities to a period of at least half of that provided for full-time trainees;
- The competent authorities shall ensure that the total duration and quality of part-time training of specialist are not less than those of full-time trainees.

The above provisions must be adhered to. Flexible trainees should undertake a pro rata share of the out of hours duties (including on-call and other out of hours commitments) required of their full-time colleagues in the same programme and at the equivalent stage.

Funding for flexible trainees is now from deaneries and these posts are no longer supernumerary. Ideally therefore 2 flexible trainees should share one post to provide appropriate service cover.

To date flexible training has inevitably been prolonged (for instance a trainee working 50% will take 10 years to train). With competency based training although the indicative training time is 5 years equivalent, proof of completion to competencies may enable these trainees to finish their training in a shorter time. This will be the decision of the trainers in discussion with the SAC

Research

Trainees who wish to acquire extensive research competencies, in addition to those specified in the generic element of the curriculum, may undertake a research project as an ideal way of obtaining those competencies, all options can be considered including taking time out of programme to complete a specified project or research degree. Time out of programme needs prospective approval from the SAC and the support of the Postgraduate Dean. Funding will need to be identified for the duration of the research period. A maximum period of 3 years out of programme is allowed.

Training Sites and Rotations

Most formal training will be “in-service” and thus trainees must have experience in both teaching hospitals (or units with major academic activities) and non-teaching hospitals (minimum two years or one year for lecturer posts). At each unit the trainee will have an educational supervisor responsible for the regular appraisal and assessment of the trainee. Other supervising consultants and non-medical staff will also participate in assessment. In each region one consultant will act as the Programme Director who will organise the trainee’s rotation through training sites depending on the trainee’s needs. Training units and rotations will be approved prospectively by the Regional Postgraduate Dean (usually through a Regional Gastroenterology Training and Education Committee) and by the Gastroenterology SAC. There will be at least two consultant supervisors within the specialty at any training unit and a minimum of one consultant gastroenterologist per trainee.

2 CONTENT OF LEARNING

This curriculum is designed to train a specialist in gastroenterology. The majority of trainees will also acquire knowledge and skills in Acute Medicine to Level 2. Particular knowledge of nutrition is encouraged. Some trainees will also sub-specialise in liver disease and it is our intention to develop over time sub-specialisation in advanced endoscopy to include such techniques as ERCP and endoscopic ultrasound. The curriculum describes the competencies and outcomes required to complete a CCT and to be registered on the Specialist register in Gastroenterology. As described above the holder will also be credited with competence to level 2 in Acute Medicine. The holder of a CCT in gastroenterology will be able to work as a consultant specialist within the National Health Service and will have the knowledge skills and attitudes required to do this.

The first 2 years will focus upon General Medical Training. The subsequent 5 years will to a major extent be directed towards gastroenterology training but with a continued content of Acute Medical training to level 2. The Generic curriculum will run throughout.

For detail of the gastroenterology learning objectives please see Appendix 1

Course Content and Objectives

General Aims (see also JRCPTB Generic Curriculum)

The training programme in Gastroenterology aims to produce practitioners who:

- Show appropriate attitudes and communication skills to allow working with teams, patients and relatives.
- Apply knowledge and skill in diagnosis and management to ensure safe independent practice.
- Establish a differential diagnosis by appropriate use of clinical consultations, physical examination and investigation.
- Are competent in performing the core investigations required in Gastroenterology.
- Are able to apply knowledge of biological and behavioural sciences to their practice.
- Can develop management plans for the “whole patient” and have a sound knowledge of the appropriate treatments including health promotion, disease prevention, screening and long-term care.
- Use life-long learning skills to keep their expertise up-to-date.
- Have the qualities of a teacher, team-worker and leader.
- Manage time and resources efficiently to the benefit of patients and the clinical team.
- Will carry out all practices to the standard of *Good Medical Practice as laid down in the GMC Publication in 2006*.
- Have acquired the appropriate competencies as laid down by the curriculum

The topics highlighted in the following pages were chosen to represent the majority of conditions, or areas of learning, which present to Gastroenterologists in practice. It is not likely to be totally inclusive and other problem areas may be added in time. By the end of training the trainee should be able to determine satisfactory explanations for, provide diagnostic investigation for, and determine the therapeutic strategies for patients with:

Non cardiac chest pain and dysphagia Upper abdominal pain/dyspepsia Nausea and vomiting Upper gastrointestinal bleeding	Section 1
Steatorrhoea, anorexia, weight loss Anaemia Short bowel syndrome/high stoma output Nutritional support	Section 2
Abdominal pain Functional bowel disorders Diarrhoea and Inflammatory bowel disease Rectal Bleeding and perianal fistulation	Section 3

3 MODEL OF LEARNING

Adults Learn by

- Reflection and experience
- Identification of need
- Apprenticeship
- Evaluation of the effectiveness of an experience.

Adults learn better in

- A good educational environment
- Within a planned programme

Thus for a trainee to gain the maximum benefit from a period of training the goals must be set out in advance and progress monitored throughout that period. i.e. *an Educational Contract*.

The hospital environment affords a wide range of potential learning experiences. In any one hospital the learning will be based around an agreed timetable. This is designed to deliver a balanced educational experience including:

One to one Tuition	e.g. outpatient clinics
Group teaching	e.g. wards rounds
Self-directed learning	Reading texts, journals and E-based data
Practical skills	principally endoscopy but also paracentesis and for some trainees liver biopsy. See Hepatology training

The Post Content and Timetable

The following is a checklist of good practice to help Deans and Programme Directors create programmes

1. There should be at least 2 consultant gastroenterologists as supervisors
2. There must be no more than one SpR per trainer
3. The timetable must include scheduled outpatient sessions (minimum 2 maximum 3) and always supervised
4. Ward rounds: A minimum of one trainer led round and 1 SpR led ward round per week (Max 3 ward round sessions)
5. Endoscopy: At least 2 sessions per week supervised to the appropriate level and containing the appropriate case mix (Dependant upon the trainees needs). These could include ERCP. No more than 3 sessions should be expected. (*This will be modified when the advanced endoscopy posts become active*)
6. One bleep free session per week to enable trainees to attend regional training days, carry out audit projects/research and private study.
7. Multidisciplinary Meetings : To include X-ray, surgery, oncology and histology, with review of both upper and lower GI cases. Upper GI to include hepatobiliary disease

8. Grand Round Weekly
9. Formal Audit : Included in the timetable.
10. Induction: There should be an induction programme on arrival at a unit which should include information on unit guidelines and protocols preferably in electronic format
11. Specified regular appraisal in the job description
12. Management: There should be opportunities for trainees to attend appropriate management meetings (e.g. service review, departmental meetings and Directorate meetings)
13. Training in the management of acute gastrointestinal bleeding and its endoscopic management should be available in the rotation for all trainees
14. The post should be used with other posts in the rotation to ensure that a trainee achieves appropriate training in all areas of gastroenterology and should include at least 1 year in a DGH and including 6 months in a **specialised liver post.

** There are 2 forms of liver experience

- i) For all trainees: at least 6 months in a liver unit or general post with a significant liver interest
- ii) For trainees wishing to do subspecialty liver disease: A 1 year subspecialty hepatology post in a liver unit accessed by competitive interview plus 1 years liver experience as part of the general gastroenterology training. See Hepatology curriculum below

Assessment

The domains of Good Medical Practice will be assessed using an integrated package of workplace-based assessments and examination of knowledge and clinical skills, which will sample across the domains of the curriculum (e.g. knowledge, skills and attitudes). The assessments will be supported by structured feedback for trainees within the training programme of GIM (Acute). Assessment tools will be both formative and summative and will be selected on the basis of their fitness for purpose.

It is likely that the workplace-based assessment tools will include mini-CEX (mini-Clinical Examination Exercise), DOPS (Direct Observation of Procedural Skills) and MSF (multi-source feedback). The Federation of the Royal Colleges of Physicians has piloted these methods and has demonstrated their validity and reliability. It is proposed that the examination and assessment of knowledge will utilise elements of the MRCP (UK) examination, relevant to the level of training.

An assessment blueprint will be developed which will map the assessment methods on to the curriculum in an integrated way. The blueprint will ensure that there is appropriate sampling across the curriculum. It is expected that the blueprinting exercise will have been completed by the end of 2006.

4 THE LEARNING EXPERIENCE

Gastroenterology differs from many other specialties in that there is a considerable element of manual skill involved in endoscopy.

Learning will therefore occur in a variety of settings.

- Patient contact
- Learning in both the inpatient (ward round and emergency on call) and outpatient setting to communicate with patients and ascertain appropriate clinical history and carry out clinical examination
- Case and paper presentations at Grand rounds, Local Specialist meetings and at National and International meetings.
- Personal study for general learning and also researching particular projects
- Audit. Various Audit projects in every training year
- Where appropriate writing papers
- Teaching
- Practical skills in endoscopy. Specific learning objectives as laid down by
- The Joint Advisory Group for Endoscopy (JAG)
- Regional tutorials and lectures

Learning will be from a variety of sources

- Consultant Teaching
- Outpatient clinics one to one teaching by consultants with experiential
- Learning by case management
- Ward rounds
- Post take Reflective learning and consultant lead learning seeing a range of gastrointestinal and general medical emergencies
- Routine Consultant teaching and review of cases. On registrar led rounds experience in decision making.
- Teaching others see below
- Endoscopy lists Training as per JAG guidelines
- Apprenticeship
- Emergency on call
- Registrar led ward rounds
- Didactic learning
- Grand rounds presentation and participation
- Regional training programmes
- Attendance at subject based courses
- Attendance at Regional, National and International Specialist Meetings
- Personal Learning
- Personal study, textbooks, journals and increasingly computer based data
- Writing articles, reviews, case reports and research results as appropriate
- Conducting research and submission of a thesis or manuscript for publication
- Teaching others
- Teaching medical students, junior doctors and Professionals Allied to
- Medicines in tutorials, lectures, and ward rounds
- Presentation at Grand rounds
- Journal club presentations
- Presentations at meetings local, national and international

As part of the *Educational Contract* different parts of the curriculum will be taught at each stage of the rotating training programme dependant upon the particular trainer's particular expertise. Any specific requirements will be discussed and agreed at induction. At the same time some of the more generic parts of the GI curriculum will be taught in all rotations but it will be expected that the level of attainment will progress throughout the training until all are at level 1 by CCT as stated previously.

It is clear from the above descriptors which part of this education will be delivered on site and which will be acquired off site. The balance between the two will be decided at the initial appraisal meeting between trainer and trainee. This will be reviewed regularly through the continuing appraisal and assessment process

To summarise

Trainees must have wide out-patient experience and be involved in the continuing responsibility of out-patients and in-patients. They must have a commitment to the management of gastrointestinal emergencies. Trainees should have an opportunity to gain particular experience in liver disease, with a six month attachment in a specialised liver post. Trainees should acquire experience in the management of nutritional problems with experience of a multi-disciplinary nutritional team during their training. Evidence of this is required at the Penultimate Year Assessment (PYA). ERCP training is not necessary for most trainees but some should be given an opportunity to gain particular expertise in this area. Colonoscopy is similarly not compulsory. However, other than those training for a subspecialty in Hepatology (subspecialty accreditation) or pursuing an academic career it is likely that the majority of trainees will wish to acquire competence in colonoscopy. (JAG certification).

There should be sufficient opportunities in the training rotations around the different regions for individuals with excellent basic training to complete with additional expertise. This additional expertise could be in General Internal Medicine, advanced endoscopy, nutrition, hepatology, inflammatory bowel disease or in academic gastroenterology amongst other areas. A separate subspecialty curriculum is included for hepatology as already noted. It should be noted that to obtain a CCT in gastroenterology the candidate must have satisfied the requirements laid down in this document. This will mean that Trainees will have core Gastroenterology skills and knowledge, together with additional expertise which will be laid down in the training record.

5 SUPERVISION AND FEEDBACK

Educational Supervisor

The educational supervisor will be one of the consultant staff on the firm or in the department to which the trainee is attached who will usually have day to day contact with the trainee. The educational supervisor will plan a weekly programme, agreed with the Regional Programme Director and the trainee that will provide an appropriate balance between training and service commitments. Training commitments will include academic time for meetings, audit, self-directed learning, research, study leave and supervised service. The educational supervisor will also arrange for regular appraisal of the trainee initially and every four to six months when the educational objectives are discussed and recorded. A formative assessment must be undertaken at the termination of the training

period, after which a structured report will be written (See below). Time must be set aside for these activities

Upon the trainees arrival at a hospital the Educational Supervisor will

1. Ascertain the current level of training and experience
2. Ascertain any specific training needs from the trainee, previous trainers and if necessary the Regional Programme Director. A copy of the latest RITA assessment should be available to inform this discussion
3. Agree an educational contract with the trainee
4. Agree the frequency of feedback and assessment (see above)
5. Agree the use of modern modalities: mini CEX Multi-source feedback and DOPS. The latter will apply particularly to endoscopy

Besides this formal feedback informal assessment, appraisal and feed back will go on throughout the training process on ward rounds, in outpatient clinics and in endoscopy sessions. Overall this is a constructive process but will provide opportunities to correct mistakes and prevent bad habits before they are embedded. The ultimate aim is to achieve the required competencies.

Assessment of Trainee

The integrated assessment system includes a range of assessment methods that assess across domains of the curriculum. A blueprinting exercise will be undertaken which will map assessments onto the curriculum. Assessments will be in the main within the workplace and include validated methods such as mini-CEX (mini clinical evaluation exercise), DOPS (direct observation of procedural skills) and MSF (multi-source feedback). The number and range of these will ensure a reliable assessment of the training relevant to their state of training and achieve coverage of the curriculum. In addition there is a mandatory requirement for trainees to complete MRCP examination Parts One and Two (or an equivalent) prior to CCT. MRCP is a high quality, externally validated exam that tests achievement of the acute medicine component of specialist training. A knowledge based assessment of gastroenterology will also be a mandatory requirement prior to CCT.

Specific Assessments for Gastroenterology

Endoscopy training requirements: DOPS

Formative

A minimum of 10 DOPS (using current JAG forms or those which replace them) each year and usually a DOPS form for every endoscopy until JAG certification for each procedure that the trainee is doing i.e. upper GI endoscopy, flexible sigmoidoscopy *colonoscopy and polypectomy, *ERCP. (See below) This means that in year one there may only be upper GI DOPS but others will be expected as time proceeds.

Summative

When it is agreed by the trainee and trainer that the trainee has reached competence he/she will do 2 further DOPS scored by 2 independent trainers minimum of 4 each.

When the trainee achieves the M in all these assessments a JAG certificate will be issued.

See Assessment of Endoscopy Competence Appendix 4

* Where the trainee wishes to train in this modality

Paracentesis:

6 DOPS demonstrating competence with a minimum of two observers in total.

PEG placements:

10 DOPS of abdominal end with two observers in total plus certification/DOPS as above in upper GI endoscopy.

Annual Review of Training

Record of In-Training Assessment (RITA)

An annual review of training will be undertaken by the Regional Gastroenterology Training Committee. At annual reviews, assessments and reports by educational supervisors will be reviewed and a decision made as detailed in the JRCPTB handbook. At some or all of these annual reviews an external assessor will be present and scrutinize the training record. An SAC representative will participate in the penultimate year assessment (held to a standard format; see below) approximately 12-18 months before the planned end of training. The award of the CCT will be based on satisfactory completion of the entire series of annual assessments.

A knowledge based exam is being developed and is expected to become active in 2007. When fully embedded in the process a pass in this exam will also be required before CCT is awarded

Trainees

As indicated above the trainee should agree and implement a weekly time table with the local educational supervisor and the Regional Programme Director. The trainee should ensure that there is a formal appraisal with educational supervisor initially and every four to six months and that any problems with training are identified and resolved in good time. The trainee should keep a record of practical procedures in the Training Record and ensure that the experience from the post fulfils the stated requirements for that period of training. Any problems that are not resolved locally should be reported promptly to the Programme Director or failing this, Specialist Advisory Committee. Trainees should see and sign any formal reports or assessments about their training.

Penultimate Year Assessment (PYA's)

Detailed guidance notes are available from the JRCPTB. Please see appendix 5 for a suggested model of good practice.

Structured Supervisors reports

See Appendix 6.

6 MANAGING CURRICULUM IMPLEMENTATION

The Curriculum describes the training required and the competencies needed to achieve CCT. Trainees will be given a copy of the curriculum on enrolment with JRCPTB and it will similarly be available to Educational Supervisors, Programme Directors Regional Specialty Advisors and Post Graduate Deans.

Curriculum coverage

The trainers and trainee should use the curriculum as a guide to ensure full coverage of the specialty and any particular subspecialty areas e.g. *hepatology*. The Programme Director will be responsible for developing an appropriate rotation, and individual educational supervisors will arrange appropriate training at each stage in the rotation. This is all in discussion with the trainee.

Curriculum management in post

Initially it is imperative that there is discussion between the trainee and the educational supervisor to plan the years training. Relevant induction documentation guidelines and protocols will be given to the trainee. Thereafter the training progress will be assessed by regular 4 to 6 monthly appraisals by the educational supervisor to ensure satisfactory progress. Clearly these can be more frequent if it is thought necessary.

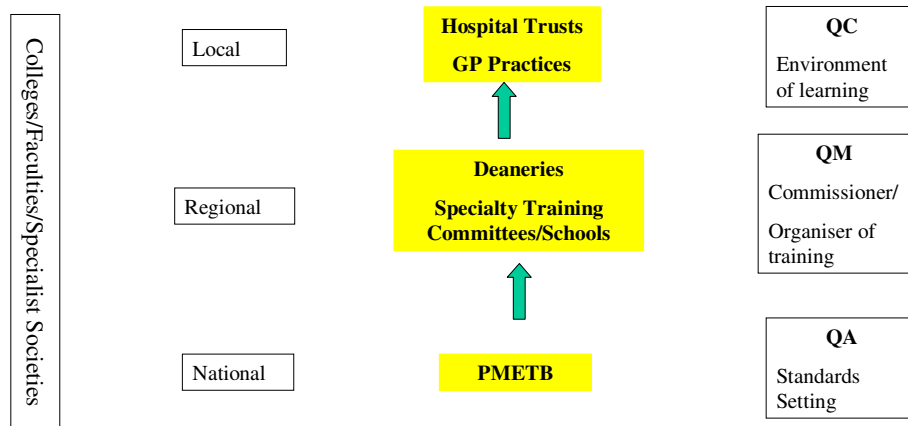
Curriculum management across the programme

The Programme Director in discussion with trainees and their Educational Supervisors will devise a rotation to optimise training for each individual trainee. This is carried out through the RITA and PYA processes.

Deaneries are responsible for quality management, PMETB will quality assure the deaneries and educational providers are responsible for local quality control, to be managed by the deaneries. The role of the Colleges in quality management remains important and will be delivered in partnership with the deaneries. The College role is one of quality review of deanery processes and this will take place within the SACs on a regular basis.

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The Organisation and Quality Assurance of PG Training



7 CURRICULUM REVIEW AND UPDATING

Curriculum review will be informed by a number of different processes. For instance the SAC will be able to use information gathered from specialty heads, specialty deans and the National Health Service. It will have available to it results of the trainee survey, which will include questions pertaining to their specialty. Interaction with the NHS will be particularly important to understand the performance of specialists within the NHS and feedback will be required as to the continuing need for that specialty as defined by the curriculum. It is likely that the NHS will have a view as to the balance between generalist and specialist skills, the development of generic competencies and, looking to the future, the need for additional specialist competencies and curricula.

8 EQUALITY AND DIVERSITY

In the exercise of these powers and responsibilities, the Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of relevant legislation, such as the:

- Race Relations (Amendment) Act 2000;
- Disability Discrimination Act 1995 and Special Educational Needs and Disabilities Act 2001;
- The Disability Discrimination Act 1995 (amendment) (further and higher education) regulations 2006
- Age Discrimination Act in October 2006

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers, as advisers from the medical profession, as members of the Colleges' professional bodies or as doctors in training and examination candidates. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

Deanery quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by PMETB.

Compliance with anti-discriminatory practice will be assured through:

- Monitoring of recruitment processes
- Ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- Ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature
- Monitoring of College examinations
- Ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees because of gender, ethnicity, sexual orientation or disability (other than that which would make it impossible to practice safely as a physician). All efforts shall be made to ensure the participation of people with a disability in training.

Statutory responsibilities

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of legislation, such as the:

- Human Rights Act 1998
- Freedom of Information Act 2001
- Data Protection Acts 1984 and 1998

HEPATOLOGY SUBSPECIALTY

Trainees opting for the subspecialty hepatology will be required to fulfil the competencies of the general GI curriculum. The areas in which the hepatology curriculum differs from the general GI curriculum are set out below

Rationale

As for general gastroenterology

Content of Learning

As for general gastroenterology plus:

- The overall goal of training in specialist hepatology is to produce, in a two year module hepato-gastroenterologists who are competent to manage both the broad spectrum of hepatological problems encountered in a typical gastroenterology practice, and also complex and rarer cases, together with the selection, assessment and follow-up of patients undergoing liver transplantation. This is conducted within the 5-year training in gastroenterology/GIM,
- All training programs must provide trainees with a broad knowledge of the physiology of the liver and a thorough knowledge of the management of patients with hepatobiliary diseases. A program must ensure that the trainee acquires the following.
- A significant fund of knowledge about the basic biology and pathobiology of the liver and biliary systems as well as a thorough understanding of the diagnosis and treatment of a broad range of hepatobiliary disorders.
- Skill in the performance of a limited number of diagnostic and therapeutic procedure
- An appreciation of the indications and use of a number of diagnostic and therapeutic procedures that are needed to manage hepatobiliary disorders.

For content of learning objectives please see Appendix 1 Section 5

Training in hepatology should take place after trainees have successfully completed at least 18 months of training in gastroenterology. If that gastroenterology training includes 6 months in hepatology, those 6 months can be counted towards the two-year hepatology training. This will prepare of the individual to diagnose and manage all types of liver disease, acquire the procedural skills listed below, and proficiency in performing liver consultations.

Out-patient experience must include the assessment and diagnosis of patients with all grades of severity of liver disease, and in the selection and follow-up of patients undergoing treatment for Hepatitis B (HBV) and Hepatitis C (HCV).

Experience in the management of acute liver failure and in the evaluation of patients for liver transplantation is essential.

At least 6 of the months must be spent on a liver transplant service. This may require that the trainee rotate through another institution for this training.

One year of the subspecialty training module will take place in one of the posts specifically approved to offer this module and cannot only be made up of short attachments to many different posts with a liver specialty influence.

Learning experience

As for gastroenterology

Supervision and feedback

As for general gastroenterology with the following modifications:

- | | |
|--|------------|
| 1) Performance of percutaneous liver biopsy | minimum 20 |
| 2) Diagnostic and therapeutic paracentesis | minimum 20 |
| 3) Use of ultrasound for marking for percutaneous liver biopsy | minimum 20 |

Managing curriculum implementation

As for general gastroenterology

Curriculum Development

As for general gastroenterology

Equality and Diversity

As for general gastroenterology

Appendix 1 Assessment Of Competencies

Section 1: UPPER GI TRACT

i) Dysphagia and non cardiac chest pain

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES
1. Dysphagia	To define the physiology of swallowing; benign and malignant causes and presentation of dysphagia and its management	To be able to elicit history, investigate appropriately and define medical endoscopic, radiological and surgical treatment strategies	Demonstrates willingness to participate in diagnosis and treatment of dysphagia
2. Non cardiac chest pain	To define the physiology of oesophagus and gastro-oesophageal junction; gastro-oesophageal reflux disease including symptoms (e.g. heartburn) and endoscopic findings; Barrett's oesophagus	To be able to recognise symptom complex, arrange appropriate investigations including pH monitoring, motility studies and endoscopy and interpret findings	Demonstrates willingness to participate in diagnosis and treatment of non cardiac chest pain

ii) Upper abdominal pain/dyspepsia

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Peptic ulcer type dyspepsia	Define the physiology of gastric acid secretion; Role of helicobacter pylori and its detection and treatment Effect of non steroidal anti-inflammatory drugs and drugs to inhibit gastric acid production and stimulate mucosal protection	To be able to identify appropriate investigations, make differential diagnosis, identify success of treatment and recognise complications such as gastric outlet obstruction, perforation and bleeding	Exhibits willingness to manage dyspeptic patients appropriately
2. Gall bladder type dyspepsia	Define the physiology of bile, gallstone formation, biliary colic and gall bladder neoplasia	To be able to recognise gall bladder symptoms and signs investigate appropriately and instigate medical or surgical treatment	
3. Non ulcer dyspepsia	Define the physiology of motor disorders of upper GI tract	To be able to diagnose and treat dysmotility type symptoms	
4. Pancreatic disease	See section 2, i), 1; 3, i), 1&2 and 4, ii), 2.		

iii) Nausea and vomiting

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Dyspepsia	See ii) 1 above	See ii) 1 above	
2. Functional disorders of upper GI tract see 3, ii below	Define the non organic causes of upper GI symptoms and their treatment	To be able to diagnose functional disorders and initiate symptomatic treatment	Demonstrates willingness to manage upper gastrointestinal symptoms appropriately
3. Gastric cancer	Describe the pathogenesis, clinical features, complications, medical and surgical options for treatment	To be able to investigate and stage upper GI cancer and make appropriate decisions concerning treatment modalities	
4. Other causes of nausea and vomiting	Recall the metabolic and neurological causes of nausea and vomiting as a manifestation of systemic disease	To be able to apply the wide differential diagnosis applicable to these symptoms	

iv) Upper gastrointestinal bleeding

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Assessment of patient with GI bleeding	Describe the risk factors for death, pathophysiology of shock and its measurement, resuscitation	Can evaluate and manage shocked patients adequately	Demonstrates willingness to recognise severity of condition and take prompt action as necessary
2. Peptic ulcer bleeding	Define the pathophysiology of arterial bleeding endoscopic and radiological diagnosis, endoscopic and surgical treatments	Able to evaluate the indications for urgent endoscopy for diagnosis and treatment of bleeding peptic ulcer	Demonstrates willingness to recommend prompt endoscopic action and liaise with surgical colleagues as necessary
3. Variceal bleeding	Describe the anatomy and physiology of varices, risk factors for bleeding including size, portal pressure and endoscopic stigmata, coagulation abnormalities	To be able to recommend appropriate use of endoscopic sclerotherapy and band ligation when necessary and administer prophylactic treatments and vasoconstrictor agents as necessary	Demonstrates willingness to participate in management of variceal haemorrhage and liaise with a specialist liver unit for TIPS or other measures when necessary
4. Bleeding from vascular anomalies and tumours	To describe the clinical features of vascular anomalies and tumours and risks of bleeding	To be able to perform endoscopic diagnosis and recommend treatment with thermal or other methods as appropriate	Demonstrates willingness to participate in endoscopic management

v) Clinical/laboratory tests of GI structure and function

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Oesophageal, gastric and ano-rectal function tests	Can describe oesophageal pH monitoring, oesophageal and ano-rectal motility/manometry, gastric emptying studies	Demonstrates the ability to recommend use in suitable patients	
2. Gastric secretion tests	Can explain the relevance of 24h intragastric H ⁺ concentration, maximal acid output, effect of pentagastrin and gastrin releasing peptide	Can recognise value for drug testing and research and can evaluate results	Demonstrates willingness to use tests when necessary and appropriate
3. Tests for malabsorption	Can describe the SeHCAT, PABA, lactose breath H ₂ , lactulose breath H ₂ , faecal elastase	To be able to recommend use of the appropriate test and to evaluate results.	
4. Tests for inflammation	Can describe serological and nuclear medicine testing including Tc WBC scans	To be able to make appropriate use and interpret the results	
5. Radiological evaluation	Can interpret Plain x-rays of abdomen, barium studies of GI tract CT, MRI and ultrasound	To be able to recommend appropriate use and interpret the results	
6 Histopathology evaluation	Has a knowledge of the histological features of common gastrointestinal and liver diseases	Can appreciate the histological findings in discussion with histopathologists e.g. at MDT's	Demonstrates a willingness to discuss histology findings with histopathologists and use that expert advice

Section 2: ABSORPTION AND NUTRITION

i) Malabsorption, anorexia and weight loss.

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Steatorrhoea Malabsorption	Can define the physiology of absorption and pathophysiology of malabsorption. Can describe Coeliac disease, bacterial overgrowth syndrome, small intestinal Crohn's disease, small bowel diverticular disease, chronic pancreatitis and neoplasia	To be able to recognise symptom patterns and investigate with barium, scanning endoscopic and biochemical tests and give appropriate treatment	Demonstrates willingness to recognise and treat small intestinal and pancreatic disorders and understands patient needs
2. Anorexia and weight loss	Can explain the differential diagnosis including GI and non GI causes and eating disorders Can describe the recognize the risks of the refeeding syndrome	Interprets the signs and symptoms so as to make an appropriate diagnosis of a GI cause or eating disorders. Arranges investigation. Evaluates results and recommends treatment. Is able differentiate organic from non organic disease and arrange treatment Appropriately monitors and treats the entrally fed patient to avoid the risk of the refeeding syndrome	Exhibits the ability and willingness to explain and discuss potential causes with patient especially those with non-organic syndromes

ii) Evaluation of anaemia

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Anaemia	Defines all types including bone marrow disorders and haemolysis	To be able to recognise anaemia and differentiate possible causes arrange appropriate investigations and then arrange treatment	Demonstrates willingness to investigate appropriately and treat anaemia and where appropriate underlying in GI disease
2. Iron deficiency anaemia	Describes Iron metabolism, absorption and bioavailability, iron stores, red cell indices, iron absorption, physiological and GI causes of iron losses.	To be able to recognise iron deficiency, identify cause with appropriate GI investigations, and give necessary treatment	
3. Macrocytic anaemia	Describes B12 and folate metabolism and absorption or malabsorption, pernicious anaemia, ileal disorders, alcoholism	Can evaluate the cause of anaemia, confirm by investigation and take necessary action	

iii) Short bowel syndrome/high ileostomy output

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Short bowel syndrome/ ileostomy diarrhoea	Explains fluid and electrolyte balance and its maintenance. Identifies malnutrition and micronutrient deficiency, and the underlying disease processes, Outlines the role of the stomatherapist.	Demonstrates the ability to detect fluid and electrolyte deficiency and malnutrition and plan treatment	Exhibits willingness to manage and refer patients appropriately

iv) Nutritional Support

To provide knowledge, skills and attitudes for nutritional support

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Nutritional assessment	Describe the body composition, energy homeostasis, consequences of under nutrition, and screening	To be able to detect under nutrition and apply knowledge to individual patients	Demonstrates willingness to assess nutritional needs and involve nutritional support team
2. Methods of providing nutritional support	Evaluates the types of food available and routes of administration, use of intravenous nutrition and its complications. Explains the appropriate use of various forms of enteral feeding; nasogastric and jejunal administration, PEG and J-PEG administration. Be aware that feeding lines should only be inserted by experts probably by anaesthetists or radiologists depending upon local habit and under sterile conditions. Can describe the refeeding syndrome and attendant risks	To be able to choose appropriate route for nutritional support, Supervise the use and management of feeding lines and prescribe appropriate intravenous and enteral feeding regimes. Monitors the entrally fed patient appropriately to avoid the refeeding syndrome	Exhibits willingness to assess the different options for nutritional support and to discuss with and explain them to the patient
3. PEG (Per Endoscopic Gastrostomy) tube use	Identifies the ethics and indications; Describes the anatomy of relevant area, Identifies the types of PEG tubes, and understands the advantages, disadvantages and complications	To be able to evaluate the need for PEG feeding, insert an appropriate tube and supervise follow up care	Demonstrates willingness to consider PEG support in appropriate cases listen to relatives' fears and expectations and discusses these sympathetically.
4. Obesity	Describes the risks of obesity and describe the definitions and evaluate measurement tools	Evaluates obesity and is aware of the dietary, pharmacological and surgical methods of treatment and refers to an obesity service when appropriate	Recognizes obesity as an illness and will evaluate and treat the patient in a sympathetically

Section 3: ABDOMINAL PAIN AND SYMPTOMS OF COLONIC DISEASE

i) Abdominal pain

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Acute abdominal pain	Describes the pathophysiological mechanisms, organ specific causes such as hollow viscus obstruction, pancreatitis and non GI causes	Elicits abdominal signs including acute abdomen. Interprets investigations and recommends medical or surgical treatment	Demonstrates willingness and sympathy to physical and mental responses to pain and its cause
2. Chronic abdominal pain	Recalls the pathophysiology of Crohn's disease, diverticulitis, intra abdominal neoplasia and pancreatitis	Arranges appropriate investigations for abdominal pain, and can construct a differential diagnosis	Demonstrates willingness to appreciate and sympathise with the physical and mental responses to pain and its cause
3. Treatment of abdominal pain	Describes analgesics, their administration and safety. Can describe medical and surgical nerve blocks,	Demonstrates the ability to treat abdominal pain appropriately for individual patients with different disease processes.	Demonstrates willingness to treat medically and to refer to surgeons, psychiatrists, pain clinics and palliative care teams as appropriate and when necessary

ii) Functional bowel disorders

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
<p>1. The spectrum of functional bowel disorders including burden of disease, sub types and ethological factors.</p>	<p>Can define the physiology of normal and abnormal motility. Understands the importance of central component of functional symptoms. Brain gut interaction, role of somatisation, anxiety and depression and relationship to fibromyalgia and chronic pain syndrome.</p>	<p>Ability to recognise these conditions and make appropriate differential diagnosis</p>	<p>Willingness to accept disability associated with functional bowel disorders and the need to adequate explanation and support</p>
<p>2. Oesophageal Dysmotility</p>	<p>Can describe the physiology of motor disorders of the upper GI tract including achalasia, diffuse oesophageal spasm and non specific oesophageal dysmotility of the elderly.</p>	<p>Able to understand how oesophageal manometry is performed and interpret traces</p>	<p>Exhibits sympathy and empathy with patients with motility disorders.</p>
<p>3. Functional dyspepsia - Epigastric pain syndrome, postprandial distress syndrome cyclical vomiting in adults and idiopathic nausea</p>	<p>Can identify disorders of gastric accommodation, gastric hypersensitivity and delayed gastric emptying</p>	<p>Can recognise the correlation between abnormal physiology and symptom. Ability to identify abnormalities of the migrating motor complex and response of the intestine for food. Understand working of gastric barostat</p>	<p>Recognises the importance of psychological factors, provide empathic support in small bowel motility problems including pseudo obstruction,</p>
<p>4. Irritable bowel syndrome and its subtypes</p>	<p>Can define the physiology of normal and abnormal intestinal motility Understands Rome III criteria and sub typing of IBS Understands importance of central component of IBS symptoms Brain- gut interactions Role of anxiety, somatisation, depression Relationship to fibromyalgia</p>	<p>Assessment of bowel function using Bristol Stool Form Score Simple assessment of anxiety, depression, and somatisation Use of HAD and PHQ15 scales and the normal ranges</p>	<p>Willingness to accept patient with functional bowel disorders as worthy of explanation and support Recognises impairment of quality of life associated with IBS Able to assess central components in IBS patients</p>

5. Constipation	Outlines the role of dietary fibre in influencing colonic function & motility, obstructed defecation Hirschsprung's disease. Identifies when to use anti-diarrhoeal agents.	Demonstrates the ability to investigate when necessary and advise on use of diet, laxatives and biofeedback as necessary. Demonstrates the ability to investigate with blood tests stool examination, endoscopy and radiology as appropriate	Demonstrates willingness to investigate and counsel and sympathise as appropriate
6. Obstructive defecation, proctalgia fugax	Understand mechanisms of the physiology of defecation	Ability to interpret defecating proctograms and anorectal manometry	Able to explain the disorder and provide practical advice.
7. Change in bowel habit	Define the functional disorders of colon, spurious diarrhoea, autonomic disorders, laxative abuse, diverticulosis and malignancy	Evaluates the severity of disease, take necessary action medical or surgical and when appropriate liaises with surgical colleagues Analyses data to make an accurate diagnosis and give appropriate specific or symptomatic treatment including use of antispasmodics, dietary fibre and constipating agent	Demonstrates willingness to appreciate patient discomfort associated with diarrhoea and incontinence and take sympathetic action Exhibits sympathy towards the patient with diarrhoea. Exhibits willingness to consult with surgical colleagues when necessary Demonstrates sympathy with the patient and willingness to treat as appropriate

iii) Diarrhoea , Inflammatory bowel disease

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Diarrhoea infections	Identifies infective diarrhoea(viral, bacterial and protozoal) from secretory and osmotic diarrhoea as seen in inflammatory bowel disease, intestinal ischaemia, neoplastic and infiltrative disorders	Demonstrates the ability to investigate with blood tests stool examination, endoscopy and radiology as appropriate	Demonstrates willingness to appreciate patient discomfort associated with diarrhoea and incontinence and take sympathetic action
2. Treatment of diarrhoea	Defines the medical and surgical options for treatment of ulcerative and Crohn's colitis, the use of antimicrobials in both infective and non-infective diarrhoea and when to refer to surgical colleagues. Identifies when to use anti-diarrhoeal agents.	Evaluates the severity of disease, take necessary action medical or surgical and when appropriate liaises with surgical colleagues	Exhibits sympathy towards the patient with diarrhoea. Exhibits willingness to consult with surgical colleagues when necessary
3. Inflammatory bowel disease	Describes the diagnostic parameters differential diagnosis and different forms of investigation e.g. radiology or endoscopy Can assess disease severity and when to involve surgical opinion	Selects appropriate treatment for the disease extent and severity including surgical opinion. Is aware of the role of immunomodulators in these diseases	Recognises the urgency of the acutely ill patient. Is sympathetic to the patient and family concerns. Calls for surgical support when needed.

iv) Rectal bleeding and perianal fistulae

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Rectal bleeding	Recalls the causes; haemorrhoids neoplasia of anus and colon; colitis and Crohn's disease and in some instances diverticular disease	Interpret the history, examine patients and uses the relevant techniques i.e. endoscopy (rigidsig, flexisig, colonoscopy), Barium enema. Interprets the results and undertakes appropriate action	Demonstrates willingness to undertake appropriate investigations and start treatment
2. Perianal fistulae	Describes Benign fistulae, fistulae complicated by perianal sepsis and complicating inflammatory bowel disease	Performs relevant investigations including MRI. Able to give medical treatment, understands the role of surgery and liaises with surgical colleagues when necessary	Treats the patient sympathetically. Recognises the social distress caused by these lesions.

Section 4: LIVER

i) Abnormal liver function tests

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Pathophysiology of liver dysfunction	Discusses the Bilirubin metabolism, hepatic and biliary inflammatory processes, hepatic malignancy, hepatic blood flow	To be able to recognise range of disease processes possible	Demonstrates willingness to use appropriate tests in correct circumstances
2. Hepatic dysfunction	Understands the biochemical, haematological, viral, autoimmune and metabolic markers of liver disease	Evaluates investigations including haematology, biochemistry, microbiology, radiology and ultrasound.	Recognises the disease process. Keeps the patient informed of the progress of investigation
3. Investigation of hepatic dysfunction	Discusses the indications for liver biopsy, abdominal ultrasound, CT, ERCP, MRI/MRCP	Selects and interpret appropriate tests as required. Where necessary i.e. liver biopsy obtains informed consent	Chooses the correct investigation and explains technique where necessary and results to the patient.
4. Liver biopsy <i>Mandatory for those doing liver subspecialty training optional for other trainee</i>	Describe the technique, types of needle, indications, pre and post procedure care, and complications Identifies the types of procedure i.e. blind, ultrasound guided, trans-jugular	Obtains informed consent. Performs blind liver biopsy or recommends ultrasound guided or transjugular approach as necessary, Recognises the place of each technique and understands and recognizes the complications	Chooses this technique when necessary and explains the reasons for using an invasive technique. Answers concerns and obtains informed consent.

i) Jaundice

SUBJECT	KNOWLEDGE	SKILLS	ATTITUDES
1. Anatomy and physiology of biliary system	Identify the cause of extra and intrahepatic biliary obstruction and its clinical manifestations. Describe the physiology of bile production	Recognise biliary obstruction and its complications Perform and interpret the relevant investigations	
2. Jaundice: Differential diagnosis and investigation	Define differential diagnosis of jaundice including hepatitis, alcoholic liver disease, biliary obstruction, due to pancreatic malignancy, chronic pancreatitis or gall stones. Chronic liver disease (e.g. Autoimmune hepatitis PBC, PSC) and hepatic malignancy	Selects and interprets investigations of jaundiced patients including ultrasound, CT, MRI, ERCP and liver biopsy. Initiates appropriate treatment	Recognises the development of the various causes of jaundice and takes appropriate action. Keeps the patient informed
3. Jaundice: Treatment	The surgical, radiological and medical treatment of jaundiced patients	To be able to select most appropriate treatment for individual patients	

iii) Hepatosplenomegaly and abdominal swelling

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Hepatosplenomegaly	Outline the causes of cirrhosis, primary and secondary hepatic malignancy and infiltrative and metabolic disorders of the liver	Discusses the differential diagnosis of cirrhosis, hepatic malignancy, haemochromatosis, alpha 1 antitrypsin deficiency and Wilson's disease. Selects appropriate therapeutic options available	Demonstrates willingness to investigate and treat liver disease, ascites and abdominal masses
2. Abdominal swelling	Can recall the pathophysiology of portal hypertension and causes of ascites including non-GI causes.	Discusses a differential diagnosis including GI and non-GI causes. Safely and appropriately manages ascites. Performs paracentesis when needed with or without albumen support as indicated other wise uses diuretics and fluid restriction. Manages spontaneous bacterial peritonitis with diuretics, antibiotics and paracentesis as necessary. Refers for TIPS when indicated	Demonstrates willingness to consult with and refer to a specialist unit as appropriate
3. Abdominal masses including cysts	Define the causes of hepatic and extrahepatic masses	Recognises abdominal masses and initiate appropriate investigations e.g. scans Ultrasound, CT or MRI biochemical tests and biopsy if needed	Sympathetic to patient's concerns. Investigate appropriately and with minimal risk to the patient. Takes informed consent when necessary.

iv) Confusion progressing to liver failure

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Confusion	Describe the pathophysiology, clinical features stage and precipitants of hepatic encephalopathy in liver disease	Recognises, investigates and treats hepatic encephalopathy, alcohol withdrawal syndromes and other causes of confusion	Demonstrates willingness to treat hepatic encephalopathy. Shows compassion towards relatives
2. Liver failure	Recalls the causes and manifestations of acute and chronic hepatic failure	Evaluates the patient's progression to hepatic failure. Demonstrates the knowledge to commence treatment and to refer to a specialist liver unit for consideration for liver transplantation in a timely manner	Exhibits a willingness to consult with and refer to specialist liver unit as appropriate

SECTION: 5 ADVANCE LIVER SUBSPECIALTY TRAINING OPTION AVAILABLE MAINLY IN SPECIALTY LIVER UNITS

Subspecialty training in Hepatology

Note, The specialist hepatologist will require detailed knowledge of these subjects. Non- the- less the general gastroenterologist will also be expected to have a basic knowledge in this area.

Hepatitis, acute liver failure, severe complications of chronic liver disease, benign and malignant tumours of the hepato-biliary system and liver transplantation

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Acute Hepatitis	Describe the various types of acute hepatitis e.g. viral, alcoholic, drug induced, toxic	Performs tests to make a diagnosis	Recognises the different types and communicates information to the patient
2. Anti viral therapy	Describe the criteria for treatment with and efficacy of anti viral therapy for hepatitis B & C	Administer and monitor anti viral therapy for hepatitis B & C with appropriate monitoring investigations as necessary	Demonstrates willingness to participate in the diagnosis and management of viral disease of the liver. Counsils patients about the treatment and its side effects and efficacy
3. Acute hepatic failure	Define the causes and manifestations of acute hepatic failure and its complications including cerebral oedema coagulopathy and the hepato-renal syndrome	Recognises progression of acute hepatic failure and its treatment. Analysis data to determine the need for liver transplantation	Exhibits awareness of the opportunities available for treatment. Keeps the patient and relatives informed as to these options and prognosis if possible

4. Non-viral chronic liver disease	Identifies the various types of chronic liver disease, e.g. autoimmune, primary biliary cirrhosis Wilson's disease alcoholic Haemochromatosis alpha 1 antitripsin deficiency	Interprets the investigation results appropriately	Recognises the requirements for treatment and keeps patient and relatives informed
5. Severe complications of chronic liver disease	Describe the complications of chronic liver disease including portal hypertension and portal-systemic collaterals, infections, and metabolic and circulatory complications	Discusses the use of and follow up of TIPS or surgery in patients with portal hypertension, and the approaches to renal dysfunction	Chooses the correct treatment option
6. Benign and malignant tumours of the hepatobiliary system	Describes hepatic adenoma, hepatoma and cholangiocarcinoma and medical, surgical and radiological management	Discusses the use of screening and the different therapeutic strategies available for individual patients	Recognises the urgency of the treatment required
7. Liver transplantation	Explains the selection of patients and timing of transplantation. Defines the management of peri- and post-operative complications including rejection and infection. Explains the role of Immunosuppressive therapy	Evaluates patients for liver transplantation and interprets criteria for selection. Able to manage complications of transplantation. Able to manage immunosuppressive therapy	Recognises the complexity of the treatment and explains this to patient and family. Explains possible causes for delay

Section 6: ENDOSCOPY

i) Endoscopic safety

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Equipment	Describe the structure and function of an endoscope, the light source, processor and accessories including diathermy and thermal methods for coagulation e.g. Heater probe and Argon Plasma Coagulator	Able to clean and disinfect equipment in accordance with BSG guidelines and use equipment in accordance with manufacturers recommendations	Demonstrates willingness to undertake endoscopy cleaning as necessary and uses the equipment appropriately
2. Consent	Recalls the medical and legal issues concerning consent and provision of information. Is familiar with the latest guidelines on consent.	Demonstrates ability to take informed consent with a patient in accordance with BSG and National guidelines	Demonstrates willingness to obtain consent for endoscopic procedures in an appropriate manner. Respects the patients dignity and privacy
3. Sedation and monitoring	Identifies the sedative and analgesic drugs used and their additive effects. Describes necessary monitoring including oxygen saturation	Performs endoscopy with safe and effective sedation. Uses safe monitoring before and after procedure	Exhibits willingness to participate in safe endoscopic practice

ii) Upper and lower GI endoscopy

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. Diagnostic gastroscopy Oesophagogastroduodenoscopy (OGD)	Defines the indications, contraindications, preparation and documentation	Performs OGD, take biopsies, including D2 (second part of duodenum) biopsies for diagnosis of coeliac disease. Interpret findings and take necessary action to appropriate level. <i>(JAG guidelines Appendix 2)</i>	Demonstrates willingness and ability to practise endoscopy in such a way as to minimise risk and discomfort to patients, and obtain help when needed
2. Endoscopic therapy of benign and malignant oesophageal strictures	Describes methods for dilation of oesophageal stricture and insertion of prosthetic tube or expandable metal stents when needed.	Performs dilatation of oesophageal strictures and insertion of prosthetic devices when appropriate	Exhibits willingness and ability to practice safe endoscopy with minimum patient discomfort. To obtain help when needed
3. Thermal therapy of gastro-oesophageal tumours, ulcers and vascular malformations	Discusses the laser and thermal methods for tumour ablation and control of bleeding lesions	Demonstrates ability to use thermal and laser methods during upper GI endoscopy	Demonstrates willingness and ability to practice safe endoscopy and to obtain help when needed.
4. Direct injection/banding techniques for bleeding lesions and tumour	Describes the indications for endoscopic sclerotherapy or banding of oesophageal varices and injection of vasoconstrictor agents for arterial bleeding lesions	Performs injection sclerotherapy, band ligation and adrenaline injection as appropriate into appropriate lesions.	Demonstrates willingness and ability to practice safe endoscopy and to obtain help when needed.
5. Flexible sigmoidoscopy	Explains the indications, contraindications, complications and their management. Describes , patient preparation and documentation	Performs flexible sigmoidoscopy and be able reach the descending colon in 90% of cases. <i>(JAG guidelines Appendix 2)</i> Take biopsies and perform polypectomy and take other necessary action as required	Demonstrates willingness to undertake distal colonoscopy in such a way as to minimise risk and discomfort to patient and obtain help when needed

iii) Colonoscopy and enteroscopy(*Not mandatory for CCT*)

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
6. Diagnostic total colonoscopy	Define the indications, contraindications, complications and their management. Outline patient preparation and documentation	Performs the procedure and reach caecum in at least 90% of cases Where indicated take biopsies, undertake polypectomy and take other necessary action as required Demonstrate ability to intubate the terminal ileum in at least 50% of cases. <i>(JAG Guidelines Appendix 2)</i>	Demonstrates willingness to undertake colonoscopy in such a way as to minimise risk and discomfort to patient and obtain help when needed
7. Colonoscopic therapy of benign and malignant tumours and strictures	Define the place of polypectomy for removal of polyps. Describe the use of laser and thermal methods for tumour ablation. Describe the dilatation of colonic strictures and insertion of prosthetic stents when appropriate.	Performs polypectomy for benign and malignant polyps as appropriate. Applies laser and thermal methods to control tumour growth and recanalise colon as necessary. Ability to insert colonic stents is an optional skill not required of all trainees	Demonstrates willingness to undertake therapy in such a way as to minimise risk and discomfort to patient and to obtain help when needed
8. Enteroscopy	Describe the indications, contraindications, complications and their management. Outline patient preparation and documentation	Performs enteroscopy in suitable patients. Able to treat vascular lesions and polyps appropriately <i>(JAG guidelines appendix 2)</i>	Demonstrates willingness to carry out safe enteroscopy and to refer patients to a colleague or specialist unit as necessary.

iii) Diagnostic and therapeutic ERCP (*Not mandatory for CCT*)

SUBJECT MATTER	KNOWLEDGE	SKILLS	ATTITUDES
1. ERCP	Describes the indications, contraindications, complications and their management, Outlines patient preparation and documentation	Performs the procedure and identifies the papilla in 95% of cases cannulation success is commensurate to the level of training. <i>(JAG Guidelines appendix 2)</i>	Demonstrates willingness to undertake ERCP in such a way as to minimise risk and discomfort to patient and obtain help when needed
2. Therapeutic ERCP	Describes the indications for Endoscopic sphincterotomy with or without the insertion and replacement of biliary stents, (plastic and metal) defines the place of combined endoscopic and radiological procedures. Identifies possible complications	Selects appropriate cases for sphincterotomy and stent insertion. Success rate should be commensurate with the level of training. It is understood that trainees may not achieve but should aspire to the required international standard before CCT <i>(JAG guidelines Appendix 2)</i>	Exhibits willingness to perform therapeutic ERCP in such a way as to minimize risk and discomfort to the patient and to obtain help when needed.

Appendix 2 Joint Advisory Group on Gastrointestinal Endoscopy (JAG)

Joint Advisory Group on Gastrointestinal Endoscopy (JAG)
Guidelines for the training, appraisal and assessment of trainees in
Gastrointestinal endoscopy and
Guidelines for the assessment of Units for Registration and Re-registration
Available on
www.thejag.org.uk

Appendix 3 Acute and Internal Medicine Curriculum

Generic curriculum for Medical Specialties
Available on
www.JRCPTB.org.uk

Appendix 4 Assessment of Endoscopy Competence

A certificate of competence of training CCT is awarded to trainees who have completed the relevant curricula (defined by the Royal Colleges and PMETB) and who have passed objective assessments. The JAG is responsible to the Specialty Advisory Committees of the Royal Colleges for defining the endoscopy components of the curricula and for appraising and assessing endoscopic competence.

All medical gastroenterology SpRs must achieve competence in upper gastrointestinal (GI) endoscopy and flexible sigmoidoscopy as part of their CCT. Training in other endoscopic modalities, including colonoscopy, ERCP and endoscopic ultrasound are not mandatory and should only be pursued by those trainees who intended to continue these procedures after training.

Endoscopy training is not mandatory for all trainees in gastrointestinal surgery but SpRs training in upper gastrointestinal surgery should complete JAG defined criteria for training in upper gastrointestinal endoscopy. Colo-rectal surgical SpRs should complete the JAG criteria for training in flexible sigmoidoscopy and colonoscopy .

Training will only be recognised if it has been undertaken in a JAG accredited unit. These units will have been quality assured as places in which safe and effective endoscopy is undertaken and as institutions committed to and equipped for teaching and learning.

Certificates of competence in individual endoscopic procedures (upper gastrointestinal endoscopy, colonoscopy, flexible sigmoidoscopy ERCP etc) will be issued by JAG to trainees who have successfully completed to the relevant curriculum and passed summative assessments. These certificates do not entitle a practitioner to undertake endoscopy independently: they have no legal status but will inform deaneries, Royal Colleges and PMETB that the particular endoscopic components of training have been completed. Other trainees in endoscopy, both medical (including radiologists paediatricians Acute physicians and general practitioners) and non-medical (including nurses) will be awarded identical certificates on the same basis.

Certificates confirming that training has been completed will be awarded on the basis of competency assessments rather than number of procedures undertaken. It is nevertheless recognised that a basic number of endoscopies should be completed by each trainee in order to demonstrate consistent success and acceptably low complication rates. The minimum number is:

For upper GI endoscopy

200 under supervision within a year and then a further 100 examinations under a degree of supervision to a total of 300 to ensure an adequate exposure to a full range of clinical material.

For colonoscopy

At least 100 procedures within a year. Caecal intubation should be achieved in at least 90% of cases where it is indicated in patients without stricture or marked faecal contamination.

ileal intubation should be achieved in at least 50% of procedures where it is indicated.
For ERCP
See JAG guidance appendix 2
For general guidance in all endoscopic techniques also see Appendix 2

DOPS (Direct Observation of Procedural Skills).

(a) Appraisal.

It is recommended that a DOPS form is completed by a trainer for each supervised procedure. The form is signed by trainee and trainer, feedback is given and the (anonymised) form is retained in the trainee's portfolio. It is intended that a series of DOPS appraisal forms will be present a summary of trainees progress and by the time the summative DOPS assessment is undertaken the trainee will have been scored as competent in each domain of the endoscopic procedure.

(b) Assessment

Summative DOPS assessments will be done using the same Forms but will be independently scored by two trained trainers. These will be appropriate once the trainee has completed at least the minimum number of endoscopies defined in the curriculum and when the series of DOPS appraisals have suggested that competence has been achieved.

A certificate of endoscopic competence will be awarded by the JAG to trainees following receipt of their endoscopic experience and summative DOPS forms, confirmed by the signature of their trainer. The certificates will list those procedures for which competence has been achieved. Certificates should then be retained in the training manual and presented at RITA and PYA interviews.

Attendance at JAG training courses is recommended as part of the training process but since it is not possible to provide these for all trainees, course attendance is not a mandatory requirement for CCT.

The credibility of these processes is dependant upon the expertise of trainers. JAG therefore encourages all those involved in training (non-medical as well as medical) to attend training the trainers courses. Only trained trainers should undertake summative DOPS

Accreditation of Screening Colonoscopies – DOPS Form

Candidate: Assessment Centre

Date of Assessment:/ /..... Assessor 1:

Assessor 2:

<input checked="" type="radio"/> Major Criteria	<input type="radio"/> Minor Criteria
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Scale: M – Merit: excellent – very good performance
 S - Satisfactory: competent and safe throughout procedure
 B – Borderline: some aspects could be improved, some errors uncorrected
 U – Unsatisfactory: failure to meet accepted standards, frequent errors
 Uncorrected

Criteria	Score	Comments
Assessment, Consent, Communication Obtains informed consent using a structured approach Satisfactory procedural information Risk and complications explained Co-morbidity Sedation Opportunity for questions Demonstrates respect for patient's views and Modesty during the procedure. Communicates clearly with patient throughout, Including the results of the procedure with appropriate management and f/u plan		
Safety & Sedation Secure IV access Gives appropriate dose of analgesia and Sedation and ensures adequate oxygenation and monitoring of patient Demonstrates good communication with the Nursing staff, including dosages and vital signs		
Endoscopic Skills during insertion and withdrawal Uses correct procedure to check the endoscope function before intubation <ul style="list-style-type: none"> <input type="radio"/> Performs PR <input checked="" type="radio"/> Maintains luminal view, avoiding blind insertion <input checked="" type="radio"/> Demonstrates awareness of patient's consciousness and pain during the procedure and takes appropriate action <ul style="list-style-type: none"> <input type="radio"/> Employs torque steering 		

<ul style="list-style-type: none"> ○ Uses distension, suction and lens washing appropriately • Recognises and logically resolves loop formation • Uses position change, abdominal pressure and stiffener appropriately ○ Completes examination in a reasonable time 		
<p>Diagnostic & Therapeutic Ability</p> <p>Adequate mucosal visualisation</p> <p>Recognises caecal landmarks or incomplete Examination</p> <p>Accurate identification and management of Pathology</p> <p>Uses diathermy and therapeutic techniques appropriately and safely</p> <p>Recognises and manages complications appropriately</p>		

Appendix 5 Format of Penultimate Year Assessments (PYA) in Gastroenterology

Three months in advance the trainees involved should be informed of the date, the venue and reminded of the regulations pertaining to PYAs. Trainees need to ensure that their training records fully document their training and include a signed supervisor reports. There should be a supervisors report for each and every attachment and a minimum of one report covering each year of training. Trainees should be asked to ensure that trainers have graded and countersigned each item of the curriculum including their record of endoscopic training. It is these reports that provide the real assessment and without them trainees will not be able to proceed to the next phase of training.

Assessment of the Training Record

The trainees' personal training record must be reviewed by the committee before each individual is seen. The SAC representative should be offered an opportunity to review the record. The SAC representative must be shown and read the structured supervisors reports. A minimum of ten minutes per trainee must be allocated for this before the interviews begin (or the relevant sections of the training record must be sent out at least one week in advance to the SAC representative). Whilst the whole training manual should be perused, particular attention should be applied to the weekly timetable and to the educational supervisor's signatures and comments. The research supervisor's comments should also be seen. Areas identified from this review as worthy of discussion should be noted for the subsequent interview.

The Interview

At least 30 minutes plus 5 minutes for discussion/formalities must be allowed in addition to the 10 minutes set aside to review the training record. Thus in total the interview will last approximately 45 minutes which will include a presentation by the trainee on his/her training to date, followed by discussion and planning for the final year to 18 months. The format therefore is:

(a) The presentation

This should last a maximum of 10 minutes

The candidate should be asked to present, with the aid of one or two overheads, a summary of the training to date. This should include

The current year's timetable

- I. Summary of the current years in-patient work including the numbers of patients and numbers of ward rounds including level of supervision*
- II. Summary of endoscopic and other procedures including level of supervision to date
- III. Summary of the current years out patient experience including numbers of new and follow up patients and the degree of supervision
- IV. Description of research training and duration
- V. A summary of the previous years placements with exact dates (as submitted to JRCPTB)
- VI. A Summary of total endoscopic numbers, level of activity (independent etc) for whole career (as submitted to JRCPTB)*

- VII. A statement of strengths and weaknesses which will require further training in the last year*
- VIII. The understood provisional CCT date.

* Printed copies of these should be given to the SAC representative.

(b) The Chairman and SAC representative will question the candidate concerning any aspects requiring clarification. Having considered the supervisor's reports the SAC representative will attempt to elicit evidence of competence by specific questions concerning the level of independence. The trainee should be asked whether there are aspects of the report with which he/she disagrees. The SAC representative will also address attendance at management and other courses, audit and other matters that have not been covered.

(c) The Chairman and other members of the committee will then address plans for subsequent years training bearing in mind gaps that have appeared during the interview. A formal plan for the next year's training will not be made at this assessment.

(e) The SAC representative should then lead a discussion on the CCT date and determine the correct date, and agree this with the trainee. If agreement is not achieved the method of appeal should be outlined for the trainee. The trainee will be given an opportunity to ask any remaining questions.

(f) The Trainee should then leave the room allowing opportunity for the committee to consider the adequacy of the training during that year and agree mandatory and advised targets for the final months of training.

(g) The trainee returns and the SAC representative will reveal the decision of the committee, advise the trainee of the proposed final CCT date and areas of mandatory and advised training for inclusion in their personal development plan.

The purpose of the PYA is to assess the training received, but if in the course of discussions it becomes clear that there is a problem with a particular post, or the training programme, the SAC representative should discuss this further with the committee members and request time alone with the trainee to document more accurately the problem for reporting back to the SAC and Specialty Advisor/Training Director.

Appendix 6 - Structured Supervisors Reports

These should be in the following format:-

Knowledge – Here there should be documentation that the trainee’s knowledge base is as would be expected for their level and that they read and present evidence based data, and show an interest in self-learning.

Skills – These should include history taking, communication (with staff, patients and relatives), as well as practical procedures. Include here anything they do particularly well and which would make them expert in that area. (? suitability for ERCP training).

Attitudes – This is more nebulous but often the area that generates problems in the future. Do they get on with other team members? Are they good at empathising, supportive of juniors (and you), enthusiastic, hard working, good timekeepers. If there have been a lot of complaints these should be highlighted. Does the trainee attend the teaching days? If not, please comment. Reports from other members of the team can be particularly helpful here, so please ask for the written comments on items 2 and 3 from the endoscopy sister and/or another team member who has close links with the trainee. This will be supported by Multi-source Feedback reports.

Personal Development Plan – Please document career discussions and training needs that have arisen. Please do not just write a wish list of improbabilities but make suggestions that are practical. It is difficult for the “system” to provide everything for everybody but trainees should be given an opportunity to shine in some areas. If a DGH or liver unit placement is required to satisfy curriculum requirements, this should be stated.

Time off for any reason – All absences (x days) should be documented as CCT date is extended for prolonged periods out of programme.

This report should be discussed with the trainee and they should be given a copy.

Trainers/supervisors must be able to support their opinions (to the PMETB or equivalent body if necessary). A desire not to upset trainees should not be allowed to result in inaccurate reports. Criticisms need examples and must be documented and if it is believed a trainee is exceptional, examples should be given. Trainees’ reports are likely to be externally scrutinised in the future.