ACUTE CARE COMMON STEM CORE TRAINING

A manual for trainees and trainers

Edition 1: dated January 2007

PREFACE

This training manual describes Acute Care Common Stem (ACCS) core training which is an element of the curricula for the CCT programmes in General (Internal) Medicine (Acute), Anaesthesia, Emergency Medicine and Intensive Care Medicine. It is published by the Royal College of Anaesthetists (RCoA,) the Federation of Royal Colleges of Physicians (FedRCP), the College of Emergency Medicine (CEM) and the Intercollegiate Board for Training in Intensive Care Medicine (IBTICM) which together form the Intercollegiate Committee for ACCS Training (ICACCST).

The manual was written following consultation and feedback between the RCoA, FedRCP, CEM, IBTICM, Regional Advisers, Programme Directors and individual consultants which was reviewed and developed by the ICACCST and approved by the three Colleges and the IBTICM. This edition was approved by the Postgraduate Medical Education and Training Board (PMETB) on DATE

The ICACCST will be pleased to receive comments on this training programme from both trainers and trainees. These should be addressed to ICACCST at:

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The manual is reviewed regularly with an implementation date for any changes being not less than 6 months after their publication date. Amended pages are sent to Regional and Deputy Regional Advisors, College Tutors and Programme Directors in all specialties concerned. An updated version of the manual is maintained on the relevant College and IBTICM websites. Please work from the latest version.

Occasionally decisions may have to taken that affect the immediate interpretation or application of specific topics in this manual. These will be published on the relevant College and IBTICM websites and, if necessary, earlier by e-mail to all Regional and Deputy Advisors, College Tutors and Programme Directors.

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EXECUTIVE SUMMARY

ACCS is a 2 year training course that normally follows Foundation Year and forms an element of the curricula for the CCT programmes in General (Internal) Medicine (Acute) {GIM(Acute)}, Anaesthesia, Emergency Medicine and Intensive Care Medicine (ICM). training.

Aim The aim of ACCS training is to produce for the NHS multi-competent junior doctors able to recognise and manage the sick patient, who can define the nature of the specialist intervention required and who have the complementary specialty training required for the programmes in emergency medicine, GIM (A) and ICM.

Objectives Within the overall aim, each specialty has a specific objective for ACCS training:

- ***Anaesthesia*** To produce a cohort of trainees with more widely based experience than is available solely within the anaesthesia CCT programme and to allow those who want to obtain a joint CCT in anaesthesia and ICM to obtain the complementary specialties in a pre-planned and structured manner
- ***Emergency Medicine*** To provide training that delivers the first two years of the CCT in Emergency Medicine in a pre-planned and structured manner.
- ***GIM (Acute)*** To provide training which delivers the Level I competences for the CCT in GIM (Acute) in a pre-planned and structured manner.
- ***Intensive Care Medicine (ICM)*** To allow trainees who want to obtain a joint CCT in ICM to obtain the competences of the complementary specialties in a pre-planned and structured manner.

The course comprises:

- 6 months of GIM(Acute)
- 6 months of emergency medicine
- 1 year of anaesthesia + Intensive care medicine (with a minimum period of 3 months in either discipline).

It is a competency based course where time is used for administrative reasons to ease the organisation of rotations.

Application by trainees will be for ACCS training, but at interview they will have to state a preference for the specialty programme they wish to follow on completion of ACCS training. This will enable appropriate spaces to be made available at ST2 (for anaesthesia) and at ST3 for emergency medicine and GIM (Acute). Although flexibility would be preferred, ability to change specialty stream will depend on mutual ‘swaps’, usually within the locally.

Selection will normally be made by a panel with representatives from all four disciplines. Record of In Training Assessment (RITA) panels should also have representatives from all four disciplines.

1: INTRODUCTION

Acute Care Common Stem (ACCS) core training is a two-year introductory course including training in anaesthesia, emergency medicine, GIM (Acute) and ICM. ACCS forms part of the training curricula for these four specialties. The duration and content of each specialty module may vary between Deaneries depending on the opportunities available locally. All trainees will be asked to specify their ultimate specialty before starting ACCS training.

1.1 Aim

The aim of ACCS training is to produce for the NHS multi-competent junior doctors able to recognise and manage the sick patient, who can define the nature of the specialist intervention required and who have the competences of the complementary specialties required for the programmes in emergency medicine, GIM (A) and ICM.

1.2 Objectives

Within the overall aim, each specialty has a specific objective for ACCS training:

a. ***Anaesthesia*** To produce a cohort of trainees with more widely based experience than is available solely within the anaesthesia CCT programme and to allow those who want to obtain a joint CCT in anaesthesia and ICM to obtain the complementary specialties in a pre-planned and structured manner

b. ***Emergency Medicine*** To provide training that delivers the first two years of the CCT in Emergency Medicine in a pre-planned and structured manner.

c. ***GIM(Acute)*** To provide training which delivers the Level I competences for the CCT in GIM(Acute) in a pre-planned and structured manner.

d. ***Intensive Care Medicine (ICM)*** To allow trainees who want to obtain a joint CCT in ICM to obtain the competences of the complementary specialties in a pre-planned and structured manner.

1.3 Postgraduate Medical Education and Training Board (PMETB)

The PMETB requires that all training contributing towards a Certificate of Completion of Training (CCT) must be ‘competency based’. The training and assessment of trainees has to reflect this philosophy which has two essential components:

- competence in a trainee describes possession of the knowledge, skills and attitudes required to undertake safe clinical practice at a level of confidence commensurate with stated objectives; and that
- professional practice means more than the performance of clinical skills, no matter how complex. It very importantly carries a built-in commitment to standards and the attitudes which will maintain those standards throughout life.

1.4: The NHS Litigation Authority (NHSLA)

The NHSLA is a Special Health Authority responsible for handling negligence claims made against NHS bodies in England[1]. The NHSLA has issued standards expected of Trusts of which Standard 2, the 'Competent & Capable Workforce' is particularly relevant to training. Section 5 defines the documentation that each Trust must hold relating to the management of trainees, their supervisory meetings and the verification of clinical skills. The NHSLA has three levels of accreditation, above level 0:

- ***Level 1: 2.5*** As a minimum the approved document(s) detailing the procedures to ensure that all medical staff in training (SpRs, F1 and F2 trainees) are appropriately supervised during their clinical placements must include a description of the:
  - roles and responsibilities, both across the organisation and locally
  - system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation
  - requirements in relation to the frequency and timing of supervisory meetings
  - systems to ensure that medical staff in training have the basic clinical skills required before they work independently
  - process for monitoring the effectiveness of all of the above

- ***Level 2: 2.5*** The organisation can demonstrate compliance with the standards set out within the approved document(s) which describes a systematic approach to the supervisory process for medical staff in training on initial appointment and ongoing thereafter described at level 1, in relation to the:
  - system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation
  - systems in place to ensure medical staff in training have the basic clinical skills required before they work independently

- ***Level 3: 2.5*** The organisation can demonstrate monitoring the effectiveness of the minimum requirements contained within the approved document(s) which describes a systematic approach to the supervisory process for medical staff in training on initial appointment and ongoing thereafter described at level 1, in relation to the:
  - system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation
  - systems in place to ensure medical staff in training have the basic clinical skills required before they work independently
  - where the monitoring has identified deficiencies, recommendations and action plans have been developed and changes implemented accordingly.

These standards emphasise the need for the assessment of competence and the responsibility of documenting competences and the achievement of training objectives. The implication for trainees and trainers is that training curricula must list the competences that have to be achieved and completed satisfactorily at each stage of training. The necessary knowledge, skills and attitudes have therefore been defined for all aspects of training and all three must be assessed. During the training process, it is

[1] The Welsh Risk Pool and the Scottish Clinical Negligence and Other Risks (Non-Clinical) Indemnity Scheme (CNORIS) fulfil similar roles to the NHSLA. In Northern Ireland each Trust has its own risk assessment and negligence scheme.

expected that both trainees and trainers will comply with the guidance issued by the General Medical Council (GMC) and ICACCST.

1.5: Abbreviations

To save repetition, a list of commonly used abbreviations is given in Appendix A.

1.6: Further advice

The first point of contact for information concerning an individual's training is this document in conjunction with the GIM (Acute), Anaesthesia, Emergency Medicine or Intensive Care Medicine CCT curricula. Most questions can be answered by reference to these documents.

The next point of contact is the College Tutor of the department in which the trainee is training. If the College Tutor is unable to give the necessary guidance then the appropriate Regional Advisor or Programme Director should be asked for advice.

Only if the College Tutor or Regional Advisor cannot help should a trainee contact the ICACCST for advice because inevitably it will have no knowledge of the trainee's particular circumstances.

2: PRINCIPLES OF ACCS TRAINING

2.1: Introduction

ACCS training will last for 2 years, followed by further training in Emergency Medicine (the ACCS programme is the first 2 years of this curriculum), Anaesthesia or Medical specialties with an emphasis on the acute management.

The components of training, which can be taken in any order, are:

- 1 year emergency medicine + GIM(A) (usually 6 months each)
- 1 year anaesthesia + intensive care (minimum 3 months, maximum 9 months in each)

ACCS training is constructed with the flexibility to meet the objectives of the four component specialty curricula.

The training will be provided in posts and programmes approved by PMETB.

Departments in which training occurs must comply with the regulations and recommendations of the relevant national Departments of Health, PMETB and the ICACCST. Doctors responsible for training are expected to comply with the regulations and recommendations of the GMC.

2.2: Administration of ACCS training

The intention is that all hospitals in the UK that provide ACCS training will be grouped into ACCS Schools; these are functional units, usually within Deanery boundaries, that are able to provide the all the components required for completion of ACCS training.

Schools will be developed once ACCS training is established and the best forms of delivery have been identified.

Hospitals within a School will generally be expected to offer experience and training in at least two of the specialties and preferably all four.

A key appointment in each ACCS School will be the Deanery appointed Training Programme Director with responsibility for organising the rotations to ensure that all the units of training are covered.

It will be the responsibility of each Deanery to appoint ACCS Specialty Training Committees, The Constitution of each STC in ACCS will be subject to local Deanery considerations but it is strongly recommended that each STC is chaired by a Regional Advisor or person of similar seniority and has representatives selected fairly and openly from ACCS training organisations. One or more Training Programme Directors should be appointed according to local process and the STC should also have, as a minimum, trainee and academic representation.

Guidance for Deans Guidance for Deans on the implementation of ACCS training is contained in Appendix B.

2.3: Responsibility for training in the workplace

Competency based training relies on assessments made during clinical service. The responsibility for the organisation, monitoring and efficacy of this training and assessment is shared by a variety of authorities:

- PMETB is responsible for approving posts and programmes for training.
- The ICACCST is responsible for:
  - developing the curriculum including determining the learning objectives and competences of training; and
  - advising PMETB and the Postgraduate Dean on the arrangements for organising and monitoring in-service training made by ACCS Schools and hospitals.
- The Postgraduate Dean is responsible:
  - for selecting trainees in accordance with nationally agreed procedures
  - to PMETB for the quality management of training;
  - for organising the Record of In-training Assessment (RITA) and an Annual Review for each trainee
  - for the overall training arrangements in each Trust; The Clinical Tutor or Director of Education acts as the Dean's officer within the trust and is responsible for the educational environment and in some cases, aspects of generic training
- The local Specialty Training Committee:
  - reports to the Postgraduate Dean and is responsible for local arrangements for in-service training, but may delegate many of these administrative functions to one or more ACCS Schools; and
  - has responsibility for deciding what evidence of progress in training will be reviewed at appraisal and evaluated at the RITA.
- Programme Directors organise the rotations to ensure that all units of training are covered and that remedial training is implemented if required.
- Individual specialty Regional Advisors are responsible for representing the policies and views of their respective disciplines in all relevant matters within their Region.
- The Clinical Directorates for each specialty within a hospital are responsible for delivering in service training in accordance with the principles adopted by PMETB, the ICACCST, the Postgraduate Dean and the ACCS School.
- When they are established ACCS Schools will take on responsibility for organising and monitoring the training scheme and individual trainees; in the meantime RITA panels should include representatives from all four component specialties.

2.4: Modules and units of training

ACCS training comprises four *modules*, GIM (Acute) (Appendix C), anaesthesia (Appendix D), emergency medicine (Appendix E) and ICM (Appendix F), each of which is composed of *units of training*, some of which are compulsory, others are optional. The units cater for general and specialist clinical areas as well as generic non-clinical subjects. Each unit is described in terms of:

- the subject area;
- the required knowledge;
- the required skills;
- the required attitudes and behaviour;
- workplace training objectives for the trainee;
- for some specialist areas, the training environment,

Each trainee must complete an educational agreement with his supervisor within two weeks of the start of each placement in which the training goals of the placement are clearly established. The agreement forms the basis of subsequent review.

Because of the fundamental synergy between the four specialties this format inevitably results in the same topic appearing in more than one place; similarly there is inevitable cross-over between the knowledge and skills lists. To ease the management of individual training programmes a matrix of transferable skills is contained in Appendix G.

2.5: Appraisal and assessment

There will be regular appraisal and assessment during ACCS training. Progress at various points in is dependent on successful assessment. The timing and format of appraisal and assessment will vary for each specialty specific module and will be in accordance with the requirements specified in individual specialty CCT programmes.

Every trainee must have a formal appraisal at the end of each specialty module.

Examinations of knowledge are one of several assessment methods used within the programme e.g. the MRCP Part 1 Examination for GIM(Acute), the FRCA Primary MCQ Examination for anaesthesia and MCEM for emergency medicine. The syllabi for these examinations of basic level knowledge are contained in the individual specialty CCT programmes.

Logbooks Every ACCS trainee must maintain an ACCS logbook in the format shown in Appendix H.

RITA The RITA is the process whereby all assessments of a trainee's knowledge, skills and attitudes throughout the year come together for review at Deanery level to be deemed satisfactory or otherwise as an entirety. In exceptional circumstances it may be appropriate to initiate a RITA before a year has elapsed. Such a process will only be initiated at the request of a senior trainer and with the agreement of the STC Chair or his deputy. The STC works with the Postgraduate Deans in conducting the RITA to provide a composite picture of the trainee's achievements, shortcomings and consequent future training needs. RITA panels should include representatives from all four component specialties. COPMeD's policy on implementing RITA's can be found at Appendix I.

2.6: Supervision

ACCS teaching and learning require that consultants and trainees work together in clinical practice. The detailed requirements of clinical supervision will vary in detail between the four ACCS specialties and are described in the relevant CCT programmes.

Clinical supervision

Every trainee must at all times be responsible to a named consultant. That consultant must be available to advise and assist the trainee as appropriate. Sometimes this will require the consultant's immediate presence but on many occasions less direct involvement will be acceptable. All operating lists and clinical sessions involving a trainee should be under the supervision of a named consultant or SAS grade doctor. It is accepted that absences (holiday, study leave, professional leave or sickness) will occur. However, when such absences happen and a trainee undertakes clinical work,

there must be an arrangement to provide appropriate direct or indirect consultant supervision for the trainee.

Supervision is a professional function of consultants and they will be able to decide what is appropriate for each circumstance in consultation with the trainee. The safety of an individual hospital's supervision arrangements is the concern of the departmental and hospital management and it is necessary for them to agree local standards and protocols that take account of their particular circumstances. Clinical supervision for each specialty module will be in accordance the procedures contained in the relevant CCT programme. At all times the needs of patient safety must govern the level of supervision available.

Educational supervision[2] Every trainee must have a nominated educational supervisor to oversee individual learning.

Clinical supervision by SAS grades When clinical supervision of a trainee is being provided by a SAS grade doctor, the trainee must always have unimpeded access to a named consultant.

Clinical supervision of one trainee by another Clinical supervision of one trainee by another occurs and senior trainees must learn how to do this safely and effectively. A junior trainee may refer to a more senior trainee as the first line of advice and assistance. However, both trainees must be subject to supervision from a designated consultant.

Clinical Teaching The placement of a trainee with a consultant is always a teaching opportunity even if it is primarily required to provide clinical supervision for patient safety. Consultants must work with trainees both to teach them and to assess their competence on a daily basis. This experience is best described as clinical teaching to distinguish it from pairings that occur for reasons of safety (clinical supervision) though all direct clinical supervision is also clinical teaching.

2.7: Out of hours cover for emergency services

Out of hours work for trainees largely involves providing services for emergencies. Such out of hours work makes different demands upon the trainee. Both the clinical work and the experience of working in the hospital with reduced, out of hours service must be learned through experience. Whenever trainees are learning new aspects of emergency work they must have close clinical supervision.

The service requirements of hospitals, however, may necessitate trainees undertaking more out of hours emergency cover than is needed for their training. A balance therefore must be maintained between the service and training requirements of out of hours work: service must not undermine the necessity for training out of hours. This must be reviewed by evaluating the whole training scheme; out of hours emergency work must not prevent the trainee from meeting the standards of the agreed competences on schedule. Out of hours duties apply *pro rata* (weekdays and weekends) to flexible trainees.

Each component specialty module is distinct and there is no place for moving out of the designated specialty module to provide service work in another area.

[2] see footnote 3

2.8: Simulators

The ICACCST encourages the use of simulators for relevant aspects of postgraduate training in acute care especially for events of high importance but infrequent occurrence, for situations where there might be a high risk to patients and for team building and working under pressure.

3: ENTRY AND PROGRESSION THROUGH ACCS TRAINING

3.1: Entry to ACCS core training

Entry to ACCS training will be by competitive application under nationally agreed arrangements. The interview panels will comprise representatives of all four specialties that comprise ACCS training. Before entering the ACCS programme trainees will be asked to specify the specialty they want to pursue for a CCT.

- **Entry points into the programme for the first year of transition**
  - *During transition:*
    - Entry into ACCS Year 1 from F2; and
    - Entry into ACCS Year 2 for those with one year's previous training in components of ACCS such that by the end of ACCS Year 2 competences have been achieved in all four component specialties.
  - *Steady state* Entry into ACCS Year 1 from f2

- **NTNs** During the selection process for both run-through and FTSTA posts trainees will have to declare which one of the three specialities (anaesthesia, GIM (A) or emergency medicine) they intend to follow at the end of their ACCS training. Those selected for run-through training will be allocated an NTN in their chosen specialty from the beginning. Flexibility over exit specialty e.g. switching from anaesthesia to emergency medicine *might* be possible if the run-through programmes locally can accommodate the change and there is agreement of the specialty programme directors and Regional Advisers and Dean.

- **Appointment process**
  - ACCS appointment panels should consist of trainers from each of the constituent specialties of ACCS training i.e. emergency medicine, GIM (A), anaesthesia and intensive care medicine. It is recognised however, that this may be difficult logistically for the 2007 round of recruitment. In that situation single specialty panels should select into their own ACCS specialty
  - No trainee should be appointed to a run-through training post in a specialty not represented on the appointment panel. The only exception to this could be if the prospective written agreement of the absent specialty programme director was made available to the panel at the structured interview.

3.2: Progression through the ACCS programme

Duration

The *indicative* duration of the ACCS training is two years. In theory the actual duration of competency based training should be determined by the rate at which an individual achieves the necessary competences. In practice, because the ACCS programme feeds into specialty CCT programmes with fixed start dates, this theoretical ideal will probably not be achievable.

The duration and content of each specialty module may vary between Deaneries, but minimum competences will be specified for each specialty. The time devoted to each specialty will normally be:

- anaesthesia and ICM– 1 year total, with a minimum of 3 months spent in each specialty;

- GIM(Acute) – 6 months; and
- emergency medicine – 6 months

The order in which the modules are completed does not matter and will be determined by local arrangements.

Exit from ACCS training On completion of ACCS training a trainee's next step will depend on the specialty CCT programme he/she is joining:

- *GIM (Acute)* On completion of ACCS training trainees will join the GIM(Acute) CCT programme at the start of ST year 3.

- *Anaesthesia*
  - On completion of ACCS training trainees will normally join the anaesthesia CCT programme at an appropriate point in ST year 2 because the content and duration of the balance of an individual's anaesthetic CCT programme will depend on the competences already achieved during ACCS training.
  - Trainees moving from ACCS training will normally be expected to have passed the FRCA Primary MCQ assessment of knowledge before starting their anaesthesia CCT programme.
  - If a trainee does more than 3 months ICM during ACCS training i.e. they will have completed all or part of the intermediate level syllabus for ICM[3], he she will not normally have to repeat these competences within the anaesthesia CCT programme provided that they have been successfully assessed and recorded. This will also usually mean that such a trainee will not have achieved all the necessary anaesthetic competences before moving to ST year 3 of the anaesthetic programme. The missing competences and the "additional" ICM competences will be recorded on his/her Basic Level Training Certificate and the missing competences will have to be achieved within an agreed time frame.

- *Emergency medicine* On completion of ACCS training trainees will join the emergency medicine CCT programme at the start of ST year 3.

- *ICM* Because there is no stand-alone CCT programme in ICM, trainees wishing to obtain a joint CCT in ICM must complete one of the CCT programmes listed above or a surgical specialty CCT programme.

3.3: Principles for calculating training time

Less than full-time (LTFT) trainees The European Medical Directive states that:

> "Part-time training shall meet the same requirements as full-time training, which shall differ only in the possibility of limited participation in medical duties to a period of at least half that of full-time trainees, including on-call duties."

This is interpreted to mean that flexible trainees should, *pro rata,* undertake the same out-of-hours work as full-time trainees, including weekend and shift duties. General advice on LTFT training is contained in the "Gold Guide".

Transitional arrangements for entry into year ACCS year 2 in August 2007
Trainees with a minimum of 12 months formally approved, assessed and recorded

[3] *The CCT in Anaesthesia* Part III Appendix 4

training in one of the ACCS specialties may apply for direct entry into year 2 of ACCS core training for training in the other ACCS modules. The exact content of training will be decided on an individual basis.

FTSTA posts If a FTSTA trainee successfully applies for an NTN in one of the component specialty CCT programmes, full credit will be given for competences acquired, assessed and recorded during the FTSTA.

Sickness, parental and maternity leave In a competency based programme trainees are to be assessed and signed off on the basis of competences achieved not the time taken to obtain them. Thus, normally, periods of absence due to sickness, parental or maternity leave are irrelevant. In the event of prolonged absence a period of re-orientation may be needed before further competences can be taught and assessed. Further advice can be found in Appendix J.

Military service Absence on military operations by full time or reserve members of the Defence Medical Services will be treated in the same way as for absence due to sickness. It is very possible that with careful planning such trainees may be able to acquire and be assessed for competences whilst on military duty.

Recognition of training outside the United Kingdom Retrospective recognition is not given for training obtained outside the European Economic Area (EEA).

Training year The date an individual's indicative training year starts is determined by the local Specialty Training Committee, and is not necessarily the chronological date from the beginning of training.

4: THE DELIVERY OF TRAINING AND EDUCATION

The ICACCST supports the GMC's view that *all* doctors have a professional obligation to contribute to the education and training of other doctors[4]. The instruction of trainees can be undertaken by consultants, SAS grade doctors and other trainees. Trainees may teach other trainees both formally in tutorials etc and in clinical situations where this is agreed by their supervising consultant. Clinical teaching situations will often involve the senior trainee in supervising the junior but the overall responsibility must rest with the nominated consultant supervisor (see Section 2.6). In addition there may be contributions from other health care professionals e.g. nurses, physiotherapists, pharmacists, basic scientists and health care managers.

4.1: Principles of delivering training and education

- It is intended that trainees should be totally immersed in each specialty module during their attachment to it. It is not intended that trainees should be taken away for centralised generic training, with the exception of mandatory training, which might dilute their ACCS training. The generic units of training described in Section 4.8 must be delivered within the specialty modules.
- The ICACCST recognises that the example of trainers and teachers has a powerful influence upon the standards of conduct and practice of every trainee, whether an undergraduate or a qualified doctor in training[5]. It follows that all those involved in training and teaching should recognise and meet their responsibilities[6]. In particular:
  - Any consultant or SAS grade doctor who is involved in the training or education of trainees should themselves be aware of the educational objectives of the training programme and participate actively in the optimal construction and delivery of the programme.
  - Consultants, SAS grade doctors and others involved in teaching must fulfil the CPD requirements for the clinical appraisal process and to the satisfaction of the relevant medical Royal College.
  - Trainers and teachers should take the necessary steps to acquire the skills of a competent teacher.[7]

4.2: The organisation of training and education

The primary responsibility for learning lies with the trainee. The infrastructure of training and education is there to facilitate this.

Educational Supervisor Every trainee must have an educational supervisor. The supervisor's role is to help the trainee to plan their training and reach personal and institutional objectives. In some clinical departments the College or Board Tutor may be the educational supervisor for all the trainees. If this is the case they must ensure that they have sufficient time and resources to undertake the duty in accordance with accepted good practice in educational supervision.

Trainers A trainer is a consultant who has responsibilities for the clinical teaching and educational supervision of trainees, including responsibility for appraisal and assessment.

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[4] *The doctor as teacher*, GMC 1999, paragraph 4.
[5] *The doctor as teacher*, GMC 1999, paragraph 1
[6] *Good medical practice*, GMC 1998, paragraph 10
[7] *The doctor as teacher*, GMC 1999, paragraph 5

The GMC defines the personal and professional attributes required for this role.[8 9 10] To be a trainer the consultant must adhere to the principles described in 4.1.

4.3: The Tutor[11]

The Tutor for each trainee will be from the discipline for which the trainee is given an NTN when selected for ACCS training. If a trainee changes his/her mind about their career choice then the College Tutor for the new specialty will take over responsibility for that trainee. For trainees in FTSTAs the educational and training responsibility will rest with the Tutor of the discipline in which the trainee is training at the time. If there is a linked programme it is incumbent on the Tutors involved in the linkage to ensure a joint component suitable to the trainees needs is produced and implemented.

Tutors are not expected to deliver personally all aspects of training and supervision that are listed below; the intention is that the Tutor will ensure that training is properly organised, actually happens and is accessible to the trainees. The Tutor should act as an organiser and coordinator of training. Specific tasks can be delegated by the Tutor to other members of the department. The delivery of high quality training requires contributions from all consultants and not just the Tutor although the Tutor is the prime point of contact for the trainees. In addition to acting as an important role model and general adviser to all trainees in the relevant specialty, the responsibilities of the Tutor include:

- organisation of teaching / training;
- organising workplace assessments;
- keeping records of the progress of trainees through acquisition of competences and liaising with service rota-makers;
- examination preparation for trainees;
- professional development / career advice for trainees;
- liaison with the Postgraduate Dean and Programme Director;
- possibly sitting on the Specialty Training Committee
- representing the ICACCST on training matters affecting their specialty;
- advising ICACCST on matters of general and individual concern
- audit of clinical supervision arrangements; and
- when they become established liaising with the ACCS School.

4.4: SAS grade doctors and senior trainees as trainers

The ICACCST recognises that SAS grade doctors and senior trainees have a valuable role in training.

To be a trainer SAS grades must fulfil their College's CPD requirements; this is essential for those areas where they have clinical and on-call responsibilities. The ICACCST encourages Tutors to identify those SAS grades with aptitude and to nominate them to the Specialty Training Committee (or in the future the local ACCS School), specifying the areas in which they have appropriate expertise. The specific areas in which SAS grades train are best identified at local level, but may include specialist operating lists where a SAS grade

[8] *The doctor as teacher*, GMC 1999, paragraphs 8 & 9
[9] *Good medical practice*, GMC 1998, paragraph 8
[10] *Recommendations on the training of specialists*, GMC 1987, paragraph 16 (12) (a).
[11] See also *The College Tutor - Roles and Responsibilities,* 2002

has expertise. SAS grades who undertake training must have the opportunity to acquire the skills of a competent trainer.

For senior trainees, learning to train others is part of their curriculum.

When being taught by a SAS grade or a senior trainee, trainees must at all times have unimpeded access to named consultants for advice.

4.5: Workplace based learning

To complete ACCS core training satisfactorily, the trainee must demonstrate to the satisfaction of the trainers the competences specified for the units of training listed in Appendixes C to F. The number and nature of units completed will depend on the length of time spent in each specialty module (see Section 3.2)

The proportion of time the trainee spends being directly taught in the workplace will vary throughout training depending on the requirements of the individual specialty modules, the trainee's seniority and the nature of the clinical work. There may be variation from week to week depending on local work patterns.

As trainees become more experienced they may have the opportunity to work without direct clinical supervision but the majority of their duties should include direct clinical teaching by consultants and other senior members of the team. *This does not obviate the need for appropriate educational and clinical supervision at all times.*

4.6: Clinical knowledge

To complete ACCS core training successfully, the trainee must satisfactorily complete an assessment of knowledge appropriate to the requirements of their chosen CCT specialty i.e. the FRCA Primary MCQ, the MRCP Part 1 or the MCEM Part A.

4.7: Formal education

Each trainee must complete and educational agreement with his supervisor within two weeks of the start of each placement in which the training goals of the placement are clearly established. The agreement forms the basis of subsequent review[12].

Within departments there should be arrangements for a formal, weekly, educational, departmental meeting and for meetings to cover audit, critical incident reporting, and morbidity and mortality. Although it is accepted that not all consultants can always be present at such educational meetings, it is expected that consultants will participate whenever possible. It is expected that all trainees will participate in these formal departmental educational meetings. This time should be 'ring fenced' such that trainees are not required to cover service commitments during this period save in exceptional circumstances.

Attending group educational activity in hospitals is part of the professionalism of good doctors. Attendance at departmental clinical meetings should be one of the forms of evidence of progress presented at appraisal and for RITAs. Local Specialty Training Committees should determine what level of participation should be mandatory for progress.

[12] *PMETB Generic Training Standards* Standard 6 dated April 2006

Trainees must have a meeting with their educational supervisor (or a representative) at least three-monthly, to discuss their progress, outstanding learning needs and how to meet them[13].

4.8: Professional knowledge, skills, attitudes and behaviour

Professional attitudes and behaviour

- Problems with professional and clinical attitudes and behaviour in the workplace are a major factor in the genesis of many major critical incidents. Difficulties with professional behaviour and communication are a common cause of problems in training and of disciplinary procedures and complaints about consultants. Such behaviours depend in part upon the character traits of the individual but to a great extent suitable behaviour can be learned. They can also be taught, by such means as reviewing and evaluating problems, at a personal or group level. Learning what is acceptable behaviour and attitudes requires that acceptable standards are clearly described to the trainee.
- Trainees will be expected to develop their professional attitudes and behaviour throughout their training. They can expect to be assessed regularly on this throughout their training programme; Appendix K includes guidance on required standards. The trainee's behaviour must be compared with these standards and records of good and bad performance should be kept as part of the assessment process.

Professional knowledge and skills

- The requirement for teaching and assessing professional knowledge and skills is generic to all four component specialties. The individual specialty CCT curricula may vary slightly in detail, but for simplicity *The General Curriculum for the Medical Specialities* is included at Appendix L. It is essential for all the acute care specialties that those taking up consultant posts should be able to play a full part in the running of the NHS. Throughout their training, therefore, all trainees are required to acquire and develop professional knowledge, skills and attitudes at a level and pace appropriate to their stage of training, including the following subjects:
  - The Responsibilities of Professional Life
  - Teaching and Medical Education
  - Health Care Management
  - Information Technology
  - Medical Ethics and Law
- Until ACCS Schools are established, Tutors will find their own model for delivering this training. For some aspects, trainees may take study leave and attend a specific course alternatively much can be achieved by taking advantage of what is available locally, for instance Deanery or ACCS Specialty based School based courses or departmental training sessions. Whichever way the training is delivered records of achievement must be maintained as part of the trainee's portfolio for presentation at the annual appraisal and for the RITA.

Child protection The *Children Act 1989* is the legislative authority for child welfare and protecting children from abuse. Sections 27 and 47 of *Act* place duties on various agencies to assist social services departments in actual or suspected cases of child abuse.

Equality and Diversity

- The ICACCST conforms to the view that equality of opportunity is fundamental to the selection, training and assessment of doctors. It seeks to recruit trainees regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation. Patients,

[13] *PMETB Generic Training Standards* Standard 6 dated April 2006

trainees and trainers and all others amongst whom interactions occur have a right to be treated with fairness and transparency in all circumstances and at all times. Equality characterises a society in which everyone has the opportunity to fulfil his or her potential. Diversity addresses the recognition and valuation of the differences between and amongst individuals. Promoting equality and valuing diversity are central to the anaesthesia curriculum. Discrimination, harassment or victimisation of any of these groups of people may be related to: ability, age, bodily appearance and decoration, class, creed, caste, culture, gender, health status, relationship status, mental health, offending background, place of origin, political beliefs, race, and responsibility for dependants, religion and sexual orientation.

- The importance of Equality and Diversity in the NHS has been addressed by the Department of Health in England in 'The Vital Connection'[14], in Scotland in 'Our National Health: A Plan for Action, A Plan for Change'[15] and in Wales by the establishment of the NHS Wales Equality Unit. These themes must therefore be considered an integral part of the NHS commitment to patients and employees alike. The theme was developed in the particular instance of the medical workforce in 'Sharing the Challenge, Sharing the Benefits – Equality and Diversity in the Medical Workforce'[16]. Furthermore, Equality and Diversity are enshrined in legislation enacted in both the United Kingdom and the European Union. Prominent among the relevant items of legislation are:
    - Equal Pay Act 1970
    - Sex Discrimination Acts 1975 and 1986
    - Indirect Discrimination and Burden of Proof Regulations 2001
    - Race Relations Act 1976 and Race Relations (Amendment) Act 2000
    - Disability Discrimination Act 1995
    - Employment Rights Act 1996
    - Human Rights Act 1998
    - Employment Relations Act 1999
    - Maternity and Paternity Leave Regulations 1999
    - Part Time Workers Regulations 2000
    - Employment Act 2002
    - European Union Employment Directive and European Union Race and Ethnic Origin Directive
    - Age Discrimination Act 2006
- It is therefore considered essential that all persons involved in the management of training (Board, Tutors, Training Programme Directors et al) are trained and well versed in the tenets of Equality and Diversity and it is expected that all trainers should be trained in Equality and Diversity.
- As part of their professional development trainees will be expected to receive appropriate training in equality and diversity to the standards specified by PMETB[17] and to apply those principles to every aspect of all their relationships. The delivery of this training is the responsibility of the Postgraduate Dean. A record of completion of this training must be held in the trainee's portfolio. The benefits of this training are:
    - To educate the trainee in the issues in relation to patients, carers and colleagues and others whom they may meet in a professional context
    - To inform the trainee of his or her reasonable expectations from the training programme

[14] The Vital Connection: An Equalities Framework for the NHS: DH, April 2000
[15] Our National Health: A Plan for Action, A Plan for Change: Scottish Executive, undated
[16] Sharing the Challenge, Sharing the Benefits – Equality and Diversity in the Medical Workforce: DH Workforce Directorate June 2004.
[17] *PMETB Generic Standards for Training* dated April 2006

- To advise what redress may be available if the principles of the legislation are breached

Communication skills Communication skills are developed both formally and informally. There should be formal training in presentation skills. Inter-personal communication skills should be included in assessments provided by individual consultant supervisors and remedial training should be devised and provided to meet individual needs.

Team working and leadership Doctors in the acute care specialties have to work as part of a wider team and are expected to demonstrate leadership. Formal training in these areas is not built into this curriculum, but the absence of these qualities should be commented on in workplace based assessments and discussed at appraisals. Remedial training should be devised and provided to meet individual needs.

4.9: Training accommodation

Any hospital with trainees must have appropriate accommodation to support their training and education; this may be within an appropriate department(s) or elsewhere in the hospital eg the Postgraduate Teaching Centre. This accommodation should include:

- a focal point for the ACCS staff so that effective service and training can be co-ordinated and optimal opportunities provided for gaining experience and teaching;
- adequate accommodation for trainers and teachers in which to prepare their work;
- a private area where confidential activities such as assessment, appraisal, counselling and mentoring can occur;
- a secure storage facility for confidential training records;
- a reference library where trainees have ready access to bench books (or an electronic equivalent) and where they can access information at any time;
- access for trainees to IT equipment such that they can carry out basic tasks on a computer including the preparation of audio-visual presentations. Access to the internet is recognised as an essential adjunct to learning;
- a suitably equipped teaching area;
- a private study area; and
- an appropriate rest area whilst on duty.

APPENDIX A

COMMONLY USED ABBREVIATIONS

ACCS	Acute Care Common Stem
ALS	Advanced Life Support
APLS	Advanced Paediatric Life Support
ATLS	Advanced Trauma Life Support
AUD	Audit of Case Notes
BLS	Basic Life Support
CBD	Case based discussion
CCST	Certificate of Completion of Specialist Training
CCT	Certificate of Completion of Training
CEM	College of Emergency Medicine
CNST	Clinical Negligence Scheme for Trusts
COPMeD	Conference of Postgraduate Medical Deans
CPD	Continuing Professional Development
DNR	Do Not Resuscitate
DOPS	Direct observation of practical skills
ED	Emergency Department
EEA	European Economic Area
EM	Emergency Medicine
EP	Emergency Physician
EPLS	European Paediatric Life Support
F1	Foundation Year 1
F2	Foundation Year 2
FAST	Focused Abdominal Sonography in Trauma
FedRCP	Federation of the Royal Colleges of Physicians
FRCA	Fellow(ship) of the Royal College of Anaesthetists
FTSTA	Fixed Term Specialty Training Appointments
GIM	General Internal Medicine
GMC	General Medical Council
GT	Group Teaching
IBTICM	Intercollegiate Board for Training in Intensive Care Medicine
ICACCST	Intercollegiate Committee for Acute Care Common Stem Training
ICM	Intensive Care Medicine
JCHT	Joint Committee for Higher Training
LP	Learning from Practice
LS	Life Support courses
LT	Learning from Trainers
LTFT	Less than full time
M.E.	Mock Exam
MCEM	Member(ship) of the College of Emergency Medicine
MCQ	Multiple Choice Questionnaire

Mini Pat	Mini- Peer Assessment Tool
Mini-Cex	Mini clinical evaluation exercises
MRCP	Member(ship) of the Royal College of Physicians
NHS	Notional Health Service
NHSLA	National Health Service Litigation Authority
NLS	Neo-natal Life Support
NTN	National Training Number
ODA	Follow through of patient/OPD Clinic
ODB	Dedicated time in another department
OSCE	Objective Structured Clinical Exercise
PMETB	Postgraduate Medical Education and Training Board
PS	Personal Study
RCoA	Royal College of Anaesthetists
RITA	Record of in Training Assessment
SAQ	Short Answer Questions
SAS	Staff and Associate Specialist
SL	Skills Laboratory
SpR	Specialist Registrar
ST1	Specialty Training 1
ST2	Specialty Training 2
ST3	Specialty Training 3
STC	Specialty Training Committee
STC	Specialist Training Committee

Appendix B

ACUTE CARE COMMON STEM TRAINING:

Guidance for Postgraduate Deans and Transitional Boards in Scotland on managing Acute Care Common Stem (ACCS) Training

1. Aim

The aim of ACCS training is to produce for the NHS multi-competent junior doctors able to recognise and manage the sick patient, who can define the nature of the specialist intervention required and who have the competences of the complementary specialties required for the programmes in emergency medicine, GIM (A) and ICM.

2. Short description of ACCS training

The components of ACCS training, which can be taken in any order, are:

- Emergency Medicine and General (Internal) Medicine (Acute) (GIM(A)) – 1 year, of which 6 months will usually be spent in each specialty.
- Anaesthesia and Intensive Care Medicine – 1 year, of which anaesthesia must comprise a minimum of 3 months and a maximum of 9 months i.e. ICM must comprise a maximum of 9 months and a minimum of 3 months.

3. Duration of the ACCS training ACCS training will last for 2 years, followed by further training in either Emergency Medicine (ACCS training is the first 2 years of this programme), Anaesthesia or GIM(A) specialties with an emphasis on the acute management.

4. Entry points into ACCS training

- ***During transition***
  - From FY year 2 into ACCS year 1; and
  - Entry into year ACCS year 2 for those with one year's previous training in components of ACCS such that by the end of ACCS Year 2 experience has been achieved in all four component specialties.

- ***Entry (steady state)*** From FY year 2 into ACCS year 1.

5. Exit from ACCS training

- Acute Medical Specialties especially GIM(A) - into ST year 3
- Emergency Medicine - into ST year3
- Anaesthesia - into ST year2*

* trainees who enter anaesthesia ST year 2 with less than 9 months training in anaesthesia and more than 3 months training in ICM will need their Basic Level Training Certificate annotated to record that some or all of their intermediate level ICM training has been completed and that some anaesthesia training has been delayed to ST year 3.

5. NTNs It had been hoped there would be flexibility over which specialty the trainee would continue in after ST2 in ACCS. However, it has become apparent that logistically this will be difficult at the current time. Trainees will need therefore to be allocated an NTN in their chosen specialty from the beginning. This means that trainees will be allocated either an Emergency Medicine, Core Medical Training or Anaesthetic NTN

from the time of appointment. Flexibility over exit specialty *might* be possible if the run-through programmes locally can accommodate the change and there is agreement of the specialty programme directors and Regional Advisers.

6. Appointment process

ACCS appointment panels should consist of trainers from each of the constituent specialties of ACCS training i.e emergency medicine, GIM(A), anaesthesia and intensive care medicine. It is recognised however, that this may be difficult logistically for this 2007 round of recruitment. In that situation single specialty panels should select into their own ACCS specialty

No trainee should be appointed to a run-through training post in a specialty not represented on the appointment panel. The only exception to this would be if the written agreement of the absent specialty programme director was made available to the panel at the structured interview.

7. Co-ordination of ACCS training A programme director will be needed to co-ordinate training. Ideally the successful applicants would be placed in the individual slots at the panel or a meeting where all specialty representatives are present. This is to ensure that the exit specialty needs of each trainee will be met. Specialty trainees will be under the overall educational supervision of the STC Chair / equivalent in their specialty for the duration of their ACCS training. Consultant trainers supervising trainees in the component specialty placements of the ACCS rotation will be responsible for their appraisal and assessment during that period.

8. New features of the ACCS training of which Deans should be aware

- ***Curriculum for ACCS training*** The curriculum for ACCS training follows the initial training period in each component specialty. These are shown in Appendices B t E. Many competences are transferable; these are listed in Appendix F. Log books and record of competences are essential. An example of a logbook is at Appendix G and competencies are to be recorded in accordance with single specialty procedures.
- ***Effect of ACCS training on subsequent CCT programmes***
  - *The minimum number of trainees coming out of the ACCS rotations in a deanery must at least reflect the number of trainees who will continue into Emergency Medicine since ACCS training is the first 2 years of the new EM curriculum.*
  - In addition, there should be adequate capacity for GIM(A) and anaesthesia trainees to enter into ACCS bearing in mind the number of ST3 (Medicine) and ST2 (Anaesthesia) posts that will available for these specialties two years later.
  - ICM trainees (whose requirement for complementary specialty training will be met ACCS training) can currently only enter the specialty through a “parent” specialty, which is commonly anaesthesia or medicine.

9. Fixed Term Specialty Training Appointments (FTSTAs) in ACCS These can be developed locally if it is thought desirable to do so. A FTSTA in ACCS could reflect any combination of 2 of the specialties and should deliver the competences as set out in the curriculum for those specialties. Please see additional attached guidance on FTSTAs in ICM contained in Annex 1.

10. Advice to Deans on constructing run-through training in ACCS training

Rotations are likely to work best if the 2 years are set up in multiples of 4 where rotations include at least 3 month slots in ICM. Other combinations (e.g. 6 months anaesthesia, 6 months ICM, 6 months EM, 6 months AM or 9 months anaesthesia, 3 months ICM, 6 months EM, 6 months AM) are possible. For the acute physicians the rotations that include at least 6 months of experience in ICM would be preferable.

It should be noted that GIM(A) placements must be acute specialties in medicine that offer regular and unselected "acute take"

Example In this arrangement, with 8 rotating trainees in ACCS, at any one time there would be:

3 trainees in anaesthesia
1 trainee in ICM
2 trainees in emergency medicine
2 trainees in acute medicine

	Year 1	**Year 1**	**Year 2**	**Year 2**
Trainee 1	AM 6m	EM 6 m	Anaes 9m	ICM 3m
Trainee 2	EM 6m	AM 6m	ICM 3m	Anaes 9m
Trainee 3	AM 6m	EM 6m	Anaes 3m ICM 3m	Anaes 6m
Trainee 4	EM 6m	AM 6m	Anaes 6m	ICM 3m Anaes 3m
Trainee 5	Anaes 9m	ICM 3m	AM 6m	EM 6m
Trainee 6	ICM 3m	Anaes 9m	EM 6m	AM 6m
Trainee 7	Anaes 3m ICM 3m	Anaes 6m	AM 6m	EM 6m
Trainee 8	Anaes 6m	ICM 3m Anaes 3m	EM 6m	AM 6m

An alternative pattern preferred by GIM(A), in that it provides six months of ICM, and allows for two trainees in each specialty at any one time is:

	Year 1	**Year 1**	**Year 2**	**Year 2**
Trainee 1	AM 6m	EM 6 m	Anaes 6m	ICM 6m
Trainee 2	EM 6m	AM 6m	ICM 6m	Anaes 6m
Trainee 3	AM 6m	EM 6m	ICM 6m	Anaes 6m
Trainee 4	EM 6m	AM 6m	Anaes 6m	ICM 6m
Trainee 5	Anaes 6m	ICM 6m	AM 6m	EM 6m
Trainee 6	ICM 6m	Anaes 6m	EM 6m	AM 6m
Trainee 7	ICM 6m	Anaes 6m	AM 6m	EM 6m
Trainee 8	Anaes 6m	ICM 6m	EM 6m	AM 6m

ANNEX 1 to APPENDIX B

FTSTAs in ICM
Guidance for Deans

Objective

The objective of a one year Fixed Term Specialty Training Appointment (FTSTA) in Intensive Care Medicine (ICM) is to provide a thorough grounding in ICM suitable for those who subsequently might wish to practise the specialty on a full time basis and those who wish to practise ICM on a part time basis jointly with another specialty. Such appointments are also of value, and indeed may be of most value, to those who expect to practise hospital medicine in an acute specialty in which there is currently no provision for training in ICM, but for which training in ICM is of value. Examples include cardiology, cardiothoracic surgery and nephrology.

Approval and appointment

Establishment and approval of these posts is the responsibility of the local Postgraduate Dean. Appointment will be through the National MTAS process.

Person Specification

The person specifications for entry to ST1 or ST2 are those used for the Acute Care Common Stem (ACCS) for entry into a FTSTA.

Curricular considerations

The principles of the curriculum are set out in the 'Reference Manual for Trainees and Trainers', Part 1 of the Curriculum Documentation that has been submitted to PMETB. The one year FTSTA should comprise the parts of the curriculum laid out in Parts 3 and 4, Preliminary and Core Training in ICM along with the pertinent sections of the Cardiopulmonary Resuscitation Manual, Part 6. ICM training in a FTSTA is constrained to the Preliminary and Core competences since more advanced training in ICM for a Joint CCT programme can only occur after a successful application to a primary ("parent") specialty and only then in the last two projected years of Specialty Training. It should be recognised that if Preliminary and Core training are acquired as part of an FTSTA the considerable lapse of time from the initial acquisition of these competences to entry to the final (Enhanced) stage of ICM training may require revision and reassessment of the Preliminary and Core competences achieved by an individual.

Entry into an FTSTA in ICM

Entry into a FTSTA offering training in ICM is possible from F2 or after one year of FTSTA training in another specialty. Only one year of training in a FTSTA is possible in ICM. The process of appointment will be managed by deaneries (using theMTAS portal) and the person specification that used for the ACCS training at either ST1 or ST2, for a FTSTA, but both levels will only deliver training in the preliminary and core competences as described above.

It is important that both deaneries and trainees are aware that undertaking an FTSTA in ICM confers no future rights to the trainee to pursue a career pathway in ICM, except through the usual competitive route. Doctors appointed to FTSTAs (in any circumstances) will not be awarded national training numbers.

APPENDIX C:

ACCS
GIM(A) SYLLABUS

The Content of Learning

This section lists the specific knowledge, skills, attitudes and behaviours to be attained when training in Acute Medicine. There is however no reason why competence in many of these areas cannot be acquired when working in the other disciplines that are part of the ACCS

The competencies are presented in four parts:

Part 2.1 - **Symptom Competencies** - define the knowledge, skills and attitudes required to level 1 of the General Internal Medicine (Acute) curriculum. These symptoms competencies are broken down in to emergency presentations, top 20 presentations and other presentations. The top 20 presentations are listed together to emphasise the frequency with which these problems are encountered in clinical practice, and are based on medical admission unit audit data.

Part 2.2 - **System specific competencies** – The knowledge associated with the development would be expected to be known by all trainees planning a career in Acute Medicine. For all other trainees in the ACCS programme knowledge of these system specific competencies and, in particular, the basic science associated with these conditions would not be expected to be so extensive.

Part 2.3 - **Investigation competencies** - lists investigations that a trainee must be able to describe, order, and interpret by the end of ACCS

Part 2.4 – **Procedural competencies** - lists procedures that a trainee will be competent in by the end of ACCS.

Emergency Presentations

Cardio-Respiratory Arrest

	The trainee will have full competence in the assessment and resuscitation of the patient who has suffered a cardio-respiratory arrest, as defined by the UK Resuscitation Council		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Causes of cardio-respiratory arrest Recall the ALS algorithm for adult cardiac arrest Outline indication and safe delivery of drugs used in cardiac arrest scenarios: adrenaline, atropine, amiodarone, buffers	Rapidly assess the collapsed patient in terms of ABC, airway, breathing and circulation Perform Basic Life Support competently as defined by Resuscitation Council (UK): effective chest compressions, airway manoeuvres, bag and mask ventilation Competently perform further steps in advanced life support: IV drugs; safe DC shocks when indicated; identification and rectification of reversible causes of cardiac arrest	Recognise and intervene in critical illness promptly to prevent cardiac arrest such as peri-arrest arrythmias, hypoxia Maintain safety of environment for patient and health workers Participate in UK Resuscitation Council approved ALS course Succinctly present clinical details of situation to senior doctor Consult senior and seek anaesthetic team support

Shocked patient

	The trainee will be able to identify a shocked patient, assess their clinical state, produce a list of appropriate differential diagnoses and initiate immediate management		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Identify physiological perturbations that define shock Identify principle categories of shock (i.e. cardiogenic, circulatory) Elucidate main causes of shock in each category (e.g. MI, heart failure, PE, blood loss, sepsis) Define sepsis syndromes	Recognise significance of major physiological perturbations Perform immediate (physical) assessment (A,B,C) Institute immediate, simple resuscitation (oxygen, iv access, fluid resuscitation) Arrange simple monitoring of relevant indices (oximetry, arterial gas analysis) and vital signs (BP, pulse & respiratory rate, temp, urine output) Order, interpret and act on initial investigations appropriately: ECG, blood cultures, blood count, electrolytes	Exhibit calm and methodical approach to assessing critically ill patient Adopt leadership role where appropriate Involve senior and specialist (e.g. critical care outreach) services promptly

Unconscious patient

	The trainee will be able to promptly assess the unconscious patient to produce a differential diagnosis, establish safe monitoring, investigate appropriately and formulate an initial management plan, including recognising situations in which emergency specialist investigation or referral is required		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Identify the principal causes of unconsciousness (metabolic, neurological) Recognise the principal sub causes (drugs, hypoglycaemia, hypoxia; trauma, infection, vascular, epilepsy, raised intra-cranial pressure, reduced cerebral blood flow, endocrine) List appropriate investigations for each Outline immediate management options	Make a rapid and immediate assessment including examination of coverings of nervous system (head, neck, spine) and Glasgow Coma Scale Initiate appropriate immediate management (A,B,C, cervical collar, administer glucose) Take simple history from witnesses when patient has stabilised Prioritise, order, interpret and act on simple investigations appropriately Initiate early (critical) management (e.g. control fits, manage poisoning) including requesting safe monitoring	Recognise need for immediate assessment and resuscitation Assume leadership role where appropriate Involve senior staff promptly Involve appropriate specialists to facilitate immediate assessment and management (e.g. imaging, intensive care, neurosurgeons)

Anaphylaxis

	The trainee will be able to identify patients with anaphylactic shock, assess their clinical state, produce a list of appropriate differential diagnoses, initiate immediate resuscitation and management and organise further investigations		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Identify physiological perturbations causing anaphylactic shock Elucidate causes of anaphylactic shock Define follow-up pathways after acute resuscitation	Recognise clinical consequences of acute anaphylaxis Perform immediate physical assessment (laryngeal oedema, bronchospasm, hypotension) Institute resuscitation (adrenaline, oxygen, IV access, fluids) Arrange monitoring of relevant indices Order, interpret and act on initial investigations (tryptase, C1 esterase inhibitor etc.)	Exhibit a calm and methodical approach Adopt leadership role where appropriate Involve senior and specialist allergy services promptly

‘The Top 20’ – Common Medical Presentations

Abdominal Pain

	The trainee will be able to assess a patient presenting with abdominal pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the different classes of abdominal pain and how the history and clinical findings differ between them Identify the possible causes of abdominal pain, depending on site, details of history, acute or chronic Define the situations in which urgent surgical, urological or gynaecological opinion should be sought Determine which first line investigations are required, depending on the likely diagnoses following evaluation	Elicit signs of tenderness, guarding, and rebound tenderness and interpret appropriately Order, interpret and act on initial investigations appropriately: blood tests; radiographs; ECG; microbiology investigations Initiate first line management: the diligent use of suitable analgesia; ‘nil by mouth’; IV fluids; resuscitation	Exhibit timely intervention when abdominal pain is the manifestation of critical illness or is life-threatening, in conjunction with senior and appropriate specialists Recognise the importance of a multi-disciplinary approach including early surgical assessment when appropriate Display sympathy to physical and mental responses to pain Involve other specialties promptly when required

Acute Back Pain

	The trainee will be able to assess a patient presenting with back pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the causes of acute back pain Specify abdominal pathology that may present with back pain Outline the features that raise concerns as to a sinister cause ('the red flags') and lead to consideration of a chronic cause ('the yellow flags') Recall the indications of an urgent MRI of spine Outline indications for hospital admission	Perform examination and elicit signs of spinal cord / cauda equina compromise Practice safe prescribing of analgesics / anxiolytics to provide symptomatic relief Order, interpret and act on initial investigations appropriately: blood tests, myeloma screen, radiographs	Involve neurosurgical unit promptly in event of neurological symptoms or signs Ask for senior help when critical abdominal pathology is suspected Recognise the socio-economic impact of chronic lower back pain Participate in multi-disciplinary approach: physio, OT

Blackout / Collapse

	The trainee will be able to assess a patient presenting with a collapse to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Syncope' and 'Falls')		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the causes for sudden loss of consciousness (LOC) Differentiate the causes depending on the situation of collapse, associated symptoms and signs, and eye witness reports Outline the indications for temporary and permanent pacing systems	Elucidate history to establish whether event was LOC, fall without LOC, vertigo (with eye witness account if possible) Assess patient in terms of ABC and degree of consciousness and manage appropriately Perform examination to elicit signs of cardiovascular or neurological disease and to distinguish epileptic disorder from other causes Order, interpret and act on initial investigations appropriately: ECG, blood tests inc. glucose Manage arrhythmias appropriately as per ALS guidelines Institute external pacing systems when appropriate	Recognise impact episodes can have on lifestyle particularly in the elderly Recognise recommendations regarding fitness to drive in relation to undiagnosed blackouts

Breathlessness

	The trainee will be able to assess a patient presenting with breathlessness to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Specify the common cardio-respiratory conditions that present with breathlessness Explain orthopnoea and paroxysmal nocturnal dyspnoea Identify non cardio-respiratory factors that can contribute to or present with breathlessness Define basic pathophysiology of breathlessness List the common and serious causes of wheeze and stridor	Interpret history and clinical signs to list appropriate differential diagnoses: esp. pneumonia, asthma, COPD, PE, pulmonary oedema, pneumothorax Differentiate between stridor and wheeze Order, interpret and act on initial investigations appropriately: routine blood tests, oxygen saturation, arterial blood gases, chest radiograph, ECG, PEFR, spirometry Initiate treatment in relation to diagnosis, including safe oxygen therapy, early antibiotics for pneumonia Perform chest aspiration and chest drain insertion Recognise disproportionate dyspnoea and hyperventilation Recognise other causes of dyspnoea in patients with wheeze (e.g. pneumothorax) and manage appropriately Evaluate and advise on good inhaler technique	Exhibit timely assessment and treatment in the acute phase Recognise the distress caused by breathlessness and discuss with patient and carers Recognise the impact of long term illness Consult senior when respiratory distress is evident Involve Critical Care team promptly when indicated Exhibit non-judgemental attitudes to patients with a smoking history

Chest Pain

	The trainee will be able to assess a patient with chest pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Characterise the different types of chest pain, and outline other symptoms that may be present List the common causes for each category of chest pain and associated features: cardiac, pleuritic, musculoskeletal, upper GI List respiratory causes of chest pain Define the pathophysiology of acute coronary syndrome and pulmonary embolus Identify the indications and limitations of cardiac enzymes and d dimer analysis Outline emergency treatments for PE	Interpret history and clinical signs to list appropriate differential diagnoses: esp. for cardiac pain & pleuritic pain Order, interpret and act on initial investigations in the context of chest pain appropriately: such as ECG, blood gas analysis, blood tests, chest radiograph, cardiac enzymes Commence initial emergency treatment including coronary syndromes, pulmonary embolus and aortic dissection Elect appropriate arena of care and degree of monitoring Formulate initial discharge plan	Perform timely assessment and treatment of patients presenting with chest pain Involve senior when chest pain heralds critical illness or when cause of chest pain is unclear Recognise the contribution and expertise of specialist cardiology nurses and technicians

Confusion, Acute

	The trainee will be able to assess an acutely confused patient to formulate a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the common and serious causes for acute confusion Outline important initial investigations, including electrolytes, cultures, full blood count, ECG, blood gases, thyroid Recognise the factors that can exacerbate acute confusion e.g. change in environment, infection List the pre-existing factors that pre-dispose to acute confusion	Examine to elicit cause of acute confusion Perform mental state examinations (abbreviated mental test and mini-mental test) to assess severity and progress of cognitive impairment Recognise pre-disposing factors: cognitive impairment, psychiatric disease	Recognise that the cause of acute confusion is often multi-factorial Contribute to multi-disciplinary team management Recognise effects of acutely confused patient on other patients and staff in the ward environment and attempt to minimise these

Cough

	The trainee will be able to assess a patient presenting with cough to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the common and serious causes of cough Identify risk factors relevant to each aetiology including precipitating drugs Outline the different classes of cough and how the history and clinical findings differ between them State which first line investigations are required, depending on the likely diagnoses following evaluation	Order, interpret and act on initial investigations appropriately: blood tests, chest radiograph and PFT	Contribute to patients understanding of their illness Exhibit non-judgmental attitudes to patients with a history of smoking Consult seniors promptly when indicated Recognise the importance of a multi-disciplinary approach

Diarrhoea

	The trainee will be able to assess a patient presenting with diarrhoea to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Specify the causes of diarrhoea (secretory, infective, etc) Correlate presentation with other symptoms: such as abdominal pain, rectal bleeding, weight loss Outline the pathophysiology of diarrhoea for each aetiology Describe the investigations necessary to arrive at a diagnosis Identify the indications for urgent surgical review in patients presenting with diarrhoea	Evaluate nutritional and hydration status of the patient Assess whether patient requires hospital admission Perform rectal examination as part of physical examination Initiate investigations: blood tests, stool examination, endoscopy and radiology as appropriate	Seek a surgical and senior opinion when required Exhibit sympathy and empathy when considering the distress associated with diarrhoea and incontinence Demonstrate awareness of infection control procedures

Falls

	The trainee will be able to assess a patient presenting with a fall and produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Syncope' and 'Blackout/Collapse')		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Describe causes of falls and risk factors for falls, including drug and neurovascular causes Outline the assessment of a patient with a fall and give a differential diagnosis State conditions that may present as a fall Outline the relationship between falls risk and fractures Outline secondary risks of falls, such as loss of confidence, infection	Define the significance of a fall depending on circumstances, and whether recurrent, to distinguish when further investigation is necessary Identify possible secondary complications of falls Commence appropriate treatment including pain relief and bone prophylaxis	Recognise the psychological impact to an older person and their carer after a fall Contribute to the patients understanding as to the reason for their fall Discuss with seniors promptly and appropriately Relate the possible reasons for the fall and the management plan to patient and carers

Fever

	The trainee will be able assess a patient presenting with fever to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the physiology of developing a fever Recall the broad causes of fever: infection, malignancy, inflammation Define Pyrexia of Unknown Origin Recall the role of anti-pyretics Differentiate features of viral and bacterial infection Outline indications for LP in context of fever	Recognise the presence of septic shock in a patient, commence resuscitation and liaise with senior colleagues promptly Order, interpret and act on initial investigations appropriately: blood tests, cultures, CXR Identify the risk factors in the history that may indicate an infectious disease e.g. travel, sexual history, IV drug use, animal contact, drug therapy Commence appropriate empirical antibiotics when an infective source of fever is deemed likely in accordance with local prescribing policy	Adhere to local antibiotic prescribing policies Highlight importance of nosocomial infection and principles for infection control Consult senior in event of septic syndrome Discuss with senior colleagues and follow local guidelines in the management of the immunosuppressed e.g. HIV, neutropenia Promote communicable disease prevention: e.g. immunisations, antimalarials, safe sexual practices

Fits / Seizure

	The trainee will be able to assess a patient presenting with a fit, stabilise promptly, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the causes for seizure Recall the common epileptic syndromes List the essential initial investigations following a 'first fit' Recall the indications for a CT head Describe the indications, contraindications and side effects of the commonly used anti-convulsants Differentiate seizure from other causes of collapse	Recognise and manage a patient presenting with status epilepticus Obtain collateral history from witness Promptly recognise and treat precipitating causes: metabolic, infective, malignancy	Recognise need for urgent referral in case of uncontrolled recurrent loss of consciousness or seizures Recognise the principles of safe discharge, after discussion with senior colleague Recognise importance of Epilepsy Nurse Specialist Recognise the psychological and social consequences of epilepsy

Haematemesis & Melaena

	The trainee will be able to succinctly assess the patient with an upper GI haemorrhage to determine significance; resuscitate appropriately; and liaise with endoscopist effectively		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Detail the anatomy of the upper GI tract Specify the causes of upper GI bleeding, with associated risk factors Outline methods of assessing the significance and prognosis of an upper GI bleed and how this impacts on importance of urgent endoscopy e.g. Rockall score Outline the principles of choice of IV access, fluid choice and speed of fluid administration Broadly outline endoscopic methods of haemostasis	Recognise shock or impending shock and resuscitate rapidly and appropriately Distinguish upper and lower GI bleeding Demonstrate ability to site large bore IV access Perform assessment to postulate cause of bleeding: in particular detect the presence of liver disease Safely prescribe drugs indicated in event of a likely upper GI variceal bleed: broad spectrum antibiotics, vasoconstrictor agents, acid suppression	Seek senior help and endoscopy or surgical input in event of significant GI bleed Observe safe practices in the prescription of blood products

Headache

	The trainee will be able to assess a patient presenting with headache to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the common and life-threatening causes of acute new headache, and how the nature of the presentation classically varies between them Understand the pathophysiology of headache Define the indications for urgent CT/MRI scanning in the context of headache Define clinical features of raised intra-cranial pressure	Recognise important diagnostic features in history Perform a comprehensive neurological examination, including eliciting signs of papilloedema, temporal arteritis, meningism and head trauma Order, interpret and act on initial investigations Perform a successful lumbar puncture when indicated with minimal discomfort to patient observing full aseptic technique Interpret basic CSF analysis: cell count, protein, gram stain and glucose Initiate prompt treatment when indicated: appropriate analgesia; antibiotics; antivirals; steroids	Recognise the nature of headaches that may have a sinister cause and assess and treat urgently Liaise with senior doctor promptly when sinister cause is suspected Involve neurosurgical team promptly when appropriate

Jaundice

	The trainee will be able to assess a patient presenting with jaundice to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the pathophysiology of jaundice in terms of pre-hepatic, hepatic, and post-hepatic List causes for each category of jaundice with associated risk factors Describe the need for careful prescribing in a patient with jaundice Outline basic investigations to establish aetiology Describe medical, surgical and radiological treatments	Take a thorough history and examination to arrive at a valid differential diagnosis Recognise the presence of chronic liver disease or fulminant liver failure Interpret basic investigations to establish aetiology: blood tests and abdominal ultrasound scanning Recognise complications of jaundice: sepsis and renal impairment	Exhibit non-judgmental attitudes to patients with a history of alcoholism or substance abuse Consult seniors and gastroenterologists promptly when indicated Contribute to the patient's understanding of their illness Recognise the importance of a multi-disciplinary approach

Limb Pain & Swelling

	The trainee will be able to assess a patient presenting with limb pain or swelling to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the causes of unilateral and bilateral limb swelling in terms of acute and chronic presentation Summarise the different causes of limb pain in terms of leg, arm and hand Outline the pathophysiology for pitting oedema, non-pitting oedema and thrombosis State the risk factors for the development of thrombosis Outline the indications, contraindications and side effects of diuretics and anti-coagulants Differentiate the features of limb pain and/or swelling pain due to cellulitis and DVT	Perform a full examination including assessment of viability and perfusion of limb and differentiate pitting oedema; cellulitis; venous thrombosis; compartment syndrome Recognise compartment syndrome and critical ischaemia and take appropriate timely action Order, interpret and act on initial investigations appropriately: blood tests, doppler studies, urine protein Practice safe prescribing of initial treatment as appropriate (anti-coagulation therapy, antibiotics etc) Prescribe appropriate analgesia	Liaise promptly with surgical colleagues in event of circulatory compromise (eg compartment syndrome) Recognise importance of thrombo-prophylaxis in high risk groups

Palpitations

	The trainee will be able to assess a patient presenting with palpitations to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall basic cardiac electrophysiology Define the term palpitations Define common causes of palpitations e.g. anxiety, drugs, thyrotoxicosis) List the categories of arrhythmia State common arrhythmogenic factors including drugs Outline the indications, contraindications and side effects of the commonly used anti-arrhythmic medications	Elucidate nature of patient's complaint Order, interpret and act on initial investigations appropriately: ECG, blood tests Recognise and commence initial treatment of arrhythmias being poorly tolerated by patient (peri-arrest arrhythmias) as per UK Resuscitation Council Guidelines Ensure appropriate monitoring of patient on ward	Consult senior colleague promptly when required Advise on lifestyle measures to prevent palpitations when appropriate

Poisoning

	The trainee will be able to assess promptly a patient presenting with deliberate or accidental poisoning, initiate urgent treatment, ensure appropriate monitoring and recognise the importance of psychiatric assessment in episodes of self harm		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall indications for gastric lavage, activated charcoal and whole bowel irrigation Define parameters used to give clues to type of poisoning: pupils, pulse and respiration, blood pressure, temperature, glucose, seizure, coma, renal function, osmolar and anion gap Outline presentation and management of poisoning with: paracetamol, aspirin, opiates, alcohol, benzodiazepines, beta blockers, digoxin, carbon monoxide, anti-coagulants, tricyclics, SSRIs, amphetamines and cocaine Recognise importance of accessing TOXBASE and National Poisons Information Service	Recognise critically ill overdose patient and resuscitate as appropriate Take a full history of event, including collateral if possible Examine to determine nature and effects of poisoning Commence poison-specific treatments Order, interpret and act on initial investigations appropriately: biochemistry, arterial blood gas, glucose, ECG, and drug concentrations Ensure appropriate monitoring in acute period of care	Contact senior promptly in event of critical illness or patient refusing treatment Recognise the details of poisoning event given by patient may be inaccurate Show compassion and patience in the assessment and management of those who have self-harmed

Rash

	The trainee will be able assess a patient presenting with an acute-onset skin rash and common skin problems to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define the characteristic lesions found in the acute presentation of common skin diseases Outline basic investigations to establish aetiology Identify risk factors, particularly drugs, infectious agents and allergens Describe possible medical treatments	Take a thorough focussed history & conduct a detailed examination, including the nails, scalp and mucosae to arrive at appropriate differential diagnoses Recognise the importance of a detailed drug history Recognise that anaphylaxis may be a cause of an acute skin rash Order, interpret and act on initial investigations appropriately to establish aetiology	Demonstrate sympathy and understanding of patients‘ concerns due to the cosmetic impact of skin disease Engage the patient in the management of their condition particularly with regard to topical treatments Reassure the patient about the long term prognosis and lack of transmissibility of most skin diseases

Vomiting and Nausea

	The trainee will be able to assess a patient with vomiting and nausea to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the causes and pathophysiology of nausea and vomiting List commonly used anti-emetics and differentiate the indications for each Outline alarm features that make a diagnosis of upper GI malignancy possible	Elicit signs of dehydration and take steps to rectify Recognise and treat suspected GI obstruction appropriately: nil by mouth, NG tube, IV fluids Practice safe prescribing of anti-emetics Order, interpret and act on initial investigations appropriately: blood tests, radiographs	Involve surgical team promptly in event of GI obstruction Respect the impact of nausea and vomiting in the terminally ill and involve palliative care services appropriately

Weakness and Paralysis

	The trainee will be able to assess a patient presenting with motor weakness to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Speech Disturbance' and 'Abnormal Sensation (Paraesthesia and Numbness)')		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Broadly outline the physiology and neuroanatomy of the components of the motor system Recall the myotomal distribution of nerve roots, peripheral nerves, and tendon reflexes Define the clinical features of upper and lower motor neurone, neuromuscular junction and muscle lesions Outline the common and important causes for lesions at the sites listened above Recall the Bamford classification of stroke, and its role in prognosis Outline investigations for acute presentation, including indications for urgent head CT	Elucidate speed of onset and risk factors for neurological dysfunction Perform full examination to elicit signs of systemic disease and neurological dysfunction and identify associated deficits Describe likely site of lesion in motor system and produce differential diagnosis Order, interpret and act on initial investigations for acute motor weakness appropriately Recognise when swallowing may be unsafe and manage appropriately Detect spinal cord compromise and investigate promptly Perform tests on respiratory function and inform senior appropriate	Recognise importance of timely assessment and treatment of patients presenting with acute motor weakness Consult senior and acute stroke service, if available, as appropriate Recognise patient and carers distress when presenting with acute motor weakness Consult senior when rapid progressive motor weakness or impaired consciousness is present Involve speech and language therapists appropriately Contribute to multi-disciplinary approach

Other Important Presentations

Abdominal Mass / Hepatosplenomegaly

	The trainee will be able to assess a patient presenting with an abdominal mass to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define the different types of abdominal mass in terms of aetiology, site, and clinical characteristics (e.g. mitotic, inflammatory) Describe relevant investigations related to clinical findings: radiological, surgical, endoscopy Identify the causes of hepatomegaly and splenomegaly	Elicit associated symptoms and risk factors for the presence of diseases presenting with abdominal mass, hepatomegaly and splenomegaly Elicit and interpret important clinical findings of mass to establish its likely nature Order, interpret and act on initial investigations appropriately: blood tests, imaging	Recognise the anxiety that the finding of an abdominal mass may induce in a patient Participate in multi-disciplinary team approach

Abdominal Swelling & Constipation

	The trainee will be able to undertake assessment of a patient presenting with abdominal swelling or distension to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define the causes of abdominal swelling and their associated clinical findings Outline the common causes of constipation, including drugs Outline the pathophysiology of portal hypertension and bowel obstruction Outline important steps in the diagnosis of the cause of ascites, including imaging and the diagnosis of spontaneous bacterial peritonitis and malignancy Define alarm features that raise suspicion of colorectal malignancy Identify mode of action and side effects of the commonly used laxatives	Examine to identify the nature of the swelling, including a rectal examination, and elicit co-existing signs that may accompany ascites Identify risk factors for the development of ascites and constipation, including initial blood tests Order, interpret and act on initial investigations Perform a safe diagnostic and therapeutic ascitic tap with aseptic technique with minimal discomfort to the patient Interpret results of diagnostic ascitic tap Institute initial management as appropriate to the type of swelling	Recognise the multi-factorial nature of constipation, particularly in the elderly Recognise the importance of multi-disciplinary approach

Abnormal Sensation (Paraesthesia and Numbness)

	The trainee will be able to assess a patient with abnormal sensory symptoms to arrive at a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Broadly outline the physiology and neuroanatomy of the sensory components of the nervous system Recall the dermatomal distribution of nerve roots and peripheral nerves List common and important causes of abnormal sensation and likely site of lesion in nervous system (e.g. trauma, vascular) Outline the symptomatic treatments for neuropathic pain Outline indications for an urgent head CT	Take a full history, including drugs, lifestyle, trauma Perform full examination including all modalities of sensation to elicit signs of nervous system dysfunction Describe likely site of lesion: central, root, mononeuropathy, or polyneuropathy	Recognise the distress chronic paraesthesia can cause Consult senior and acute stroke service, if available, as appropriate Contribute to multi-disciplinary approach

Aggressive / Disturbed Behaviour

	The trainee will be competent in predicting and preventing aggressive and disturbed behaviour; using safe physical intervention and tranquillisation; investigating appropriately and liasing with the mental health team		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Elucidate the factors that allow prediction of aggressive behaviour: personal history, alcohol and substance misuse, delirium Define acute psychosis and list its predominant features and causes Recall indications, contraindications and side effects of tranquillisers Outline the legal framework authorising interventions in the management of the disturbed or violent patient	Ensure appropriate arena for nursing patient with disturbed behaviour Ensure sufficient support is available Assess patient fully including mental state examination to produce a valid differential diagnosis Order, interpret and act on initial investigations appropriately when possible Practice safe rapid tranquillisation if indicated as defined in national guidelines e.g. NICE Ensure close monitoring following tranquillisation	Involve senior colleague and mental health care team promptly Recognise warning signs of incipient violent behaviour Advocate practice outlined in national guidelines (e.g. NICE) on managing violence

Alcohol and Substance Dependence

	The trainee will be able to assess a patient seeking help for substance abuse, and formulate an appropriate management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the pathophysiology of withdrawal syndromes Describe the medical, psychiatric and socio-economic consequences of alcohol and drug misuse Outline the measures taken to correct features of malnutrition, including vitamin and mineral supplementation Recall effects of alcohol and recreational drugs on cerebral function	Take a detailed medical and psychiatric history to identify physical or psychological dependence Examine patient to elicit complications of alcohol and substance misuse Obtain collateral history if possible Investigate as appropriate Practice safe prescribing of sedatives for withdrawal symptoms Detect and address other health issues: liver disease, malnutrition, wernicke's encephalopathy	Recognise the aggressive patient and manage appropriately Seek specialist advice when appropriate e.g. gastroenterology, intensive care, psychiatry

Anxiety / Panic disorder

	To assess a patient presenting with features of an anxiety disorder and reach a differential diagnosis to guide investigation and management		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the main features of anxiety disorder Elucidate the main categories of anxiety disorder: panic, generalised anxiety, phobias Recognise the role of depression in anxiety symptoms Recall organic disorders and medications than can mimic some features of anxiety disorder Outline broad treatment strategies for anxiety disorders	Assess a patient to detect organic illness Evaluate patient's mental state to categorise cause of symptoms as per national guidelines (e.g. NICE) on Anxiety	Be familiar with national guidelines (e.g. NICE) on management of anxiety Recognise the chronicity of anxiety syndromes and the distress and disability they cause

Bruising

	The trainee will be able to assess a patient presenting with easy bruising to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the different types of easy bruising Identify the possible causes of easy bruising, depending on the site, age of the patient and details of the history, particularly in relation to prescribed medication State which first line investigations are required, depending on the likely diagnosis State the common clinical presentations of coagulation disorders	Order, interpret and act on initial investigations appropriately including blood tests, radiographs, microbiology investigations Initiate first line management in consultation with senior clinicians	Recognise the importance of a multidisciplinary approach Acknowledge anxiety caused by possible diagnosis of a serious blood condition Consult senior if there is concern bruising is manifestation of critical illness Recognise that trauma is an important cause of bruising and that bruising is a common problem in the elderly

Chance Findings

	The trainee will be able to construct a management plan for patients referred by colleagues due to asymptomatic abnormal findings		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall asymptomatic abnormal findings that may precipitate discussion with medical team: abnormal radiograph; accelerated hypertension; deranged blood tests (anaemia, calcium, urea and electrolytes, full blood count, clotting); proteinuria; microscopic haematuria; abnormal ECG; drug interactions and reactions State asymptomatic findings that warrant immediate assessment, admission and management	Elucidate finding and place it in context of particular patient Decide whether immediate assessment of patient is required, after discussion with senior colleague if uncertain Formulate an appropriate management plan for each scenario Order, interpret and act on further initial investigations appropriately Manage common metabolic presentations appropriately (hyper/hypokalaemia, hyper/hyponatraemia)	Refer non-urgent cases to either GP or appropriate specialist for out-patient review or investigation Recognise the non-specific modes by which serious illness may present Seek specialist advice when appropriate

Dialysis

	The trainee will be aware of the principles, indications, and complications of Renal Replacement Therapy (RRT)		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the methods of RRT Elucidate the common complications of long term haemodialysis Recall the importance of sepsis in patients on RRT	Demonstrate ability to assess a patient on long term dialysis presenting to hospital to arrive at a valid differential diagnosis Order, interpret and act on initial investigations appropriately, recognising importance of full septic screen Commence initial management of patient if appropriate	Recognise importance of prompt senior and Renal Unit input in the management of patients on RRT Recognise the valuable insight patients on long term RRT have into the nature of their symptoms

Dyspepsia

	The trainee will be able to assess a patient presenting with heartburn to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define dyspepsia and recall principle causes Recall the lifestyle factors that contribute to dyspepsia State the indications for endoscopy as stated in national guidelines (e.g. NICE) Recall indications, contraindications and side effects of acid suppression and mucosal protective medications Recall the role of H Pylori and its detection and treatment Define alarm symptoms of upper GI malignancy	Identify alarm symptoms indicating urgent endoscopy referral Investigate as appropriate: H pylori testing, endoscopy	Respect findings of previous endoscopy when patients have exacerbation of symptoms

Dysuria

	The trainee will be able to assess a patient presenting with dysuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall anatomy of the genito-urinary tract Elucidate the causes of dysuria in males and females Outline the pathophysiology of infective causes of urethritis Outline the principles of management	Take a full history, including features pertaining to sexual heath Initiate appropriate treatment if appropriate Order, interpret and act on initial investigations	Recognise the need for specialist Genito-urinary input when appropriate Participate in sexual health promotion Use microbiology resources in the management of patients with dysuria when appropriate

Genital Discharge and Ulceration

	The trainee will be able to assess a patient presenting with genital discharge or ulceration to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the disorders that can present with genital discharge List the disorders that can present with genital ulceration Outline the investigations necessary: urinalysis; urethral smear and culture in men; high vaginal and endo-cervical swab in women, genital skin biopsy	Take a full history that includes associated symptoms, sexual, menstrual and contraceptive history and details of previous STDs Perform full examination including inguinal lymph nodes, scrotum, male urethra, rectal examination, speculum Be able to pass a speculum competently and sensitively without discomfort to the patient	Recognise the re-emergence of sexually transmitted diseases Recognise the importance of contact tracing Promote safe sexual practices Advocate the presence of a chaperone during assessment

Haematuria

	The trainee will be able to assess a patient with haematuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the anatomy of the urinary tract Outline the causes of microscopic and macroscopic haematuria Determine whether glomerular cause is likely, and indications for a nephrology opinion	Perform a focussed examination, including a rectal examination Demonstrate when a patient needs urological assessment and investigation Order, interpret and act on initial investigations such as: urine culture, cytology and microscopy; blood tests	Involve renal unit when rapidly progressive glomerulonephritis is suspected

Haemoptysis

	The trainee will be able to assess a patient presenting with haemoptysis to produce valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Identify the common and life threatening causes of haemoptysis: bronchitis, pneumonia, PE and carcinoma Describe initial treatment including fluids and oxygen management	Perform a detailed history and physical examination to determine an appropriate differential diagnosis Order, interpret and act on initial investigations appropriately: routine bloods, clotting screen, chest radiograph and ECG, sputum tests Initiate treatment including indications for starting or withholding anticoagulants and antibiotics	Involve seniors and respiratory physicians as appropriate

Head Injury

	The trainee will able to assess a patient with traumatic head injury, stabilise, admit to hospital as necessary and liaise with appropriate colleagues, recognising local and national guidelines (e.g. NICE)		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the pathophysiology of concussion Outline symptoms that may be present Outline the indications for hospital admission following head injury Outline the indications for urgent head CT scan as per national guidelines (e.g. NICE) Recall short term complications of head injury	Instigate initial management: ABC, cervical spine protection Assess and classify patient in terms of GCS and its derivative components (E,V,M) Take a focused history and a full examination to elicit signs of head injury and focal neurological deficit Manage short term complications, with senior assistance if required: seizures, airway compromise Advise nurses on appropriate frequency and nature of observations	Recognise advice provided by national guidelines on head injury (e.g. NICE) Ask for senior and anaesthetic support promptly in event of decreased consciousness Involve neurosurgical team promptly in event of CT scan showing structural lesion Recommend indications for repeat medical assessment in event of discharge of patient from hospital Participate in safe transfer procedures if referred too tertiary care

Hoarseness and Stridor

	The trainee will be able to assess a patient presenting with symptoms of upper airway pathology to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'wheeze')		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Explain the mechanisms of hoarseness and stridor List the common and serious causes for hoarseness and stridor	Differentiate hoarseness, stridor and wheeze Assess severity: cyanosis, respiratory rate and effort Perform full examination, eliciting signs that may co-exist with stridor or hoarseness e.g. bovine cough, Horner's syndrome, other neurological signs, fever Order, interpret and act on initial investigations appropriately: blood tests, blood gas analysis, chest radiograph, flow volume loops, FEV_1/peak flow ratio	Involve senior and anaesthetic team promptly in event of significant airway compromise Involve specialist team as appropriate: respiratory team, ENT or neurological team

Hypothermia

	The trainee will be able to assess a patient presenting with hypothermia to establish the cause, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define hypothermia and its diagnosis Outline perturbations caused by hypothermia, including ECG and blood test interpretation List the causes of hypothermia List complications of hypothermia	Employ the emergency management of hypothermia as per ALS guidelines Correct any predisposing factors leading to hypothermia Request appropriate monitoring of the patient	Recognise the often multi-factorial nature of hypothermia in the elderly and outline preventative approaches Recognise seriousness of hypothermia and act promptly to re-warm Recognise that death can only usually be certified after re-warming

Immobility

	The trainee will be able to assess a patient with immobility to produce a valid differential diagnosis, investigate appropriately, and produce a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Describe the risk factors and causes of immobility Explain the role of multidisciplinary team Define the basic principles of rehabilitation Describe the conditions causing immobility which may be improved by treatment and or rehabilitation	Construct problem list following assessment Discuss the role of the multidisciplinary team in management of these patients Formulate appropriate management plan including medication, rehabilitation and goal setting. Identify conditions leading to acute presentation to hospital Order, interpret and act on relevant initial investigations appropriately to elucidate a differential diagnosis	Take appropriate and focussed collateral history from carers/family/GP Recognise the importance of a multidisciplinary approach and specialist referral as appropriate Display ability to discuss plans with patients and or carers Recognise the anxiety and distress caused to patient and carers by underlying condition and admission to hospital

Involuntary Movements

	The trainee will be able to assess a patient presenting with involuntary movements to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Differentiate and outline the differential diagnoses of parkinsonism and tremor: be aware of myoclonus, and other less common movement disorders Outline the main drug groups used in the management of movement disorders	Assess including a full neurological examination to produce a valid differential diagnosis	Exhibit empathy when considering the impact to quality of life of patient and carers movement disorders can have Recognise importance of multi-disciplinary approach to management Recognise the importance of specialist referral

Joint Swelling

	The trainee will be able to assess a patient presenting with joint pain or swelling to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the generic anatomy of the different types of joint Differentiate mono-, oligo-, and polyarthritis and list principle causes for each Elucidate the importance of co-morbidities in the diagnosis of joint swelling Outline treatment options for chronic arthritides: disease modifying drugs, analgesia, physiotherapy	Recognise the importance of history for clues as to diagnosis Perform a competent physical examination of the musculo-skeletal system using both the GALS screening examination and the regional examination technique (REMS) Elicit and interpret extra-articular signs of joint disease Order, interpret and act on initial investigations appropriately: blood tests, radiographs, joint aspiration, cultures Perform knee aspiration using aseptic technique causing minimal distress to patient Interpret plain radiographs of swollen joints Practice safe prescribing of analgesics for joint disease	Recognise that monoarthritis calls for timely joint aspiration to rule out septic cause Recognise and facilitate the need for surgical intervention in septic arthritis Recognise importance of multi-disciplinary approach to joint disease: physio, OT, social services

Lymphadenopathy

	The trainee will be able to assess a patient presenting with lymphadenopathy to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the anatomy and physiology of the lymphatic system Recall the causes of generalised and local lymphadenopathy in terms of infective, malignant, reactive and infiltrative Outline the investigations indicated when tuberculosis is considered	Elicit associated symptoms and risk factors for the presence of diseases presenting with lymphadenopathy Examine to elicit the signs of lymphadenopathy and associated diseases Order, interpret and act on initial investigations appropriately Initiate treatment if appropriate	Recognise patient concerns regarding possible cause for lymphadenopathy Recognise the need for senior and specialist input Recognise the association of inguinal lymphadenopathy with STDs, assess and refer appropriately

Loin Pain

	The trainee will be able to assess a patient presenting with loin pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the common and serious causes of loin pain and renal colic Outline other symptoms that may classically accompany loin pain and renal colic Outline indications and contraindications for an urgent IVU	Elucidate risk factors for causes of loin pain Perform full examination to elicit signs of renal pathology Order, interpret and act on initial investigations appropriately: blood tests, urinalysis, urine culture and microscopy, radiographs, ultrasound Prescribe appropriate analgesia safely Commence appropriate antibiotics when infective cause is likely Recognise co-existing renal impairment promptly	Involve senior and renal team if there is associated renal impairment Involve urology team as appropriate Recognise local guidelines in prescribing antibiotics

Medical Complications During Acute Illness and Following Surgical Procedure

	The trainee will be able to assess, investigate and treat medical problems arising post-operatively and during acute illness and recognise importance of preventative measures		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List common medical complications occurring in post-operative and unwell patients and how they present Explain reasons for medical problems frequently presenting atypically post-operatively Recall investigations indicated in different scenarios: short of breath, chest pain, respiratory failure, drowsiness, febrile, collapse, GI bleed	Recognise critically ill patient and instigate resuscitative measures Assess patient with history and examination to form differential diagnosis Initiate treatment when appropriate in consultation with the surgical team Institute measures for thrombosis prophylaxis when appropriate, as per national or local guidelines	Recognise importance of thrombo-embolic complications and prophylaxis during acute illness and in post-operative period Recognise the importance of measures to prevent complications: DVT prophylaxis, effective analgesia, nutrition, physiotherapy, gastric protection Call for senior help when appropriate Respect opinion of referring surgical team

Medical Problems in Pregnancy

	The trainee will be competent in the assessment, investigation and management of the common and serious medical complications of pregnancy		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the normal physiological changes occurring during pregnancy List the common medical problems occurring in pregnancy Identify the unique challenges of diagnosing medical problems in pregnancy Recall safe prescribing practices in pregnancy	Recognise the critically ill pregnant patient, initiate resuscitation measures and liaise promptly with senior and obstetrician Take a valid history from a pregnant patient Examine a pregnant patient competently Produce a valid list of differential diagnoses Initiate treatment if appropriate	Recognise the importance of thrombo-embolic complication of pregnancy Communicate with obstetric team throughout the diagnostic and management process Discuss case with senior promptly Seek timely gastroenterology opinion in cases of significant jaundice

Memory Loss (Progressive)

	The trainee will be able to assess a patient with progressive memory loss to determine severity, differential diagnosis, investigate appropriately, and formulate management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define the clinical features of dementia that differentiate from focal brain disease, reversible encephalopathies, and pseudo-dementia List the principle causes of dementia Recall factors that may exacerbate symptoms: drugs, infection, change of environment, biochemical abnormalities, constipation	Take an accurate collateral history wherever possible Perform a full examination looking for reversible causes of cognitive impairment and neurological disease Demonstrate ability to use tools measuring cognitive impairment at the bedside Order, interpret and act on initial investigations appropriately to determine reversible cause such as: blood tests, cranial imaging, EEG Detect and rectify exacerbating factors	Demonstrate a patient sensitive approach to interacting with a confused patient and their carers Recognise that a change of environment in hospital can exacerbate symptoms and cause distress Recommend support networks to carers Participate in multi-disciplinary approach to care: therapists, elderly care team, old age psychiatrists, social services Consider need for specialist involvement

Micturition (Difficult)

	The trainee will be able to assess a patient presenting with difficulty in micturition to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline causes of difficulty in micturating in terms of oliguria and urinary tract obstruction Recall techniques that allow oliguria and bladder outflow obstruction to be differentiated Recall the investigation and management of prostatic cancer	Examine to elicit signs of renal disease, bladder outflow obstruction and deduce volaemic status of patient Differentiate oliguric pre-renal failure; acute renal failure and post renal failure Order, interpret and act on initial investigations appropriately: urinalysis, abdominal ultrasound, bladder scanning, urine culture and microscopy Initiate treatment when indicated Perform catherisation using aseptic technique with minimal discomfort to patient Recognise incipient shock and commence initial treatment	Recognise the importance of recognising and preventing renal impairment in the context of bladder outflow obstruction Liaise with senior in event of oliguria heralding incipient shock Liaise promptly with appropriate team when oliguria from bladder outflow obstruction is suspected (urology, gynaecology)

Neck pain

	The trainee will be able to assess a patient presenting with neck pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the common and serious causes of neck pain in terms of meningism; tender mass; musculoskeletal; vascular	Take a full history, including recent trauma Perform a full examination to elicit signs that may accompany neck pain Order, interpret and act on initial investigations appropriately: blood tests, plain radiographs, thyroid function Recognise meningitis and promptly initiate appropriate investigations and treatment with consultation with senior Practice appropriate prescribing of analgesia	Consult senior colleague promptly in the event of focal neurological signs or critical illness

Physical Symptoms in absence of organic disease

	The trainee will be able to assess and appropriately investigate a patient to conclude that organic disease is unlikely, counsel sensitively, and formulate an appropriate management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List symptoms that commonly have a non-organic component	Take a full history, including associated symptoms of anxiety or depression and past medical assessments Perform full examination including mental state Recognise the hyperventilation syndrome	Adopt attitude that presentation has organic cause until otherwise proven, and assess and investigate as appropriate Consult senior promptly when appropriate Strive to establish underlying precipitants to non-organic presentations: life stresses, hypochondriacism Appreciate the implications of unnecessary tests in terms of cost and iatrogenic complications

Polydipsia

	The trainee will be able to assess a patient presenting with polydipsia to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Understand mechanisms of thirst Identify common causes of polydipsia	Identify other pertinent symptoms e.g. nocturia Order, interpret and act on initial investigations appropriately Initiate adequate initial therapy	Sympathetically explain likely causes of polydipsia to patient Use appropriate aseptic techniques for invasive procedures and to minimise healthcare acquired infection.

Polyuria

	The trainee will be able to assess a patient presenting with polyuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define true polyuria Outline the causes of polyuria (in terms of osmotic, diabetes insipidus etc) Outline the pathophysiology of diabetes insipidus Elucidate the principles of treating new onset diabetes mellitus, hypercalcaemia	Identify other pertinent symptoms Perform full examination to assess volaemic status, and elicit associated signs Order, interpret and act on initial investigations appropriately Calculate and interpret serum and urine osmolarity Commence treatment as appropriate	Consult senior colleague as appropriate

Pruritus

	The trainee will be able to assess a patient presenting with itch to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall principle causes in terms of infestations, primary skin diseases, systemic diseases, liver disease Outline the principles of treating skin conditions Outline the indications of and side effects of topical steroids and differentiate their different potencies	Examine to elicit signs of a cause for pruritus Describe accurately any associated rash Formulate a list of differential diagnoses Order, interpret and act on initial investigations appropriately Recognise the presentation of skin cancer	Recognise the need for specialist dermatological input Recognise the need for other specialists in pruritus heralding systemic disease

Rectal Bleeding

	The trainee will be able to assess a patient with rectal bleeding to identify significance differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Recall the causes of bleeding per rectum Outline indications for surgical review Outline the treatments indicated in acute colitis	Perform examination including rectal examination Recognise and appropriately treat the shocked patient including consultation with surgical colleague Order, interpret and act on initial investigations appropriately Distinguish upper and lower GI bleeding	Liaise with senior and surgical team when appropriate Recognise role of IBD nurse when patient with known IBD presents

Skin and Mouth Ulcers

	The trainee will be able to assess a patient presenting with skin or mouth ulceration to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also Dermatology in Section 2 for Skin Tumour competencies)		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the common and serious causes of skin (especially leg) or mouth ulceration Outline the classification of skin ulcers by cause Outline the pathophysiology, investigation and management principles of diabetic ulcers	Recognise likely skin and oral malignancy Recognise life threatening skin rashes presenting with ulcers, commence treatment and involve senior Assess and formulate immediate management plan for diabetic foot ulceration Order, interpret and act on initial investigations appropriately	Recognise the importance of prevention of pressure ulcers and diabetic ulcers Participate in multi-disciplinary team: nurse specialists, podiatrist

Speech Disturbance

	The trainee will be able to assess a patient with speech disturbance to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define Dysphonia, dysarthria and dysphasia Recall the neuro-anatomy relevant to speech and language Differentiate receptive and expressive dysphasia List causes for dysphonia, dysarthria and dysphasia	Take a history from a patient with speech disturbance Examine patient to define nature of speech disturbance and elicit other focal signs List differential diagnoses following assessment Order, interpret and act on initial investigations appropriately	Recognise the role of speech and language therapy input Recognise the relationship between dysarthria and swallowing difficulties and advise patients and carers accordingly Involve stroke team or neurology promptly as appropriate

Suicidal Ideation

	The trainee will be able to take a valid psychiatric history to elicit from a patient suicidal ideation and underlying psychiatric pathology; assess risk; and formulate appropriate management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the risk factors for a suicidal attempt Outline the common co-existing psychiatric pathologies that may precipitate suicidal ideation Outline the indications, contraindications and side effects of the major groups of psychomotor medications Outline the powers that enable assessment and treatment of patients following self harm or self harm ideation as defined in the Mental Health Act	Take a competent psychiatric history Be familiar with scoring tools to assess risk of further self harm (eg Beck's score) Elicit symptoms of major psychiatric disturbance Obtain collateral history when possible Recognise and manage appropriately anxiety and aggression	Liaise promptly with psychiatric services if in doubt or when high risk of repeat self harm is suspected Recognise the role of the Self Harm Team prior to discharge Ensure prompt communication is maintained with community care on discharge (GP, CPN)

Swallowing Difficulties

	The trainee will be able to assess a patient with swallowing difficulties to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the physiology of swallowing Recall the causes of swallowing problems Differentiate between neurological and GI causes Outline investigative options: contrast studies, endoscopy, manometry, CT Outline the pathophysiology, staging, and therapeutic options of oesophageal malignancy Define odynophagia and list causes	Elicit valid history, detecting associations that indicate a cause: weight loss, aspiration, heartburn Examine a patient to elicit signs of neurological disease, malignancy and connective tissue disease Be able to evaluate whether patient is safe to eat or drink by mouth	Recognise importance of multi-disciplinary approach to management

Syncope & Pre-syncope

	The trainee will be able to assess a patient presenting with syncope to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also ‘ blackouts/collapse’)		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Define syncope Outline the pathophysiology of syncope depending on situation (vaso-vagal, cough, effort, micturition, carotid sinus hypersensitivity) Differentiate from other causes of collapse in terms of associated symptoms and signs, and eye witness reports Outline the indications for cardiac monitoring	Take thorough history from patient and witness to elucidate episode Differentiate pre-syncope from other causes of ‘dizziness’ Assess patient in terms of ABC and degree of consciousness and manage appropriately Perform examination to elicit signs of cardiovascular disease Order, interpret and act on initial investigations appropriately: blood tests ECG	Recognise impact episodes can have on lifestyle particularly in the elderly Recognise recommendations regarding fitness to drive in relation to syncope

Unsteadiness / Balance Disturbance

	The trainee will be able to assess a patient presenting with unsteadiness or a disturbance of balance to produce a valid list of differential diagnoses, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Outline the neuro-anatomy and physiology relevant to balance, coordination and movement Define and differentiate types of vertigo and list causes Define and differentiate sensory and cerebellar ataxia and list causes	Take history from patient and attempt to define complaint as either pre-syncope, vertigo or unsteadiness Perform full physical examination to elicit signs of neurological, inner ear or cardiovascular disease including orthostatic hypotension Describe an abnormal gait accurately Recognise intoxication Initiate basic investigations and urgent treatment with vitamins when appropriate	Recognise the importance of multi-disciplinary approach: physio, OT

Visual Disturbance (diplopia, visual field deficit, reduced acuity)

	To assess the patient presenting with a visual disturbance to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	Broadly outline the basic anatomy and physiology of the eye and the visual pathways Define the different types of visual field defect and list common causes Define diplopia and list common causes List common causes for reduced visual acuity	Perform full examination including acuity, eye movements, visual fields, fundoscopy, related cranial nerves and structures of head & neck Formulate differential diagnosis Order, interpret and act on initial investigations appropriately	In case of acute visual loss recognise early requirement for review by Ophthalmology team Recognise rapidly progressive symptoms and consult senior promptly Recognise anxiety acute visual symptoms invoke in patients

Weight Loss

	The trainee will be able to assess a patient presenting with unintentional weight loss to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan		
	Knowledge	**Skills**	**Attitudes and Behaviour**
Competency Level 1	List the common causes for weight loss (in terms of psychosocial, neoplasia, gastroenterological etc) Outline the indications and complications for nutritional supplements, and enteral feeding including PEG/NG feeding	Take a valid history highlighting any risk factors for specific disorders presenting with weight loss, and a thorough social history Examine fully to elucidate signs of disorders presenting with weight loss, and also assess degree of malnutrition Order, interpret and act on initial screening investigations Initiate nutritional measures including enteral preparations when appropriate Pass a fine bore NG feeding tube and ensure correct positioning	Recognise multi-factorial aspect of weight loss, especially in the elderly Recognise prominence of psychosocial factors, with collateral history where possible Liaise with nutritional services appropriately

System Specific Competencies

Common and / or Important Problems

It is often the case that patients very often already have a ‘diagnostic label’, for example a GP referring ‘a breathless patient with heart failure’. In the age of better patient education and patient involvement in their chronic disease management , frequently the modern doctor needs to refer to disease-specific knowledge earlier in the consultation. This is especially true in the out patient setting which all trainees undertaking the ACCS will be expected to experience.

Therefore, listing the specific conditions aims to advise the trainee on the conditions that require detailed comprehension. The list also gives a guide to the topics that will form the basis for formal and work-place assessments.

A framework for the knowledge required for specific conditions is set out below, and should continue to improve with time in line with the principles of a spiral curriculum:

- Definition
- Pathophysiology
- Epidemiology
- Features of History
- Examination findings
- Differential Diagnosis
- Investigations indicated
- Detailed initial management and principles of ongoing management (counselling, lifestyle, medical, surgical, care setting and follow up)
- Complications
- Prevention (where relevant to condition)

Allergy

Competencies

- Recognise when specialist allergy opinion is required.
- Be aware of the management and subsequent investigation of patients presenting with immune mediated medical emergencies anaphylaxis, laryngoedema, urticaria, angioedema

Common or Important Allergy Problems

- Anaphylaxis
- Recognition of common allergies; introducing occupation associated allergies.Food, drug, latex and insect venom allergies
- Urticaria and angioedema
- Indications and contraindications for, and therapeutic scope of allergen immunotherapy
- Indications for, and limitations of, skin prick testing and in vitro tests for allergen-specific IgE

Clinical Science

- Mechanisms of allergic sensitisation: primary and secondary prophylaxis
- Natural history of allergic diseases
- Mechanisms of action of anti-allergic drugs and immunotherapy
- Principles and limitations of allergen avoidance

Cancer and Palliative Care

Competencies

- Take an accurate pain history
- Perform full physical examination without causing undue pain or distress to patient
- Recognise the terminally ill often present with problems with multi-factorial causes
- Recognise associated psychological and social problems
- Investigate appropriately
- Recognise when specialist oncology or palliative care opinion is needed
- Outline treatment principles with drawbacks: surgery, chemotherapy and radiotherapy
- Break bad news to patient and family with cancer in sensitive and appropriate manner
- Contribute to discussions on decisions not to resuscitate with patient, carers, family and colleagues appropriately and sensitively ensuring patients interests are paramount
- Recognise the dying phase of terminal illness
- Manage symptoms in dying patients appropriately
- Practice safe use of syringes drivers
- Recognise importance of hospital and community Palliative Care teams
- Recognise that referral to specialist palliative care is appropriate for patients with other life threatening illnesses, as well as those with cancer

Common or Important Oncology Problems:

- Hypercalcaemia
- SVC obstruction

- Spinal cord compression
- Neutropenic sepsis
- Common cancers (presentation, diagnosis, staging, treatment principles): lung, bowel, breast, prostate, stomach, oesophagus, bladder)

Common or Important Palliative Care Problems:

- Pain: appropriate use, analgesic ladder, side effects, role of radiotherapy
- Constipation
- Breathlessness
- Nausea and vomiting
- Anxiety and depressed mood

Clinical Science:

- Principles of oncogenesis and metastatic spread
- Apoptosis
- Principles of staging
- Principles of screening
- Pharmacology of major drug classes in palliative care: anti-emetics, opioids, NSAIDS, agents for neuropathic pain, bisphosphonates, laxatives, anxiolytics

Cardiovascular Medicine

Competencies

- Recognise when specialist Cardiology opinion is indicated
- Outline risk factors for cardiovascular disease
- Counsel patients on risk factors for cardiovascular disease
- Outline methods of smoking cessation of proven efficacy (see below)

Common and / or important Cardiac Problems:

- Arrhythmias
- Ischaemic Heart Disease: acute coronary syndromes, stable angina, atherosclerosis
- Heart Failure
- Hypertension – including investigation and management of accelerated hypertension
- Valvular Heart Disease
- Endocarditis
- Aortic dissection
- Syncope
- Dyslipidaemia

Clinical Science:

- Anatomy and function of cardiovascular system
- Physiological principles of cardiac cycle and cardiac conduction
- Homeostasis of the circulation

- Atherosclerosis
- Pharmacology of major drug classes: beta blockers, alpha blockers, ACE inhibitors, ARBs, anti-platelet agents, thrombolysis, inotropes, calcium channel antagonists, potassium channel activators, diuretics, anti-arrhythmics, anti-coagulants, lipid modifying drugs, nitrates, centrally acting anti-hypertensives

Clinical Genetics

Competencies

- Recognise the organisation and role of Clinical Genetics and when to seek specialist advice
- Take and interpret a complete family history
- Recognise the anxiety caused to an individual and their family when investigating genetic susceptibility to disease
- Recognise the importance of skilled counselling in the investigation of genetic susceptibility to disease
- Recognise basic patterns of inheritance
- Understand the ethical implications of molecular testing and screening: confidentiality, screening children, pre-symptomatic testing
- Estimate risk for relatives of patients with mendelian disease
- Recognise the differing attitudes and beliefs towards inheritance

Common and / or Important problems:

- Down's syndrome
- Turner's syndrome
- Huntington's disease
- Haemochromatosis
- Marfan's syndrome
- Klinefelter's syndrome
- Familial cancer syndromes
- Familial cardiovascular disorders

Clinical Science:

- Structure and function of human cells, chromosomes, DNA, RNA and cellular proteins
- Principles of inheritance: mendelian, sex-linked, mitochondrial
- Principles of pharmacogenetics
- Principles of mutation, polymorphism, trinucleotide repeat disorders
- Principles of genetic testing including metabolite assays, clinical examination and analysis of nucleic acid (e.g. PCR)

Clinical Pharmacology

Competencies

- Practise safe prescribing
  - Effects of: renal or liver impairment; old age; pregnancy
  - Outline importance of drug interactions and role CYP450 isoenzymes
  - Outline drugs requiring therapeutic monitoring
- Use national and local guidelines on appropriate and safe prescribing (BNF, NICE)
- Write a clear and unambiguous prescription
- Engage patients in discussions on drug choice, and side effects
- Recognise range of adverse drug reactions to commonly used drugs
- Use Yellow Card report scheme for adverse drug reactions
- Liaise effectively with pharmacists
- Discuss therapeutic changes with patient and discuss with GP promptly and comprehensively
- Competently formulate management plan for poisoning and adverse drug reactions
- Demonstrate appropriate use of a toxicology database (eg Toxbase)
- Calculate glomerular filtration rate

Common and / or Important problems:

- Corticosteroid treatment: short and long-term complications, bone protection, safe withdrawal of corticosteroids, patient counselling regarding avoid adrenal crises
- Specific treatment of poisoning with:
  - Aspirin,
  - Paracetamol
  - Tricyclics anti-depressants
  - Beta-blockers
  - Carbon monoxide
  - Opiates
  - Digoxin
  - Benzodiazepines
  - SSRI

Clinical Science:

- Drug actions at receptor and intracellular level
- Principles of absorption, distribution, metabolism and excretion of drugs
- Effects of genetics on drug metabolism
- Pharmacological principles of drug interaction
- Outline the effects on drug metabolism of: pregnancy, age, renal and liver impairment

Dermatology

Competencies

- Accurately describe skin lesions following assessment
- Skin Tumours
  - Outline the clinical features and presentation of melanoma, squamous cell carcinoma and basal cell carcinoma
  - List diagnostic features for the early detection of malignant melanoma
  - Recognise and manage suspected skin tumours when they may be an incidental finding
  - Recognise the association between timely biopsy / excision of melanoma and survival
  - Arrange prompt skin biopsy when appropriate
  - Counsel patients on preventative strategies for skin tumours (e.g. avoiding excess UV exposure); and the diagnostic features for the early detection of malignant melanoma
- Recognise when specialist Dermatology opinion is indicated
- Recognise when a patient's presentation heralds a systemic disease
- Suspect and treat meningococcal septicaemia when a purpuric rash accompanies systemic illness

Common and / or Important problems:

- Cellulitis
- Cutaneous drug reactions
- Psoriasis and eczema
- Skin failure: eg erthryoderma, toxic epidermal necrolysis
- Urticaria and angio-oedema
- Cutaneous vasculitis
- Herpes zoster and Herpes Simplex infections
- Skin tumours (see above for more specific competencies)
- Skin infestations
- Dermatomyositis

Clinical Science:

- Structure and function of skin, hair and nails
- Pharmacology of major drug classes: topical steroids, immunosuppressants

Diabetes & Endocrine Medicine

Competencies

- Elucidate a full diabetic medical history
- Recall diagnostic criteria for Diabetes Mellitus
- Assess diabetic patient to detect long term complications
- Formulate and appropriate management plan, including newly diagnosed and established diabetic patients to prevent short and long term complications
- Outline common insulin regimes for type 1 diabetes

- Outline drug management of type 2 diabetes: oral hypoglycaemics, glitazones, primary and secondary vascular preventative agents
- Recognise vital importance of patient education and a multidisciplinary approach for the successful long-term care of diabetes
- Recognise when specialist Endocrine or Diabetes opinion is indicated

Common and / or Important Diabetes Problems:

- Diabetic ketoacidosis
- Non-acidotic hyperosmolar coma / severe hyperglycaemia
- Hypoglycaemia
- Care of the acutely ill diabetic
- Peri-operative diabetes care

Common or Important Endocrine Problems:

- Hyper/Hypocalcaemia
- Adrenocortical insufficiency
- Hyper/Hyponatraemia
- Thyroid dysfunction
- Dyslipidaemia
- Endocrine emergencies: myxoedema coma, thyrotoxic crisis, Addisonian crisis, hypopituitary coma, phaeochromocytoma crisis

Clinical Science:

- Structure and function of hypothalamus, pituitary, thyroid, adrenals, gonads, parathyroids, pancreas
- Outline the structure and function of hormones
- Principles of hormone receptors, action, secondary messengers and feedback
- Pharmacology of major drug classes: insulin, oral antidiabetics, thyroxine, anti-thyroid drugs, corticosteroids, sex hormones, drugs affecting bone metabolism

Gastroenterology and Hepatology

Competencies

- Understand the role of specialised diagnostic and therapeutic endoscopic procedures
- Recognise when specialist Gastroenterology or Hepatology opinion is indicated
- Recognise when a patient's presentation heralds a surgical cause and refer appropriately
- Perform a nutritional assessment and address nutritional requirements in management plan
- Outline role of specialist multi-disciplinary nutrition team

Common or Important Problems:

- Peptic Ulceration and Gastritis
- Gastroenteritis
- GI malignancy (oesophagus, gastric, hepatic, pancreatic, colonic)
- Inflammatory bowel disease

- Iron Deficiency anaemia
- Acute GI bleeding
- Acute abdominal pathologies: pancreatitis, cholecystitis, appendicitis, leaking abdominal aortic aneurysm
- Functional disease: irritable bowel syndrome, non-ulcer dyspepsia
- Coeliac disease
- Alcoholic liver disease
- Alcohol withdrawal syndrome
- Acute liver dysfunction: jaundice, ascites, encephalopathy
- Gastro-oesophageal reflux disease
- Nutrition: indications, contraindications and ethical dilemmas of nasogastric feeding and PEG tubes, IV nutrition, re-feeding syndrome
- Parenteral feeding
- Gall stones
- Viral hepatitis
- Auto-immune liver disease
- Pancreatic cancer

Clinical Science:

- Structure and function of salivary glands, oesophagus, stomach, small bowel, colon, rectum, liver, biliary system, pancreas
- Principles of the physiology of alimentary tract: motility, secretion, digestion, absorption
- Bile metabolism
- Principles of action of liver
  - Laboratory markers of liver, pancreas and gut dysfunction
  - Pharmacology of major drug classes: acid suppressants, anti-spasmodics, laxatives, anti-diarrhoea drugs, aminosalicylates, corticosteroids, immunosuppressants, infliximab, pancreatic enzyme supplements

Haematology

Competencies

- Recognise when specialist Haematology opinion is indicated
- Practice safe prescribing of blood products, including appropriate patient counselling
- Outline indications, contraindications, side effects and therapeutic monitoring of anticoagulant medications

Common and / or Important Problems:

- Bone marrow failure: causes and complications
- Bleeding disorders: DIC, haemophilia
- Thrombocytopaenia
- Anticoagulation treatment: indications, monitoring, management of over-treatment

- Transfusion reactions
- Anaemia: iron deficient, megaloblastic, haemolysis, sickle cell,
- Thrombophilia: classification; indications and implications of screening
- Haemolytic disease
- Myelodysplastic syndromes
- Leukaemia
- Lymphoma
- Myeloma
- Myeloproliferative disease
- Inherited disorders of haemoglobin (sickle cell disease, thalassaemias)
- Amyloid
- Principles of Bone Marrow Transplantation

Clinical Science:

- Structure and function of blood, reticuloendothelial system, erythropoietic tissues
- Haemoglobin structure and function
- Haemopoiesis
- Metabolism of iron, B12 and folate
- Coagulation

Immunology

Competencies

- Recognise the role of the Clinical Immunologist

Common or Important Problems:

- Anaphylaxis (see also 'Allergy'

Clinical Science:

- Structure and function of reticuloendothelial system
- Innate and adaptive immune responses
- The Complement System: structure and function
- Principles of Hypersensitivity
- Principles of transplantation

Infectious Diseases

Competencies

- Elucidate risk factors for the development of an infectious disease including contacts, travel, animal contact and sexual history
- Recognise when specialist Microbiology or Infectious Diseases opinions are indicated
- Recognise when a patient is critically ill with sepsis, promptly initiate treatment and liaise with critical care and senior colleagues

- Outline spectrum of cover of common anti-microbials, recognising complications of inappropriate use
- Use local anti-microbial prescribing guidelines, including therapeutic drug monitoring when indicated
- Recognise importance of immunisation and Public Health in infection control, including reporting notifiable diseases
- Outline principles of prophylaxis eg anti-malarials

Common and / or Important Problems:

- Fever of Unknown origin
- Complications of sepsis: shock, DIC, ARDS
- Common community acquired infection: LRTI, UTI, skin and soft tissue infections, viral exanthema, gastroenteritis
- CNS infection: meningitis, encephalitis, brain abscess
- Imported fever
- HIV and AIDS including ethical considerations of testing
- Infections in immuno-compromised host
- Tuberculosis
- Anti-microbial drug monitoring
- Endocarditis
- Common genito-urinary conditions: non-gonococcal urethritis, gonorrhoea, syphilis

Clinical Science:

- Mechanisms of organism pathogenesis
- Host response to infection
- Principles of vaccination
- Pharmacology of major drug classes: penicillins, cephalosporins, tetracyclines, aminoglycosides, macrolides, sulphonamides, quinolones, metronidazole, anti-tuberculous drugs, anti-fungals, anti-malarials, anti-helmintics, anti-virals

Medicine in the Elderly

Competencies

- Elucidate in older patients co-morbidities, activities of daily living, social support, drug history and living environment
- Assess mental state and tests of cognitive function
- Recognise the frequent presence of multiple factors contributing to presentation
- Recognise when specialist Medicine in the Elderly opinion is indicated
- Recognise importance of multi-disciplinary assessment
- Contribute to effective multi-disciplinary discharge planning
- Perform a nutritional assessment and address nutritional requirements in management plan
- Set realistic rehabilitation targets
- Rationalise individual drug regimens to avoid unnecessary poly-pharmacy

- Contribute to discussions on decisions not to resuscitate with patient, carers, family and colleagues appropriately, and sensitively ensuring patients interests are paramount
- Recognise the role of Intermediate Care, and practice prompt effective communication with these facilities
- Recognise the often multi-factorial causes for clinical presentation in the elderly and outline preventative approaches
- Recognise that older patients often present with multiple problems (e.g. falls and confusion, immobility and incontinence)

Common or Important Problems:

- Deterioration in mobility
- Acute confusion
- Stroke and transient ischaemic attack
- Falls
- Age related pharmacology
- Hypothermia
- Continence problems
- Dementia
- Movement diseases including parkinson's disease
- Depression in the elderly
- Osteoporosis
- Malnutrition
- Osteoarthritis

Clinical Science:

- Effects of ageing on the major organ systems
- Normal laboratory values in older people

Musculoskeletal System

Competencies

- Accurately describe the examination features of musculoskeletal disease following full assessment
- Recognise when specialist Rheumatology opinion is indicated
- Outline the indications, contraindications and side effects of the major immunosuppressive drugs used in rheumatology including corticosteroids
- Recognise the need for long term review in many cases of rheumatological disease and their treatments
- Recognise importance of eg multidisciplinary approach to rheumatological disease including physio, OT
- Use local / national guidelines appropriately e.g. osteoporosis

Common or Important Problems:

- Septic arthritis
- Rheumatoid arthritis

- Osteoarthritis
- Seronegative arthritides
- Crystal arthropathy
- Osteoporosis – risk factors, and primary and secondary prevention of complications of osteoporosis
- Polymyalgia and temporal arteritis
- Acute connective tissue disease: systemic lupus erythematosus, scleroderma, poly- and dermatomyositis, Sjogren's syndrome, vasculitides

Clinical Science:

- Structure and function of muscle, bone, joints, synovium
- Bone metabolism
- Pharmacology of major drug classes: NSAIDS, corticosteroids, immunosuppressants, colchicines, allopurinol, bisphosphonates

Neurology

Competencies

- Define the likely site of a lesion within the nervous system following full assessment
- Recognise when specialist Neurology opinion is indicated
- Recognise when a patient's presentation heralds a neurosurgical emergency and refer appropriately

Common or Important Problems:

- Acute new headache
- Stroke and transient ischaemic attack
- Sub-arachnoid haemorrhage
- Coma
- Central Nervous System infection: encephalitis, meningitis, brain abscess
- Raised intra-cranial pressure
- Sudden loss of consciousness including seizure disorders (see also above syncope etc)
- Acute paralysis: Guillian Barre, myasthenia gravis, spinal cord lesion
- Multiple sclerosis
- Motor neurone disease

Clinical Science:

- Structure and function of the central, peripheral and sympathetic nervous systems
- Physiology of nerve conduction
- Principles of neurotransmitters
- Structure and physiology of visual, auditory, and balance systems
- Cerebral automaticity
- Anatomy or cerebral blood supply

- Brain death
- Pathophysiology of pain
- Speech and language
- Pharmacology of major drug classes: anxiolytics, hypnotics inc. benzodiazepines, anti-epileptics, anti-parkinson drugs (anti-muscarinics, dopaminergics)

Psychiatry

Competencies

- Be able to take a full medical and psychiatric history
- Be able to perform a mental state examination
- Recognise when specialist Psychiatric opinion is indicated
- Recognise when a patient's presentation heralds organic illness and manage appropriately
- Recognise role of community mental health care teams

Common and /or Important Problems:

- Suicide and parasuicide
- Acute psychosis
- Substance dependence
- Depression

Clinical Science:

- Structure and function of limbic system and hippocampus
- Principles of substance addiction, and tolerance
- Principles of neurotransmitters
- Pharmacology of major drug classes: anti-psychotics, lithium, tricyclics antidepressants, mono-amine oxidase inhibitors, SSRIs, venlafaxine, donepezil, drugs used for addiction (bupropion, disulpharam, acamprosate, methadone)

Public Health & Health Promotion

Competencies

- **Smoking**
  - Outline the effects of smoking on health
  - Promote smoking cessation
  - Recognise the need for support during cessation attempts
  - Recognise and utilise specific Smoking Cessation health professionals
- **Alcohol**
  - Recall safe drinking levels
  - Recognise the health and psychosocial effects of alcohol
  - Recommend support networks for problem drinkers
  - Outline appropriate detoxification programme and methods to retain abstinence

- **Obesity**
  - Recognise medical impact of obesity
  - Outline good dietary practices
  - Promote regular exercise
  - Recommend specialist dietician input as appropriate
  - Define principles of therapeutic interventions in morbid obesity
- **Nutrition**
  - Recognise the public health problem of poor nutrition
  - Perform basic nutritional assessment
  - Identify patients with malnutrition and instigate appropriate management
  - Recognise importance of dietician input and follow-up
  - Define principles of enteral and parenteral feeding
  - Outline the ethical issues associated with nutrition
- **Sexual behaviour**
  - Promote safe sexual practices
- **Substance abuse**
  - Recognise the health and psychosocial effects of substance abuse
  - Recommend support networks
- **Social Deprivation**
  - Recognise the impact of social deprivation on health
- **Occupation**
  - Recognise the impact of occupation on health
  - Outline the role of Occupational Health consultants
- **Exercise**
  - Define the health benefits of regular exercise
  - Promote regular exercise
- **Mental Health**
  - Recognise the interaction of mental and physical health
  - Recommend appropriate treatment and support facilities

Renal Medicine

Competencies

- Formulate a differential diagnosis for the patient following assessment
- Formulate and appropriate management plan
- Discuss with patient likely outcomes and prognosis of condition and requirement for long term review
- Differentiate pre-renal failure, renal failure and urinary obstruction
- Recognise when specialist Nephrology or Urology opinion is indicated
- Identify patients who are at high risk of renal dysfunction in event of illness or surgery, and institute preventative measures

Common and / or Important Problems:

- Acute renal failure
- Chronic renal failure
- Glomerulonephritis
- Nephrotic syndrome
- Urinary tract infections
- Urinary Calculus
- Renal replacement therapy
- Disturbances of potassium, acid/base, and fluid balance (and appropriate acute interventions)

Clinical Science:

- Structure and function of the renal and urinary tract
- Homeostasis of fluid, electrolytes and acid base
- Urine composition
- Measurement of renal function
- Metabolic perturbations of acute, chronic, and end-stage renal failure and associated treatments

Respiratory Medicine

Competencies

- Recognise when specialist Respiratory opinion is indicated
- Safe oxygen prescribing
- Principles of short and long term oxygen therapy
- Outline the different delivery systems for respiratory medications
- Outline methods of smoking cessation of proven efficacy
- Counsel patients in smoking cessation appropriately
- Take a thorough Occupational History to identify risk factors for lung disease

Common and / or Important Respiratory Problems:

- COPD
- Asthma
- Pneumonia
- Pleural disease: Pneumothorax, pleural effusion, mesothelioma
- Lung Cancer
- Respiratory failure and methods of respiratory support
- Pulmonary embolism and DVT
- Tuberculosis
- Interstitial lung disease
- Obstructive sleep apnoea
- Cystic fibrosis

- Bronchiectasis
- Respiratory failure and cor pulmonale
- Pulmonary hypertension

Clinical Science:

- Anatomy and function of respiratory system (airways, lungs, chest wall)
- Physiology of gas exchange: ventilation, perfusion, ventilation and perfusion matching
- Acid-base homeostasis
- Principles of lung function measurement
- Pharmacology of major drug classes: bronchodilators, inhaled corticosteroids, leukotriene receptor antagonists, immunosuppressants.

Investigation Competencies

The initial list outlines the investigations that the trainee is expected to able to outline the indications for and interpret by the end of ACCS. The second list states the investigations that the trainee should know the indications for, and how the investigation is carried out, but detailed interpretation is not expected. These investigations usually require specialist interpretation (eg histology, radiology). However, the reports of such tests should be interpreted in the clinical context.

Outline the Indications for, and interpret the following investigations:

Biochemistry

- Basic blood biochemistry: urea and electrolytes, liver function tests, bone biochemistry, glucose, magnesium
- Cardiac biomarkers and cardiac-specific troponin
- Creatine kinase
- Thyroid function tests
- Inflammatory markers: CRP / ESR
- Arterial Blood Gas analysis
- Cortisol and short Synacthen test
- HbA1C
- Lipid profile
- Amylase
- Drug levels: paracetamol, salicylate, digoxin, antibiotics, anti-convulsants

Haematology

- Full blood count
- Coagulation screen
- Haemolysis screen
- D dimer
- Blood film report

- Haematinics

Microbiology / Immunology

- Blood / Sputum / urine culture
- Fluid analysis: pleural, cerebro-spinal fluid, ascitic
- Urinalysis and urine microscopy
- Auto-antibodies
- H. Pylori testing

Radiology

- Chest radiograph
- Abdominal radiograph
- Joint radiographs (knee, hip, hands, shoulder, elbow, dorsal spine, ankle)

Physiological

- ECG
- Peak flow tests
- Full lung function tests

Outline Principles of the following investigations:

Biochemistry

- Urine catecholamines
- Sex hormones (FSH, LH, testosterone, oestrogen and progesterone)
- Prolactin
- Specialist endocrine suppression or stimulation tests (dexamethasone suppression test; insulin tolerance test; water deprivation test, glucose tolerance test and growth hormone)

Microbiology / Immunology

- Coeliac antibody screening
- Viral hepatitis serology
- Myeloma screen
- Stool testing
- HIV testing

Radiology

- Detailed imaging: Barium studies, CT, CT pulmonary angiography, high resolution CT, MRI
- Imaging in endocrinology (thyroid, pituitary, adrenal)
- Renal imaging: ultrasound, KUB, IVU, CT

Physiological

- Echocardiogram
- 24 hour ECG monitoring
- Ambulatory blood pressure monitoring
- Exercise tolerance test
- Cardiac perfusion scintigraphy

- Tilt testing
- Neurophysiological studies: EMG, nerve conduction studies, visual and auditory evoked potentials

Medical Physics

- Bone scan
- Bone densitometry
- Scintigraphy in endocrinology
- V/Q scanning

Endoscopic Examinations

- Bronchoscopy
- Upper and lower GI endoscopy
- ERCP

Pathology

- Liver biopsy
- Renal biopsy
- Bone marrow and lymph node biopsy
- Cytology: pleural fluid, ascitic fluid, cerebro-spinal fluid, sputum

Procedural Competencies

The trainee is expected to be competent in performing the following procedures by the end of CMT. The trainee must outline the indications for these interventions. For invasive procedures, the trainee must recognise the indications for the procedure, the importance of valid consent, aseptic technique, safe use of local anaesthetics and minimising patient discomfort. During specialist training (level 2) the trainee should be competent at the instruction, appraisal and assessment of junior doctors in the performance of these procedures.

- Venepuncture
- Cannula insertion, including large bore
- Arterial blood gas sampling
- Lumbar Puncture
- Pleural tap and aspiration
- Intercostal drain insertion: Seldinger technique
- Ascitic tap
- Abdominal paracentesis
- Central venous cannulation
- Initial airway protection: chin lift, guedel airway, nasal airway, laryngeal mask
- Basic and, subsequently, advanced cardiorespiratory resuscitation

- DC cardioversion
- Urethral catheterisation
- Nasogastric tube placement
- Electrocardiogram
- Knee aspiration
- Temporary cardiac pacing by internal wire or external pacemaker
- Skin Biopsy (this is not mandated for all trainees but opportunities to become competent in this technique should be available especially for trainees who subsequently wish to undertake specialist dermatology training)

APPENDIX D:

ACCS

ANAESTHESIA SYLLABUS

During the anaesthesia module all ACCS trainees will be expected to pass the Initial Assessment of Competency (Annex 1).

ACCS trainees doing more than 3 months training in anaesthesia will follow a syllabus defined by Sections 4 to 6, 9, 14 and 16 to 21 of *The CCT in Anaesthesia II: Basic Level (ST years 1 and 2) Training and Assessment* which are reproduced in Annex 2. The exact units will depend on the length of the anaesthesia module and local circumstances

ANNEX 1 to APPENDIX D

THE INITIAL TEST OF COMPETENCY: SYLLABUS

The principles of this Initial Test of Competency can be found in Section 2 of *The CCT in Anaesthesia II: Basic Level (ST years 1 and 2) Training and Assessment*

This test is in 5 parts:

a) Preoperative assessment.
b) General anaesthesia for ASA I or II patients (including equipment and anaesthetic machine checks).
   1. General anaesthesia with spontaneous respiration
   2. General anaesthesia with endotracheal intubation
c) Rapid sequence induction and failed intubation routine.
d) Cardio pulmonary resuscitation (CPR) skills.
e) Clinical judgement, attitudes and behaviour.

If a trainee has successfully completed an ALS course within the last 12 months (d) can be omitted.

Only after this test has been satisfactorily completed can a trainee progress beyond direct supervision.

Each of the 5 parts of the test (a – e, above) can be assessed by one (or more) trainers, but not all 5 parts can be “signed off” by the same single trainer. At least two trainers must be involved in the overall assessment.

What follows is the syllabus for each of the five parts together with the assessment sheets for each part.

INITIAL ASSESSMENT OF COMPETENCY SYLLABUS:

a) Pre-operative assessment of patients

Clinical skills

1. Is able to demonstrate satisfactory communication with staff and patients
2. Is able, in a manner appropriate to the patient, to take a relevant history, explain the necessary aspects of anaesthesia, and answer their questions
3. Is able to assess the airway
4. Is able to recognise potential problems requiring senior help
5. Is able to explain the management of post-operative pain and symptom control in a manner appropriate to the patient
6. Is able to interpret basic investigations (FBC, U & Es, chest x ray, ECG)
7. Is able to choose and prescribe appropriate pre-medication

Knowledge

1. The ASA scale of fitness
2. The relevance of common inter-current diseases to anaesthesia and surgery
3. Consent for anaesthesia
4. Predictors of difficult intubation

Setting

Patients: All appropriate patients aged 16 and over.

Assessments

- A ward based demonstration of practical skills.
- Simultaneous oral confirmation of understanding.

Guidance:
This is a preliminary test to ensure that the trainee communicates adequately and understands the broad outline of anaesthetic assessment. After three months of training the trainee should be expected to identify patients who are low risk from the anaesthetist's point of view. There is no expectation of the trainee being able to determine the fitness for operation of patients who are severely ill or who have inter-current disease. The expectation is that they will know which cases to refer to or discuss with senior colleagues. The trainee should have an understanding of whatever premedication he or she intends to use.

INITIAL ASSESSMENT OF COMPETENCY:

a) Pre-operative assessment of patients

The trainee must be accompanied on a pre-operative round of patients.

Name of trainee…….…….

The Trainee:

	Yes	No
Communicates in a satisfactory manner with patients		
Obtains relevant history		
Undertakes any physical examination (if indicated)		
Assesses the airway		
Understands the pre-operative investigations		
Explains anaesthesia clearly		
Discusses pain and explains post operative analgesia clearly		
Prescribes pre-operative medication as needed		
Understands the ASA classification		
Understands consent for anaesthesia and operation		

	Yes	No
This assessment was completed satisfactorily		

IF NO, GIVE REASONS:

Signed ……..….. Print name……..….. Date …..……..

Appointment ……..

Signed: …… Print name ……... Date……..……

Appointment……

INITIAL ASSESSMENT OF COMPETENCY SYLLABUS:

b) Administration of a safe general anaesthetic to an ASA I or II patient

Clinical skills

1. Explanation of the anaesthetic procedure(s) and surgery to the patient
2. Appropriate choice of anaesthetic technique
3. Pre-use equipment checks
4. Proper placement of I.V. cannula
5. Attachment of monitoring (including ECG) before induction of anaesthesia
6. Measures blood pressure non-invasively
7. Pre-oxygenation
8. Satisfactory induction technique
9. Appropriate management of the airway
10. Maintenance of anaesthesia, including analgesia
11. Appropriate perioperative monitoring and its interpretation
12. Recognition and immediate management of any adverse events which might occur
13. Proper measures during emergence from general anaesthesia, including extubation.
14. Satisfactory hand over to recovery staff
15. Accurate completion of anaesthetic and other records
16. Prescription of appropriate post-operative analgesia and anti-emetics
17. Choice of post operative oxygen therapy
18. Instructions for continued I.V. therapies (if relevant)

Knowledge

1. The effects of anaesthetic induction on cardiac and respiratory function
2. The rationale for pre-oxygenation
3. Methods available for the detection of misplaced ET tubes, including capnography
4. Common causes of arterial desaturation (cyanosis) occurring during induction, maintenance and recovery
5. Common causes and management of intra-operative hypertension and hypotension
6. The immediate management only of cyanosis, apnoea, inability to ventilate, aspiration, bronchospasm, anaphylaxis and malignant hyperpyrexia
7. Trainees must demonstrate an adequate, basic, practical knowledge of anaesthetic pharmacology to support their practice, for example, know about: 2 induction agents, 2 volatile agents, 2 opioids, suxamethonium and 1 competitive relaxant

Setting

Patients: ASA I and II patients age 16 years and over requiring uncomplicated surgery in the supine position e.g. hernia, varicose veins, hysterectomy, arthroscopy.
Location: Operating theatre.
Situations: Supervised theatre practice.

Assessments:

- A theatre based demonstration of practical skills.
- Simultaneous oral case discussion of understanding.

Guidance:
The trainee should be observed undertaking a number of cases using facemask and airway, and/or laryngeal mask and/or endotracheal tube. Care should be taken to ensure that the trainee is skilled in use of bag and mask and does not always rely on the laryngeal mask. Whilst ensuring patient safety the assessor should let the trainee proceed largely without interference and note problems of technique. This should be combined with a question and answer session covering the underlying comprehension of the trainee. The level of knowledge expected is that of a trainee who has been working in anaesthesia for 3 months and should be sufficient to support the specified clinical skills. Exclusions are specialised surgery, rapid sequence induction (see Section c) and children under the age of 16 years.

INITIAL ASSESSMENT OF COMPETENCY :

b) Ability to administer a general anaesthetic competently to an elective ASA I or II patient

Part 1 General anaesthesia with spontaneous respiration

Name of trainee ……

The Trainee:

	Yes	No
Properly prepares the anaesthetic room and operating theatre		
Satisfactorily conducts a pre-operative equipment check (including the anaesthetic machine and breathing system)		
Has properly prepared and assessed the patient for surgery		
Chooses an appropriate anaesthetic technique		
Establishes IV access		
Establishes ECG and pulse oximetry in the anaesthetic room		
Measures the patients blood pressure prior to induction		
Pre-oxygenates as necessary		
Induces anaesthesia satisfactorily		
Manages airway competently		
I) Face mask (+/-) airway		
II) LMA		
Makes satisfactory transfer to operating theatre		
Positions patient safely		
Maintains and monitors anaesthesia satisfactorily		
Conducts emergence and recovery safely		
Keeps an appropriate and legible anaesthetic record		
Prescribes analgesia appropriately		
Properly supervises discharge of patient from recovery		
Understands the need for oxygen therapy		

	YES	NO
This assessment was completed satisfactorily		

IF NO, GIVE REASONS:

Signed …….…….. Print name……..……..……..…… Date……..…… Appt…….……

Signed ……...…… Print name……..…… Date…… Appt……..……

INITIAL ASSESSMENT OF COMPETENCY :

b) Ability to administer a general anaesthetic competently to an elective ASA I or II patient

Part 2 General anaesthesia with endotracheal intubation

Name of trainee …….

In addition to the assessment in Part 1, the trainee must demonstrate the following:

	Yes	No
Assesses the airway properly		
Knowledge of factors which may make intubation difficult		
Satisfactory use of laryngoscope		
Correct placement of endotracheal tube*		
Confirming the position of endotracheal tube by		
(i) observation		
(ii) auscultation		
(iii) capnography		
Knowledge of how to recognise incorrect placement of endotracheal tube		
Knowledge of how to maintain oxygenation in the event of failed intubation		
Manages extubation competently		

	YES	NO
This assessment was completed satisfactorily		

IF NO, GIVE REASONS:

Signed …….…….. Print name……..……..…….…. Date……..…. Appt…….……

Signed ……...…… Print name……..…… Date…… Appt……..…….

*If intubation is not possible, the trainee should maintain the airway and allow the assessor to intubate the patient.

INITIAL ASSESSMENT OF COMPETENCY SYLLABUS:

c) Rapid Sequence Induction for an ASA I or II patient and failed intubation routine

Clinical skills

1. Detection of risk factors relating to slow gastric emptying, regurgitation and aspiration
2. Use of drugs (antacids, H_2 receptor antagonists etc) in the management of the patient at risk of aspiration
3. Explanation of pre-oxygenation to the patient
4. Proper explanation of rapid sequence induction (RSI) to patient.
5. Proper demonstration of cricoid pressure to the patient and assistant.
6. Demonstration of the use of:
   a) tipping trolley
   b) suction
   c) oxygen flush
7. Appropriate choice of induction and relaxant drugs.
8. Attachment of ECG, pulse oximeter and measurement of BP before induction.
9. Pre-oxygenation.
10. Satisfactory rapid sequence induction technique.
11. Demonstration of proper measures to minimise aspiration risk during emergence from anaesthesia.
12. Failed intubation drill, emergency airway management (this may be manikin based).

Knowledge

1. Risk factors causing regurgitation and aspiration.
2. Factors influencing gastric emptying, especially trauma and opioids.
3. Fasting periods in relation to urgency of surgery
4. Reduction of the risks of regurgitation.
5. Failed intubation drill, emergency airway management
6. The emergency treatment of aspiration of gastric contents
7. Basic pharmacology of suxamethonium and repeated doses.

Setting

Patients: Starved ASA I and II patients aged 16 and over having uncomplicated elective or urgent surgery with normal upper airway anatomy.
Location: Operating theatre.
Situations: Supervised theatre practice.

Assessments

- A test of failed intubation drill (this may be manikin based)
- A theatre based demonstration of practical skills.
- Simultaneous oral test of understanding.

Guidance:
This test should ensure competent management of the airway during straightforward urgent surgery. The test must be done on a patient who is adequately starved prior to induction of anaesthesia. The patient may, or may not be, an urgent case. The trainee should be able to discuss methods of prediction of the difficult airway and of difficult intubation. They should be able to explain and if possible demonstrate on a manikin the failed intubation drill, and the immediate management of the patient who aspirates gastric contents.

INITIAL ASSESSMENT OF COMPETENCY:

c) Rapid Sequence Induction (RSI) and failed intubation routine

Name of trainee……

The Trainee has satisfactorily demonstrated:

	Yes	No
Preparation of the anaesthetic room and operating theatre		
Satisfactorily checking of the anaesthetic machine, sucker etc.		
Preparation of the patient (information and positioning)		
An understanding of the mandatory periods for pre-operative fasting		
An understanding of the indications for RSI		
An adequate explanation of RSI to the patient, including cricoid pressure		
To the assistant how to apply cricoid pressure		
Proper pre-oxygenation of the patient		
The undertaking of a RSI		
Recognition of correct placement of tracheal tube		
Knowledge of failed intubation drill		
Practical application of failed intubation drill (this may be manikin based)		
Proper extubation when the stomach may not be empty		

	Yes	No
This assessment was completed satisfactorily		

IF NO, GIVE REASONS:

Signed …….…….. Print name……..……..……..…. Date……..…. Appt…….……

Signed ……...……. Print name……..…… Date…… Appt……..…….

INITIAL ASSESSMENT OF COMPETENCY SYLLABUS:

d) Cardio-pulmonary resuscitation (CPR)

Clinical skills

1. Able to recognise cardiac and respiratory arrest
2. Able to perform cardiac compression
3. Able to manage the airway during cardiopulmonary resuscitation (CPR): using expired air breathing, bag and mask, laryngeal mask and endotracheal intubation
4. Able to perform CPR either single-handed or as a member of a team
5. Able to use the defibrillator
6. Able to interpret arrhythmias causing and associated with cardiac arrest
7. To perform resuscitation sequences for ventricular tachycardia, VF, asystole, EMD
8. Able to move a patient into the recovery position

Knowledge

1. Resuscitation guidelines of Resuscitation Council (UK)
2. The factors relating to brain injury at cardiac arrest
3. Factors influencing the effectiveness of cardiac compression
4. Drugs used during CPR (adrenaline (epinephrine), atropine, lignocaine, calcium, magnesium, sodium bicarbonate)
5. The ethics of CPR: who might benefit
6. Record keeping at CPR

Setting

Simulated scenario of collapse requiring cardio-pulmonary resuscitation during a practical teaching session
Role: Initiate and maintain CPR when necessary. Undertake the role of team leader if no more senior doctor is present, continuing CPR as appropriate, administering necessary drugs and defibrillating if needed. If a more experienced resuscitator is available will adopt an appropriate role in the resuscitation team.

Locations: Wherever necessary.

Assessments

- Manikin based practical assessment of CPR skills
- Arrhythmia recognition session using monitor
- Oral assessment of knowledge of resuscitation

If a trainee has completed an ALS course within the last 12 months, the assessment of CPR competency can be assumed and signed off with a comment made to that effect under the signature(s).

INITIAL ASSESSMENT OF COMPETENCY:

d) Cardiopulmonary Resuscitation

This assessment may be undertaken at any time and may be combined with a practical teaching session.[18]

Name of trainee……

The Trainee:

	Yes	No
Ensures personal safety and that of the staff		
Calls for help		
Demonstrates the diagnostic method		
Demonstrates mask to mouth rescue breathing.		
Demonstrates ventilation with mask and bag		
Demonstrates satisfactory insertion of and ventilation with ET tube		
Demonstrates satisfactory cardiac compression.		
Satisfactorily interprets common arrhythmias on ECG monitor.		
Understands the indications for defibrillation.		
Demonstrates correct use of defibrillator		
Understands the use of appropriate drugs during resuscitation		
Can undertake the lead role in directing CPR.		
Demonstrates moving a patient into the recovery position		

	Yes	No
This assessment was completed satisfactorily		

IF NO, GIVE REASONS

Signed …….…….. Print name……..……..……..…. Date……..…. Appt…….……

Signed ……...…… Print name……..…… Date…… Appt……..…….

[18] If a trainee has completed an ALS course within the last 12 months, the assessment of CPR competency can be assumed and signed with a comment made to that effect under the signature(s).

INITIAL ASSESSMENT OF COMPETENCY SYLLABUS:

e) Clinical judgement, attitudes and behaviour

A guide to assessing satisfactory attitudes and behaviour is given in *The CCT in Anaesthesia I: General Principles* Appendix 4. At this early stage in a trainee's career all that is required is confirmation of the statement on the assessment sheet overleaf.

INITIAL ASSESSMENT OF COMPETENCY:

e) Clinical judgement, attitudes and behaviour

Name of trainee **-**
……..

To the best of my knowledge and belief this trainee has:

1. **Shown care and respect for patients.**
2. **Demonstrated a willingness to learn.**
3. **Asked for help appropriately.**
4. **Appeared reliable and trustworthy.**

Signed ……..…….. Print name……..……..……..…. Date……..…. Appt……..……

Signed ……...…… Print name……..…….…… Date…… Appt……..…….

ANNEX 2 to APPENDIX D:

THE ACCS ANAESTHESIA SYLLABUS

Section numbering refers to the indexing in *The CCT in Anaesthesia II: Basic Level (ST years 1 and 2) Training and Assessment*

4.	Induction of general anaesthesia	
5.	Intraoperative care (including sedation)	
6.	Postoperative and recovery care	
9.	Management of trauma, stabilisation and transfer of patients	
14.	Infection control	
16.	Management of respiratory and cardiac arrest	
17.	Anatomy	
18.	Physiology and biochemistry	
19.	Pharmacology	
20.	Physics and clinical measurement	
21.	Statistical methods	

4: INDUCTION OF GENERAL ANAESTHESIA

4.1: Knowledge

B:4.1.1	Intravenous and inhalational induction of anaesthesia; advantages and disadvantages of each technique
B:4.1.2	Indications for tracheal intubation
B:4.1.3	Selection of tube type (oral, nasal, armoured etc), diameter and length
B:4.1.4	Management of difficult intubation and failed intubation
B:4.1.5	Methods of confirming placement of the endotracheal tube; oesophageal and endobronchial intubation, complications
B:4.1.6	Insertion and use of oral airways, face masks and laryngeal mask airway
B:4.1.7	Causes of regurgitation and vomiting during induction, prevention and management of pulmonary aspiration
B:4.1.8	Cricoid pressure
~~B:4.1.9~~	DELIBERATE DELETION
~~B:4.1.10~~	DELIBERATE DELETION
~~B:4.1.11~~	DELIBERATE DELETION
B:4.1.12	Monitoring during induction
~~B:4.1.13~~	DELIBERATE DELETION
~~B:4.1.14~~	DELIBERATE DELETION
~~B:4.1.15~~	DELIBERATE DELETION
~~B:4.1.16~~	DELIBERATE DELETION

4.2: Skills

B:4.2.1	IV and inhalational Induction of anaesthesia in patients with elective and urgent conditions requiring gynaecological, abdominal, orthopaedic, ENT, dental, urological and body surface surgery (Knowledge of sub-specialty practice and specialised techniques is not required unless specified elsewhere)
B:4.2.2	Checking patient in the anaesthetic room
B:4.2.3	Safety checking of equipment (see section 7)
B:4.2.4	Obtaining vascular access - suitability of sites and technique of intravenous injection
B:4.2.5	Airway assessment and optimising the patient's position for airway management
B:4.2.6	Airway management with mask and oral/nasal airways
B:4.2.7	Introduction and checking correct placement of laryngeal mask airway
B:4.2.8	Appropriate choice and passage of oral and nasal endotracheal tubes
B:4.2.9	Intubation up to grade II Cormack-Lehane
B:4.2.10	Use of gum elastic bougie and stilette
B:4.2.11	Identifying correct/incorrect placement of tube (oesophagus/main bronchus)
B:4.2.12	Interpretation of capnograph trace
B:4.2.13	Failed intubation drill
B:4.2.14	Rapid sequence induction/cricoid pressure
B:4.2.15	Checking difficult intubation kit and paediatric intubation set
B:4.2.16	Using of monitoring equipment, including application of ECG electrodes
~~B:4.2.17~~	DELIBERATE DELETION

4.3: Attitudes and behaviour

B:4.3.1	Safety first
B:4.3.2	Always knowing the whereabouts of senior assistance
B:4.3.3	Being clear in explanations to patient and staff
B:4.3.4	Being reassuring to patients during induction of anaesthesia
B:4.3.5	Being polite, calm and having a professional approach

4.4: Workplace training objectives

B:4.4.1	To perform routine intravenous induction of anaesthesia
B:4.4.2	To perform routine gaseous induction of anaesthesia
B:4.4.3	To identify the correct placement of the endotracheal tube after intubation
B:4.4.4	To rehearse failed intubation drill
B:4.4.5	To discuss induction of general anaesthesia in difficult airways, shocked patients and others of ASA>II
B:4.4.6	To manage the cardiovascular and respiratory complications of induction of general anaesthesia
B:4.4.7	To describe the management of aspiration, anaphylaxis, failed intubation and malignant hyperpyrexia

5: INTRAOPERATIVE CARE (INCLUDING SEDATION)

5.1: Knowledge

B:5.1.1	Techniques of maintenance of general anaesthesia involving both spontaneous and controlled ventilation (except sub-specialty and highly specialised practice)
B:5.1.2	Definition of and methods of sedation
B:5.1.3	Management of the shared airway
B:5.1.4	Effects and hazards of the pneumoperitoneum induced for laparoscopic surgery
B:5.1.5	Drugs: Pharmacology, uses and dosages of induction agents used for IV maintenance, relaxants, analgesics, inhalational agents
B:5.1.6	Methods of producing muscle relaxation
B:5.1.7	Choice of spontaneous and controlled ventilation and methods of monitoring them
B:5.1.8	Minimum monitoring standards
B:5.1.9	Additional monitoring for sick patients (e.g. CVP, urine flow)
B:5.1.10	Detection and prevention of awareness
B:5.1.11	Management of important critical incidents occurring during anaesthesia (see section 19)
B:5.1.12	Diagnosis and treatment of pneumothorax
B:5.1.13	Principles of fluid balance
B:5.1.14	Blood & blood products; synthetic colloids; crystalloids
B:5.1.15	Management of massive haemorrhage, volume expansion, blood transfusion (hazards including incompatibility reaction)
B:5.1.16	Correct intraoperative positioning on theatre table, care of pressure points, avoidance nerve injury: complications of supine and prone positions
B:5.1.17	Management of asthma, COPD, hypertension, IHD, rheumatoid arthritis, jaundice, steroid therapy, diabetes
B:5.1.18	Content of the anaesthetic record
B:5.1.19	Modification of technique in repeat anaesthesia
B:5.1.20	Understanding basic surgical operations

5.2: Skills

B:5.2.1	Maintenance of appropriate levels of anaesthesia with inhalational and intravenous agents in patients with elective and urgent conditions requiring gynaecological, abdominal, orthopaedic, ENT, dental, urological and body surface surgery (Knowledge of sub-specialty practice and specialised techniques is not required unless specified elsewhere.)
B:5.2.2	Transferring the patient from trolley to operating table
B:5.2.3	Positioning the patient
B:5.2.4	Airway control: recognition and correction of problems
B:5.2.5	Laryngoscopy and intubation and its problems
B:5.2.6	Detection and correction of airway obstruction
B:5.2.7	Use of oral airways, facemasks and laryngeal mask airway
B:5.2.8	Sharing the airway
B:5.2.9	Management of appropriate intermittent positive pressure ventilation
B:5.2.10	Methods of pain relief during maintenance
B:5.2.11	Management of effects of drugs used during anaesthesia

B:5.2.12	Management of hypo and hypertension
B:5.2.13	Provision of intra-operative fluids; transfusion of blood and blood products
B:5.2.14	Management of diabetes
B:5.2.15	Methods of detection of awareness
B:5.2.16	Management of appropriate muscle relaxation
B:5.2.17	Management of any critical incidents which occur during anaesthesia
B:5.2.18	Interpretation and limitations of monitoring equipment

5.3: Attitudes and behaviour

B:5.3.1	Vigilance
B:5.3.2	Attention to detail
B:5.3.3	Attention to multiple sources of data continuously
B:5.3.4	Recognition of need to communicate with colleagues

5.4: Workplace training objectives

B:5.4.1	To manage anaesthetised spontaneously breathing patients
B:5.4.2	To manage anaesthetised ventilated patients
B:5.4.3	To manage sedated patients
B:5.4.4	To manage diabetes perioperatively
B:5.4.5	To manage steroid cover
B:5.4.6	To checking blood and blood products
B:5.4.7	To apply and interpret of appropriate monitoring
B:5.4.8	To know how to deal with emergencies as they occur in anaesthesia and how to stabilise a patient's condition until senior assistance arrives
B:5.4.9	To plan ahead with the surgeon any unusual requirements of anaesthesia

6: POSTOPERATIVE AND RECOVERY CARE

6.1: Knowledge

B:6.1.1	Causes and treatment of failure to breathe at end of operation
B:6.1.2	Distinguishing between opiate excess, continued anaesthetic effect and/or residual paralysis
B:6.1.3	Care of the unconscious patient
B:6.1.4	Monitoring the patient in recovery
B:6.1.5	Interpretation of nerve stimulator patterns
B:6.1.6	Oxygen therapy, indications and techniques
B:6.1.7	Management of cyanosis, hypo- and hypertension, shivering and stridor
B:6.1.8	Postoperative fluid balance and prescribing
B:6.1.9	Assessment of pain and methods of pain management
B:6.1.10	Methods of treating of postoperative nausea and vomiting
B:6.1.11	Causes and management of post-operative confusion
B:6.1.12	Management of asthma, COPD, hypertension, IHD, rheumatoid arthritis, jaundice, steroid therapy, diabetes
B:6.1.13	Management of the obese patient
B:6.1.14	Recovery room equipment
B:6.1.15	Prevention, diagnosis and management of postoperative pulmonary atelectasis, deep vein thrombosis and pulmonary embolus
B:6.1.16	Criteria for discharge of day-stay patients

6.2: Skills

B:6.2.1	Recovery from anaesthesia in patients with elective and urgent conditions requiring gynaecological, abdominal, orthopaedic, ENT, dental, urological and body surface surgery (Knowledge of sub-specialty practice and specialised techniques is not required unless specified elsewhere.)
B:6.2.2	Clear instructions during handover of patient to recovery staff
B:6.2.3	Assessment of full return of protective reflexes
B:6.2.4	Assessment of adequacy of ventilation/reversal
B:6.2.5	Recognition of residual relaxant action
B:6.2.6	Use of nerve stimulator
B:6.2.7	Extubation and airway protection in presence of potentially full stomach
B:6.2.8	Prescription of postoperative fluids
B:6.2.9	Assessment of fluid balance and need for urethral catheterisation
B:6.2.10	Evaluation and management of post-operative confusion
B:6.2.11	Assessment of postoperative pain
B:6.2.12	Prescription of postoperative pain regimen
B:6.2.13	Treatment of nausea and vomiting
B:6.2.14	Stabilisation before discharge from Recovery
B:6.2.15	Continuation of care until discharge from Recovery, and beyond as appropriate
B:6.2.16	Criteria for discharge of patients to ward
B:6.2.17	Criteria for discharge of day-stay patients

6.3: Attitudes and behaviour

B:6.3.1	Clear communication
B:6.3.2	Responding rapidly to calls for help
B:6.3.3	Follow up of sick patients on the ward before going home

6.4: Workplace training objectives

B:6.4.1	To achieve a smooth, controlled return of vital functions and reflexes
B:6.4.2	To practice giving clear instructions to recovery staff
B:6.4.3	To be able to discharge patients safely back to the ward
B:6.4.4	To know the criteria for discharge of day-stay patients
B:6.4.5	To recognise and treat of common recovery room complications
B:6.4.6	To recognise and treat conditions and circumstances requiring HDU or ICU care
B:6.4.7	To know the equipment requirements of a recovery room

9: MANAGEMENT OF TRAUMA, STABILISATION AND TRANSFER OF PATIENTS

9.1: Knowledge

B:9.1.1	Performance and interpretation of the primary and secondary survey
B:9.1.2	Emergency airway management
B:9.1.3	Anatomy and technique of cricothyrotomy/tracheostomy/mini-tracheotomy
B:9.1.4	Establishing IV access: interosseous cannulation
B:9.1.5	Immediate specific treatment of life-threatening illness or injury, with special reference to thoracic and abdominal trauma
B:9.1.6	Recognition and management of hypovolaemic shock
B:9.1.7	Effects of trauma on gastric emptying
B:9.1.8	Central venous access: anatomy and techniques
B:9.1.9	Central venous pressure monitoring
B:9.1.10	Arterial pressure monitoring
B:9.1.11	Pleural drain insertion
B:9.1.12	Peritoneal lavage
B:9.1.13	Principles of the management of head injury
B:9.1.14	Mechanisms and effects of raised intra-cranial pressure: coup and contra-coup injuries
B:9.1.15	Methods of preventing the 'second insult' to the brain
B:9.1.16	Principles of anaesthesia in the presence of a recent head injury
B:9.1.17	Management of cervical spine injuries
B:9.1.18	Principles of the safe transfer of patients
B:9.1.19	Understanding portable monitoring systems
B:9.1.20	Recognition and management of dilutional coagulopathy
B:9.1.21	Factors affecting intraocular pressure

9.2: Skills

B:9.2.1	Assessment and immediate management of trauma patient: primary and secondary survey
B:9.2.2	Glasgow coma scale
B:9.2.3	Recognition of need for appropriate investigations (Hb, cross-match, chest X-ray etc)
B:9.2.4	Assessment and management of circulatory shock
B:9.2.5	Emergency airway management, oxygen therapy and ventilation
B:9.2.6	Chest drain insertion and management: emergency relief of tension pneumothorax
B:9.2.7	Cannulation of major vessels for resuscitation and monitoring
B:9.2.8	Care and immobilisation of cervical spine
B:9.2.9	Transfers within and between hospitals of adults who do <u>not</u> have life threatening conditions or a severe head injury
B:9.2.10	Analgesia for trauma victim
B:9.2.11	Urinary catheterisation in traumatised patient
B:9.2.12	Establishing central venous pressure monitoring: interpretation of readings
B:9.2.13	Establishing arterial pressure monitoring: interpretation of readings
B:9.2.14	Anaesthesia in the presence of a recent head injury (which itself does not require surgery)

B:9.2.15	Anaesthesia for a penetrating eye injury
B:9.2.16	Ability to deal with emergencies before, during and after anaesthesia and the ability to stabilise a patient's condition until senior assistance arrives

9.3: Attitudes and behaviour

B:9.3.1	Trauma matters: importance of speed of response and proper resuscitation
B:9.3.2	Try to offer the best chance of survival
B:9.3.3	Focus on the golden hour
B:9.3.4	Communication with appropriate specialists
B:9.3.5	Ability to take control when either appropriate or necessary
B:9.3.6	Insist on stabilisation before transfer
B:9.3.7	Pretransfer checking of kit and personnel
B:9.3.8	Communication with relatives

9.4: Workplace training objectives

B:9.4.1	To perform assessment, immediate care and management of the traumatised patient, (including the principles of managing a head injury)
B:9.4.2	To stabilise a patient’s condition until senior assistance arrives
B:9.4.3	To know when to get senior or other specialist help
B:9.4.4	To know of how to deal with emergencies related to trauma before, during and after anaesthesia
B:9.4.5	To transfer a *stable* ventilated patient safely to another site, either in the same or in a different hospital

14: INFECTION CONTROL

14.1: Knowledge

B:14.1.1	Universal precautions and good working practices (hand washing, gloves etc)
B:14.1.2	Cross infection: modes and common agents
B:14.1.3	Emergence of resistant strains: antibiotic policies in a hospital
B:14.1.4	Common surgical infections: antibiotic choice and prophylaxis
B:14.1.5	Infections from contaminated blood
B:14.1.6	Hepatitis and HIV infections: modes of infection: natural history: at risk groups
B:14.1.7	Immunisation policy
B:14.1.8	Sterilisation of equipment
B:14.1.9	Strategy if contaminated

14.2: Skills

B:14.2.1	Preoperative assessment: awareness of at risk groups
B:14.2.2	Recognition of the immunocompromised patient
B:14.2.3	Administration of IV antibiotics: risk of allergy and anaphylaxis
B:14.2.4	Aseptic techniques
B:14.2.5	Use of disposable filters and breathing systems
B:14.2.6	Use of protective clothing/gloves/masks etc

14.3: Attitudes and behaviour

B:14.3.1	Every patient entitled to the best care available
B:14.3.2	Prevention of self-infection
B:14.3.3	Prevention of cross infection

15.4: Workplace training objectives

B:14.4.1	To think about and apply the skills and attitudes listed above to all patients
B:14.4.2	To wash hands between patients

16: MANAGEMENT OF RESPIRATORY AND CARDIAC ARREST

This section should be read in conjunction with Section 2.1 and Appendix 1. Trainees can be regarded as achieving the necessary competencies if they have successfully completed an ALS course in the last 12 months.

16.1: Knowledge

B:16.1.1	Patient assessment: diagnosis of causes of cardio-respiratory arrest
B:16.1.2	Causes of cardio-respiratory arrest during induction, maintenance and recovery from anaesthesia
B:16.1.3	Importance of considering non-cardiac causes of cardio-respiratory arrest
B:16.1.4	Methods of airway management (mouth-mouth/nose, bag-mask, LMA, intubation)
B:16.1.5	Recognition and management of life-threatening arrhythmias including defibrillation and drug therapy
B:16.1.6	Recognition and management of non-cardiac causes of cardio-respiratory arrest
B:16.1.7	Knowledge of specific problems of paediatric resuscitation
B:16.1.8	Ethical aspects of resuscitation

16.2: Skills

B:16.2.1	Recognition of cardiac and respiratory arrest
B:16.2.2	Resuscitation equipment checklist
B:16.2.3	ABC
B:16.2.4	Practical life support – following current algorithm
B:16.2.5	Managing the airway
B:16.2.6	External chest compression
B:16.2.7	Vascular access, suitability of sites
B:16.2.8	Arrhythmia recognition and management (drugs/ defibrillators/ pacemakers)
B:16.2.9	Defibrillation and defibrillator settings
B:16.2.10	Deciding when further resuscitation is futile
B:16.2.11	Diagnosis of death
B:16.2.12	Fluid balance assessment/management

16.3: Attitudes and behaviour

B:16.3.1	Always resuscitate unless certain it is inappropriate
B:16.3.2	Not to resuscitate orders
B:16.3.3	Recognise need for team leader
B:16.3.4	Desire to offer the best possible chance of survival
B:16.3.5	Recognition of futility
B:16.3.6	Dealing sensitively and honestly with relatives
B:16.3.7	Medico-legal aspects of resuscitation (police reports etc)

16.4: Workplace training objectives

B:16.4.1	To resuscitate adults (and know the principles of resuscitating children) from cardio-respiratory arrest to the standards set by the Resuscitation Council [UK]
B:16.4.2	To discuss ethical aspects of resuscitation

17: ANATOMY

Trainees should be able to demonstrate a good understanding of human anatomy relevant to the practice of anaesthesia at basic level and to support progress to intermediate level training.

17.1: Knowledge

Respiratory System	
B:17.1.1	Mouth, nose, pharynx, larynx, trachea, main bronchi, segmental bronchi, structure of bronchial tree: differences in the child
B:17.1.2	Airway and respiratory tract, blood supply, innervation and lymphatic drainage
B:17.1.3	Pleura, mediastinum and its contents
B:17.1.4	Lungs, lobes, microstructure of lungs
B:17.1.5	Diaphragm, other muscles of respiration, innervation
B:17.1.6	The thoracic inlet and 1st rib
B:17.1.7	Interpretation of a normal chest x-ray
Cardiovascular system	
B:17.1.8	Heart, chambers, conducting system, blood and nerve supply.
B:17.1.9	Pericardium
B:17.1.10	Great vessels, main peripheral arteries and veins
B:17.1.11	Fetal and materno - fetal circulation
Nervous system	
B:17.1.12	Brain and its subdivisions
B:17.1.13	Spinal cord, structure of spinal cord, major ascending and descending pathways
B:17.1.14	Spinal meninges, subarachnoid and extradural space, contents of extradural space
B:17.1.15	CSF and its circulation
B:17.1.16	Spinal nerves, dermatomes
B:17.1.17	Brachial plexus, nerves of arm
B:17.1.18	Intercostal nerves
B:17.1.19	Nerves of abdominal wall
B:17.1.20	Nerves of leg and foot
B:17.1.21	Autonomic nervous system
B:17.1.22	Sympathetic innervation, sympathetic chain, ganglia and plexuses
B:17.1.23	Parasympathetic innervation
B:17.1.24	Stellate ganglion
B:17.1.25	Cranial nerves: base of skull: trigeminal ganglion
B:17.1.26	Innervation of the larynx
B:17.1.27	Eye and orbit
Vertebral column	
B:17.1.28	Cervical, thoracic, and lumbar vertebrae
B:17.1.29	Sacrum, sacral hiatus
B:17.1.30	Ligaments of vertebral column
B:17.1.31	Surface anatomy of vertebral spaces, length of cord in child and adult

Surface anatomy	
B:17.1.32	Structures in antecubital fossa
B:17.1.33	Structures in axilla: identifying the brachial plexus
B:17.1.34	Large veins and anterior triangle of neck
B:17.1.35	Large veins of leg and femoral triangle
B:17.1.36	Arteries of arm and leg
B:17.1.37	Landmarks for tracheostomy, cricothyrotomy
B:17.1.38	Abdominal wall (including the inguinal region): landmarks for suprapubic urinary and peritoneal lavage catheters

17: Objectives for trainees

This knowledge base will be tested in the Primary Examination. Some clinical aspects may be asked in the workplace assessments.

18: PHYSIOLOGY AND BIOCHEMISTRY

Trainees should have a good general understanding of human physiology, be able to apply physiological principles and knowledge to clinical practice at basic level and to support progress to intermediate level training.

18.1: Knowledge

General	
B:18.1.1	Organisation of the human body and control of internal environment
B:18.1.2	Variations with age
B:18.1.3	Function of cells; genes and their expression
B:18.1.4	Cell membrane characteristics; receptors
B:18.1.5	Protective mechanisms of the body
Biochemistry	
B:18.1.6	Acid base balance and buffers
B:18.1.7	Ions e.g. Na^{+}, K^{+}, Ca^{++}, Cl^{-}, HCO_3^{-}
B:18.1.8	Cellular metabolism
B:18.1.9	Enzymes
Body fluids and their functions and constituents	
B:18.1.10	Capillary dynamics and interstitial fluid
B:18.1.11	Osmolarity: osmolality, partition of fluids across membranes
B:18.1.12	Lymphatic system
B:18.1.13	Special fluids especially cerebrospinal fluid: also pleural, pericardial
B:18.1.14	and peritoneal fluids
Haematology and Immunology	
B:18.1.15	Red blood cells: haemoglobin and its variants
B:18.1.16	Blood groups
B:18.1.17	Haemostasis and coagulation
B:18.1.18	White blood cells
B:18.1.19	The inflammatory response
B:18.1.20	Immunity and allergy
Muscle	
B:18.1.21	Action potential generation and its transmission
B:18.1.22	Neuromuscular junction and transmission
B:18.1.23	Muscle types
B:18.1.24	Skeletal muscle contraction
B:18.1.25	Smooth muscle contraction: sphincters
B:18.1.26	Motor unit
Heart/Circulation	
B:18.1.27	Cardiac muscle contraction
B:18.1.28	The cardiac cycle: pressure and volume relationships
B:18.1.29	Rhythmicity of the heart
B:18.1.30	Regulation of cardiac function; general and cellular
B:18.1.31	Control of cardiac output (including the Starling relationship)
B:18.1.32	Fluid challenge and heart failure
B:18.1.33	Electrocardiogram and arrhythmias

Heart/Circulation (continued)	
B:18.1.34	Neurological and humoral control of systemic blood pressures, blood volume and blood flow (at rest and during physiological disturbances e.g. exercise, haemorrhage and Valsalva manoeuvre)
B:18.1.35	Peripheral circulation: capillaries, vascular endothelium and arteriolar smooth muscle
B:18.1.36	Characteristics of special circulations including: pulmonary, coronary, cerebral, renal, portal and foetal
Renal tract	
B:18.1.37	Blood flow and glomerular filtration and plasma clearance
B:18.1.38	Tubular function and urine formation
B:18.1.39	Assessment of renal function
B:18.1.40	Regulation of fluid and electrolyte balance
B:18.1.41	Regulation of acid-base balance
B:18.1.42	Micturition
B:18.1.43	Pathophysiology of acute renal failure
Respiration	
B:18.1.44	Gaseous exchange: O_2 and CO_2 transport, hypoxia and hyper- and hypocapnia, hyper-and hypobaric pressures
B:18.1.45	Functions of haemoglobin in oxygen carriage and acid-base equilibrium
B:18.1.46	Pulmonary ventilation: volumes, flows, dead space
B:18.1.47	Effect of IPPV on lungs
B:18.1.48	Mechanics of ventilation: ventilation/perfusion abnormalities
B:18.1.49	Control of breathing, acute and chronic ventilatory failure, effect of oxygen therapy
B:18.1.50	Non-respiratory functions of the lungs
Nervous System	
B:18.1.51	Functions of nerve cells: action potentials, conduction and synaptic mechanisms
B:18.1.52	The brain: functional divisions
B:18.1.53	Intracranial pressure: cerebrospinal fluid, blood flow
B:18.1.54	Maintenance of posture
B:18.1.55	Autonomic nervous system: functions
B:18.1.56	Neurological reflexes
B:18.1.57	Motor function: spinal and peripheral
B:18.1.58	Senses: receptors, nociception, special senses
B:18.1.59	Pain: afferent nociceptive pathways, dorsal horn, peripheral and central mechanisms, neuromodulatory systems, supraspinal mechanisms, visceral pain, neuropathic pain, influence of therapy on nociceptive mechanisms
B:18.1.60	Spinal cord: anatomy and blood supply, effects of spinal cord section
Liver	
B:18.1.61	Functional anatomy and blood supply
B:18.1.62	Metabolic functions
Gastrointestinal	
B:18.1.63	Gastric function; secretions, nausea and vomiting
B:18.1.64	Gut motility, sphincters and reflex control
B:18.1.65	Digestive functions
Metabolism	
B:18.1.66	Nutrients: carbohydrates, fats, proteins, vitamins and minerals
B:18.1.67	Metabolic pathways, energy production and enzymes; metabolic rate
B:18.1.68	Hormonal control of metabolism: regulation of plasma glucose, response to trauma

B:18.1.69	Physiological alterations in starvation, obesity, exercise and the stress response
B:18.1.70	Body temperature and its regulation
Endocrinology	
B:18.1.71	Mechanisms of hormonal control: feedback mechanisms, effect on membrane and intracellular receptors
B:18.1.72	Hypothalamic and pituitary function
B:18.1.73	Adrenocortical hormones
B:18.1.74	Adrenal medulla: adrenaline (epinephrine) and noradrenaline (norepinephrine)
B:18.1.75	Pancreas: insulin, glucagon and exocrine function
B:18.1.76	Thyroid and parathyroid hormones and calcium homeostasis
Pregnancy	
B:18.1.77	Physiological changes associated with normal pregnancy
B:18.1.78	Materno-fetal, fetal and neonatal circulation
B:18.1.79	Functions of the placenta: placental transfer
B:18.1.80	Fetus: changes at birth

18.2: Objectives for trainees

This knowledge base will be tested in the Primary Examination. Some clinical aspects may be asked in the workplace assessments.

19: PHARMACOLOGY

Trainees should have a good understanding of general pharmacological principles, together with knowledge of drugs likely to be encountered in (a) anaesthetic practice and (b) current treatment of patients presenting for anaesthesia. The level of knowledge should be sufficient to enable clinical practice at basic level and to support progress to intermediate level training.

19.1: Knowledge

Applied chemistry	
B:19.1.1	Types of intermolecular bonds
B:19.1.2	Laws of diffusion. Diffusion of molecules through membranes
B:19.1.3	Solubility and partition coefficients
B:19.1.4	Ionization of drugs
B:19.1.5	Drug isomerism
B:19.1.6	Protein binding
B:19.1.7	Oxidation and reduction
Mode of action of drugs	
B:19.1.8	Dynamics of drug-receptor interaction
B:19.1.9	Agonists, antagonists, partial agonists, inverse agonists
B:19.1.10	Efficacy and potency. Tolerance
B:19.1.11	Receptor function and regulation
B:19.1.12	Metabolic pathways; enzymes; drug: enzyme interactions; Michaelis-Menten equation
B:19.1.13	Enzyme inducers and inhibitors
B:19.1.14	Mechanisms of drug action
B:19.1.15	Ion channels: types: relation to receptors. Gating mechanisms
B:19.1.16	Signal transduction: cell membrane/receptors/ion channels to intracellular molecular targets, second messengers
B:19.1.17	Action of gases and vapours
B:19.1.18	Osmotic effects. pH effects. Adsorption and chelation
B:19.1.19	Mechanisms of drug interactions:
B:19.1.20	Inhibition and promotion of drug uptake. Competitive protein binding. Receptor inter-actions
B:19.1.21	Effects of metabolites and other degradation products.
Pharmacokinetics and pharmacodynamics	
B:19.1.22	Drug uptake from: gastrointestinal tract, lungs, transdermal, subcutaneous, IM, IV, epidural, intrathecal routes
B:19.1.23	Bioavailability
B:19.1.24	Factors determining the distribution of drugs: perfusion, molecular size, solubility, protein binding
B:19.1.25	The influence of drug formulation on disposition
B:19.1.26	Distribution of drugs to organs and tissues: Body compartments
B:19.1.27	Influence of specialised membranes: tissue binding and solubility
B:19.1.28	Materno-fetal distribution
B:19.1.29	Distribution in CSF and extradural space
B:19.1.30	Modes of drug elimination:
B:19.1.31	Direct excretion

B:19.1.32	Metabolism in organs of excretion: phase I & II mechanisms
B:19.1.33	Renal excretion and urinary pH
B:19.1.34	Non-organ breakdown of drugs
B:19.1.35	Pharmacokinetic analysis:
B:19.1.36	Concept of a pharmacokinetic compartment
B:19.1.37	Apparent volume of distribution
B:19.1.38	Clearance
Pharmacokinetics and pharmacodynamics (continued)	
B:19.1.39	Clearance concepts applied to whole body and individual organs
B:19.1.40	Simple 1 and 2 compartmental models: concepts of wash-in and wash-out curves
B:19.1.41	Physiological models based on perfusion and partition coefficients
B:19.1.42	Effect of organ blood flow: Fick principle
B:19.1.43	Pharmacokinetic variation: influence of body size, sex, age, disease, pregnancy, anaesthesia, trauma, surgery, smoking, alcohol and other drugs
B:19.1.44	Effects of acute organ failure (liver, kidney) on drug elimination
B:19.1.45	Pharmacodynamics: concentration-effect relationships: hysteresis
B:19.1.46	Pharmacogenetics: familial variation in drug response
B:19.1.47	Adverse reactions to drugs: hypersensitivity, allergy, anaphylaxis, anaphylactoid reactions
Systematic Pharmacology	
B:19.1.48	Anaesthetic gases and vapours
B:19.1.49	Hypnotics, sedatives and intravenous anaesthetic agents
B:19.1.50	Simple analgesics
B:19.1.51	Opioids and other analgesics; and opioid antagonists
B:19.1.52	Non-steroidal anti-inflammatory drugs
B:19.1.53	Neuromuscular blocking agents (depolarising & non-depolarising), and anticholinesterases
B:19.1.54	Drugs acting on the autonomic nervous system: cholinergic and adrenergic agonists and antagonists
B:19.1.55	Drugs acting on the heart & cardiovascular system (including inotropes, vasodilators, vasoconstrictors, antiarrhythmics, diuretics)
B:19.1.56	Drugs acting on the respiratory system (including respiratory stimulants & bronchodilators)
B:19.1.57	Antihypertensives
B:19.1.58	Anticonvulsants
B:19.1.59	Anti-diabetic agents
B:19.1.60	Diuretics
B:19.1.61	Antibiotics
B:19.1.62	Corticosteroids and other hormone preparations
B:19.1.63	Antacids. Drugs influencing gastric secretion and motility
B:19.1.64	Antiemetic agents
B:19.1.65	Local anaesthetic agents
B:19.1.66	Plasma volume expanders
B:19.1.67	Antihistamines
B:19.1.68	Antidepressants
B:19.1.69	Anticoagulants
B:19.1.70	Vitamin K, B_{12} and thiamine

19.2: Objectives for trainees

This knowledge base will be tested in the Primary Examination. Some clinical aspects may be asked in the workplace assessments.

20: PHYSICS AND CLINICAL MEASUREMENT

Candidates should have a good understanding of the principles of physics and clinical measurement with an emphasis on the function of monitoring equipment safety and measurement techniques.

20.1: Knowledge

B:20.1.1	Mathematical concepts: relationships and graphs
B:20.1.2	Concepts only of exponential functions and logarithms: wash-in, wash-out and tear away
B:20.1.3	Basic measurement concepts: linearity, drift, hysteresis, signal: noise ratio, static and dynamic response
B:20.1.4	SI units: fundamental and derived units
B:20.1.5	Other systems of units where relevant to anaesthesia (e.g. mmHg, bar, atmospheres)
B:20.1.6	Simple mechanics: mass, force, work and power
B:20.1.7	Heat: freezing point, melting point, latent heat
B:20.1.8	Conduction, convection, radiation
B:20.1.9	Mechanical equivalent of heat: laws of thermodynamics
B:20.1.10	Measurement of temperature and humidity
B:20.1.11	Colligative properties: osmometry
B:20.1.12	Physics of gases and vapours
B:20.1.13	Absolute and relative pressure
B:20.1.14	The gas laws; triple point; critical temperature and pressure
B:20.1.15	Density and viscosity of gases
B:20.1.16	Laminar and turbulent flow; Poiseuille's equation, the Bernoulli principle
B:20.1.17	Vapour pressure: saturated vapour pressure
B:20.1.18	Measurement of volume and flow in gases and liquids
B:20.1.19	The pneumotachograph and other respirometers
B:20.1.20	Principles of surface tension
B:20.1.21	Basic concepts of electricity and magnetism
B:20.1.22	Capacitance, inductance and impedance
B:20.1.23	Amplifiers: band width, filters
B:20.1.24	Amplification of biological potentials: ECG, EMG, EEG
B:20.1.25	Sources of electrical interference
B:20.1.26	Processing, storage and display of physiological measurements
B:20.1.27	Bridge circuits
B:20.1.28	Basic principles and safety of lasers
B:20.1.29	Basic principles of ultrasound and the Doppler effect
B:20.1.30	Principles of cardiac pacemakers and defibrillators
B:20.1.31	Electrical hazards: causes and prevention
B:20.1.32	Electrocution, fires and explosions
B:20.1.33	Diathermy and its safe use
B:20.1.34	Principles of pressure transducers

B:20.1.35	Resonance and damping, frequency response
B:20.1.36	Measurement and units of pressure
B:20.1.37	Direct and indirect methods of blood pressure measurement
B:20.1.38	Principles of pulmonary artery and wedge pressure measurement
B:20.1.39	Cardiac output: Fick principle, thermodilution
B:20.1.40	Measurement of gas and vapour concentrations, (oxygen, carbon dioxide, nitrous oxide, and volatile anaesthetic agents) using infra-red, paramagnetic, fuel cell, oxygen electrode and mass spectrometry methods
B:20.1.41	Measurement of pH, pCO_2 , pO_2
B:20.1.42	Measurement CO_2 production/ oxygen consumption/ respiratory quotient
B:20.1.43	Simple tests of pulmonary function e.g. peak flow measurement, spirometry
B:20.1.44	Capnography
B:20.1.45	Pulse oximetry
B:20.1.46	Measurement of neuromuscular blockade
B:20.1.47	Measurement of pain

20.2: Objectives for trainees

This knowledge base will be tested in the Primary Examination. Some clinical aspects of safety and measurement will probably be asked in the workplace assessments.

21: STATISTICAL METHODS

Trainees will be required to demonstrate understanding of basic statistical concepts, but will not be expected to have practical experience of statistical methods. Emphasis will be placed on methods by which data may be summarised and presented, and on the selection of statistical measures for different data types. Candidates will be expected to understand the statistical background to measurement error and statistical uncertainty.

21.1: Knowledge

Data Collection.	
B:21.1.1	Simple aspects of study design
B:21.1.2	Defining the outcome measures and the uncertainty of measuring them
B:21.1.3	The basic concept of meta-analysis and evidence based medicine
Descriptive statistics	
B:21.1.4	Types of data and their representation
B:21.1.5	The normal distribution as an example of parametric distribution
B:21.1.6	Indices of central tendency and variability
Deductive and inferential statistics	
B:21.1.7	Simple probability theory and the relation to confidence intervals
B:21.1.8	The null hypothesis
B:21.1.9	Choice of simple statistical tests for different data types
B:21.1.10	Type I and type II errors

21.2: Objectives for trainees

This knowledge base will be tested in the Primary Examination. Some clinical aspects may be asked in the workplace assessments.

APPENDIX E:

ACCS
EMERGENCY MEDICINE SYLLABUS

Introduction to Specialty Specific Curriculum

Emergency Medicine (EM) is concerned with the acute and urgent aspects of illness and injury affecting patients of all age groups with the full spectrum of undifferentiated physical and behavioural disorders.Typically care within the Emergency Department is completed within four hours but some patients may be admitted under the Emergency Department for further observation and testing.
The identification and treatment of those needing resuscitation is a core activity.This is based on a structured prioritized approach in order to systematically identify life threatening problems in a timely fashion.This requires practical skills related to the airway, ventilation and the circulation.
Careful diagnostic strategies and observation are also required to differentiate those patients who require admission from those who can safely be sent home. Within the Emergency department the generic skills of communication, leadership, prioritization and risk management are needed to be performed at a high level and is the ideal place for training in such skills

The following pages describe the knowledge,skills and attitudes required of an Emergency Physician in specific areas of specialist training.They should be put into practice against the background of the generic professional skills described within the ACCS document and in the full Emergency Medicine curriculum.

The EM curriculum describes in black text what should be completed by the end of ST2 (from the EM trainee perspective) and is a function of the whole ACCS programme. Those non EM trainees undertaking ACCS can expect from their 6 month EM module to cover those areas that are highlighted in turquoise and for which training will be ensured. The other text (in black,blue or red) refers to what *could be* experienced in the ED during this time.

It is expected that the trainee will manage increasingly complex cases independently as he or she progresses through training.

With regard to Paediatrics much of the curriculum is directly applicable to children and should be assumed. Where there are areas unique to children or that require special emphasis they have been highlighted. The paediatric content of this curriculum reflects what would be expected of a typical emergency physician in departments that see both children and adults.
It would be expected that trainees would be competent in paediatric aspects of Emergency Medicine by the end of ST3.

Those requiring details on sub-specialisation in paediatrics should visit www.emergencymed.org.uk

What this curriculum does not convey, as by its nature it is reductionist, is the complexity of the specialty of Emergency Medicine. It is the specialty that sees patients of all age groups, with all pathologies, who present with a spectrum of urgency, in an unpredictable way. Therefore the knowledge, skills and competencies needed to manage such undifferentiated patients are much greater than the sum of the individual components of the curriculum. Add

to this the greyness of the cases, often with limited information, against a background of dealing with the competing priorities of managing several patients concurrently and one starts to have a sense of the equalities and depth of medical experience required to be an Emergency Physician.

Abbreviations used in Speciality Specific Curriculum

Learning Experiences

Learning from practice	LP
Learning from Trainers	LT
Group Teaching	GT
Personal Study	PS
Life Support Courses	LS
Skills Laboratory	SL
Out of Department Training	
a) Follow through of patient/OPD Clinic	ODA
b) Dedicated time in another department (e.g. ICU, anaesthesia)	ODB

Assessment

Clinical	
a) Observed Care	OC
b) Min – Cex	MC
c) DOPS	DOPS
d) Case based discussion	CBD
e) Audit of Case Notes	AUD
Examination	
a) Mock Exam	ME
b) FCEM	FCEM
c) MCEM	MCEM

Levels

- Black text indicates competencies to be achieved at the end of ST2 for the
- EM trainee
- For non EM trainees undertaking ACCS those areas highlighted in turquoise describe what can be expected to be covered from their 6 month EM module and for which training will be ensured.
- Blue text indicates competencies to be achieved at the end of ST3
- Red text indicates competencies to be achieved at the end of ST5.

Emergency Medicine Speciality Specific Curriculum

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A1: Generic objectives for Resuscitation

Objectives:

- To be able to use a structured prioritised approach to life threatening situations.
- To be able to undertake resuscitation procedures in a timely and effective manner.
- Understand the pharmacology, indications, and contra indications of resuscitation drugs.
- Lead and supervise the resuscitation team.
- Effectively interact with other specialties to ensure optimal care.
- To be supportive of relatives and friends of the patient whilst giving clear information.
- Exercise good judgement as to when resuscitation is futile or inappropriate.

Specific paediatric objectives:

- Be able to formulate a differential diagnosis by age of a patient with acute life threatening respiratory difficulty and prioritise management
- Be able to lead a resuscitation team in line with APLS/EPLS/NLS guidelines
- Understand the indications, pharmacology, contraindications, dose calculation and routes of administration of drugs used in resuscitation and in the stabilization of children in cardiac arrest or failure
- Be able to obtain appropriate peripheral venous and arterial access including intraosseous route
- Understand the prognostic factors for outcome of cardiac resuscitation for children
- Understand the indications and procedures for transport to a definitive facility following stabilization
- Have developed a sensitivity and understanding in the management of chronic end-stage conditions
- Understand the appropriate management of Sudden Death in Infancy and the local management guidelines for supporting the family
- Understanding the differential diagnosis of the well looking infant presenting with apparent life threatening events (ALTE) e.g. apnoea, cyanosis, floppy baby.

A1.1: Resuscitation - Airway

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to assess, establish and maintain a patent airway, using both Basic Life Support and Advanced Life Support techniques.	Identification of the obstructed airway and its causes. Methods of maintaining a patent airway i.e. head positioning, jaw thrust, adjuncts, suction. Bag valve mask ventilation / Mapleson C circuit. Oxygen delivery systems. Indications for tracheal intubation. Complications of tracheal intubation. Understand the appropriate use of pharmacological agents in induction and maintenance of anaesthesia and be aware of their complications and side effects Understand the principles of simple ventilators Have knowledge of monitoring techniques ($SpA0_2$, $ETC0_2$) Failed airway drill, including LMA, needle & surgical cricothyroidotomy	**Skills** Airway assessment & optimising the patient's position for airway management. Be able to identify the difficult or potentially difficult airway and summon expertise. Airway management with the use of oral/nasal airways. Ventilation using bag valve and mask. Appropriate choice and passage of tracheal tubes using appropriate laryngoscope blades. Use of gum elastic bougie/introducers. Tracheal suction. Manage tracheostomy tube complications Identifying correct/incorrect placement of tube (oesophagus, right main bronchus). Perform needle/surgical cricothyroidotomy and percutaneous transtracheal ventilation Interpretation of capnograph trace.	LP LT GT PS LS SL ODA ODB	OC DOPS CBD AUD ME FCEM MCEM

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
		Introduction and checking correct placement of laryngeal mask airway. Heimlich manoeuvre **Attitudes:** Know own limitations Appreciate the urgency of providing a patient airway, and the importance of basic airway manoeuvres Always know the location of senior assistance		
To be able to assess, establish and maintain a patent airway in a child	Know the indications and contraindications for a surgical airway Understand the prognostic features of the outcome of respiratory arrest	Be able to follow age-appropriate algorithms for obstructed airway including choking.	LP LT GT PS LS SL ODA ODB	OC DOPS CBD AUD ME FCEM MCEM

A1.2: Resuscitation – Cardiac Arrest / Peri-arrest

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To confirm cardiac arrest, establish Basic Life Support, use defibrillation appropriately and use appropriate drugs. To be able to recognise and manage peri arrest arrhythmias.	Familiarity with the ALS and APLS algorithms and pharmacology. Knowledge of cardiac arrests in special situations, e.g. hypothermia, trauma, overdose. Knowledge of the outcomes of pre-hospital arrest. Post arrest management. Peri-arrest arrhythmias and pharmacology of drugs used. Organ Donation	*Skills* Perform effective B.L.S. and A.L.S. Rhythm recognition and treatment. Safe defibrillation. To know when to discontinue resuscitation. Central venous access. External pacing Endotracheal drug administration *Attitudes* Team Work Compassion To act as the patient's advocate when continued critical care input is needed	LP LT GT PS LS SL	OC DOPS CBD AUD ME FCEM MCEM Life support course assessments
Understand specific aspects of the management of cardiac arrest in children	Understand the prognostic features and the outcome of respiratory arrest Understand the causes of cardiac arrest in children.	Be able to take decisions in circumstances that present ethical issues and know when to cease resuscitation. Be able to discuss end of life decisions	LP LT GT PS LS SL	OC DOPS CBD AUD ME FCEM

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
	Understand the outcomes of cardiac arrest in children	in a sympathetic and caring manner with patients and their families ***Be able to discuss organ donation in a sensitive manner***		MCEM Life Support Course assessments

A1.3: Resuscitation - Shock

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to recognise the shocked patient, the likely cause and to initiate treatment.	Know the differential diagnosis of the shocked patient and the distinguishing features of hypovolaemic shock, distributive shock, obstructive shock and cardiogenic shock. Patho-physiology of shock. Role and types of monitoring Appropriate use of inotropes and vasopressors. The role of imaging, e.g. FAST scanning and echocardiography in the shocked patient. To be competent in undertaking a FAST scan. (AFTER 2010)	*Skills* To be able to gain peripheral and central venous access in the shocked patient. (Ultrasound guided). Central access including: Subclavian / internal jugular / femoral and CVP measurements Arterial line insertion Judicious use of fluids especially in the elderly and the trauma patient. Intra-osseous and cut down techniques. Accessing indwelling vascular lines Recognition of the need for urgent surgical intervention. *Attitudes* Ensure optimal team working to establish the diagnosis and commence treatment. This will require close liaison with in-patient teams and radiology.	LP LT GT PS LS SL ODA ODB	OC DOPS CBD AUD ME FCEM MCEM

A1.4: Resuscitation - Coma

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to look after the comatose patient safely and establish the diagnosis and differential diagnosis by systematic history and examination and appropriate diagnostic testing.	Understand the differential diagnosis of the comatose patient and be able to undertake investigation (routine blood tests/arterial blood gas/radiology) and commence treatment.	*Skills* Apply the A, B, C, D approach to manage and stabilize the patient. Protection of the comatose patient including log rolling and urinary catheterisation. *Attitudes* Respect Compassion	LP LT GT PS LS SL ODA ODB	OC DOPS CBD AUD ME FCEM MCEM

A2.1: Anaesthetics and Pain Relief - Pain Management

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To safely and effectively relieve pain, the commonest presenting complaint in the Emergency Department, in a timely way.	Assessment of pain including pain scoring Understand the appropriate use of analgesics (including paracetamol, NSAIDs, opioids, ketamine, Entonox) and be aware of their complications and side effects. Routes of administration: Oral, IV, IM, and nasal/PR. Monitoring Knowledge of controlled drug policy. Knowledge of adjuncts such as local anaesthesia, splinting, distraction.	*Skills* Selection and safe prescribing of appropriate analgesic, dosage and route of administration. Appropriate monitoring. Be able to discuss options for pain relief with the patient. **Attitudes** To be safe To ensure effectiveness and to seek help if pain is not relieved or is disproportionate. To treat the underlying cause of pain	LP LT GT PS LS SL	OC MC DOPS CBD AUD ME FCEM MCEM

Pain management

A2.2: Anaesthetics and Pain Relief - Local Anaesthetic Techniques

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To use local anaesthesia appropriately and safely.	Understand the appropriate use of local anaesthetic agents (lidocaine, bupivicaine and prilocaine) and be aware of complications and side effects Anatomy of nerve blocks and physiology of nerve function. Intravenous regional anaesthesia	*Skills* To be able to undertake the following nerve blocks and know their contra-indications: • digital • wrist (ulnar ,median,radial), • femoral • facial (auricular, supratrochlear, supraorbital) • ankle • Biers Block To calculate max. dose of local anaesthetic for each patient. *Attitudes* Have patient safety and comfort as prime driver. Know own limitations and recognise when to call for help	LP LT GT PS SL	OC DOPS CBD AUD ME FCEM MCEM

A2.3: Anaesthetics and Pain Relief - Safe Conscious Sedation

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to deliver safe conscious sedation to selected patients	Know "Implementing and ensuring safe sedation practice for healthcare procedures in adults" http://www.rcoa.ac.uk/ Recognition of risk factors: airway, co-morbidity, and drugs/alcohol. Drug pharmacology, selection, dosage. Knowledge of antagonists. Monitoring, O_2 therapy, resuscitation equipment. Safe discharge.	**Skills** Airway assessment and management including BVM in order to deal with complications. Safe titration of drugs in a monitored environment. Prompt recognition of over sedation and recognition that loss of verbal responsiveness equates with general anaesthesia in terms of the level of patient care required. **Attitudes** Be able to take informal consent Respect patient choice Have patient safety as prime driver Work with others to ensure implementation of local and national guidelines Know own limitations and recognise when to call for help	LP LT GT PS LS SL ODA	OC DOPS CBD AUD

A3: Wound Management

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to assess a wound and its under-lying structures, provide analgesia to ensure adequate exploration, cleansing and debridement. Decide if wound should be closed or not and select appropriate technique. Recognise those wounds that require more senior Emergency Department staff or specialist referral.	Classification and description of wounds. Closure techniques: sutures, staples, glue, adhesive strips, delayed primary closure. Wound infections. Wound dressings/splintage. Special wounds: puncture, bites, amputation, degloving, foreign bodies. Tetanus immunisation schedules. Special patients, e.g. the immunocompromised Role of antibiotics. Detailed knowledge of hand, wrist and facial anatomy.	*Skills* Local anaesthetic techniques. Recognition of underlying structures. Ensure thorough mechanical wound cleansing and removal of foreign bodies. Ensure the best conditions for wound management i.e. good lighting, good analgesia, good equipment. Correct closure technique. Appropriate follow up, recognising those patients at risk of wound infection and delayed healing. *Attitudes* Be meticulous in wound assessment and thorough in wound cleaning using appropriate investigations to establish presence of foreign bodies and damage to underlying structures.	LP LT GT PS SL	OC MC DOPS CBD AUD ME FCEM MCEM

A4.1: Major Trauma

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to assess, resuscitate and stabilise victims of major trauma based on ATLS principles. To identify those that need life or limb saving surgery. To use diagnostic testing appropriately.	To understand the epidemiology of trauma. Understand the importance of mechanisms of injury, trauma scoring and how trauma teams work.	*Skills* Take an ambulance service hand over. To be able to recognise need for, and carry out, life saving procedures. To provide adequate pain relief and splintage. To be skilled in x-ray interpretation and the use of FAST. *Attitudes* Optimal working within a team, using ATLS principles and sensitive handling of relatives.	LP LT GT PS LS SL ODA	LP OC DOPS CBD AUD ME FCEM MCEM ATLS Courses
To be able to manage major trauma in children.	Understand and apply the principles of Acute Trauma Life Support / Advanced Paediatric Life Support	*Skills* ***To be able to examine a child in a way which localises injuries*** ***Be aware of child protection and accident prevention issues***	As above	As above

Major trauma

A4.2: Head Injury

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to assess the head injured patient using history and examination and appropriate investigation.	Knowledge of the anatomy of the scalp, skull and brain. Physiology of cerebral perfusion and intracranial pressure. To be able to stratify head injured patients, identify those who need CT/plain radiology, identify those who need neurosurgical referral. Intracranial consequences of a head injury i.e. extradural, subdural, intracerebral haematoma, diffuse axonal injury, post concussion syndrome. Plain radiology/CT appearances. Knowledge of NICE (http://www.nice.org.uk/) and SIGN (http://www.sign.ac.uk) guidelines.	*Skills* To recognise the major head injury and institute an A, B, C, D approach, optimise therapy to avoid secondary brain injury. Identify those patients who will need intubation and ventilation. Appropriate and timely involvement of neurosurgery. Management of scalp lacerations. To be able to safely recognise and treat for minor head injury. Ensure the safe discharge of patients with minor head injury. *Attitudes* Optimise joint team working with Critical Care, Neurosurgery and the Emergency Department for the seriously head injured patient.	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM
To manage the head injured child	Understand the NICE guidelines for head injury in children	**Skills** Be able to assess AVPU and Glasgow Coma Score (GCS) in children	LP LT GT PS	OC MC DOPS CBD

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
	Understand when to safely discharge children with minor head injury Understand how to recognize signs of physical abuse and how to proceed with local child protection protocols	Be able to request appropriate radiology including plain skull x rays and head CT scanning as per national guidelines ***Be able to initiate management of all children with scalp lacerations***	LS SL ODA	AUD ME FCEM MCEM

A4.3: Chest Trauma

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to recognise and treat those patients who have life-threatening or potentially life-threatening chest injuries.	Knowledge of the anatomy of the intrathoracic organs and surface anatomy of the major thoracic structures. Knowledge of the pathophysiology of cardiothoracic injury. To be able to identify life threatening chest trauma, i.e. tension, pneumothorax, open pneumothorax, flail chest, massive haemothorax, and cardiac tamponade. To be able to identify those patients with a potential aortic injury, diaphragmatic rupture, pulmonary contusion, myocardial contusion, oesophageal rupture, tracheobronchial injury, rib fracture and sternal fracture and to appreciate the plain radiology and CT appearances of these injuries. Understand importance of mechanism of injury e.g., penetrating versus blunt trauma	**Skills** To undertake the ATLS approach. Identify life threatening chest conditions. To be able to undertake a needle thoracocentesis, place an intercostal chest drain, pericardiocentesis. Know when to call cardiothoracic surgery. Resuscitative thoracotomy. (not in children) To provide advice and care for those patients with isolated chest wall injuries who are to be discharged.	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM

To manage chest injuries in children	Understand the likely chest injuries through different age groups		LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM

Chest trauma

A4.4: Abdominal Trauma

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Recognition of those patients who have sustained significant abdominal trauma by thorough history and examination and appropriate investigation.	Knowledge of the structural function and surface markings of the abdominal organs. Knowledge of the different presentation of abdominal trauma and the structures that may be damaged. Specifically blunt splenic, hepatic, renal pancreatic trauma, hollow viscus injury, penetrating abdominal injury, urethral / bladder / testicular trauma. Indications for CT / early surgical involvement.	**Skills** To be able to assess and reassess the traumatic abdomen, initiate treatment and investigation and involve appropriate specialists. Recognise the influence of injuries elsewhere on abdominal assessment. Be able to undertake a FAST scan or DPL. NGT placement	LP LT GT PS LS SL ODA	OC DOPS CBD AUD ME FCEM MCEM

Abdominal trauma

A4.5: Spinal Injury

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to recognise those patients who have suffered a spinal cord, peripheral nerve or plexus injury by appropriate history, examination and investigation.	Knowledge of anatomy and physiology of spinal cord, myotomes and dermatomes. Recognition of injury to vertebrae (fracture / dislocation), cord (including spinal cord syndromes / SCIWORA) and ligaments. Methods of appropriate imaging (plain radiology / CT / MRI). (NICE Guidelines http://www.nice.org.uk) Neurogenic shock / spinal shock – recognition and treatment. To be able to interpret plain radiology of the spine.	*Skills* Safe initial care of the potential spinally injured patient (spinal immobilisation). Techniques of spinal immobilisation and log roll Appreciate how spinal cord injury affects assessment. Identify when CT and MRI is appropriate. To record accurately the neurological status of the patient. Liaise with appropriate specialist. To safely 'clear' the c-spine. *Attitudes* To communicate sensitively and accurately to the patient and their relatives the nature of these injuries.	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM

To manage the child with a spinal injury	Understand the mechanisms and risk of spinal injury in children	**Skills** Be able to manage the anxious immobilised child Be able to examine the spine and apply the indications for being able to clinically 'clear' the spine	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM

Spinal injury

A4.6: Maxillo-facial Trauma

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To identify those patients with maxillo-facial trauma, specifically those that may have airway threat. To be able to characterise maxillo-facial injuries.	Anatomy and physiology of facial structure Nasal fractures Le Fort fractures Mandibular fractures/dental fractures/ avulsed teeth/orbital fractures. Zygomatic fractures To be able to identify underlying structures at risk from facial lacerations, specifically parotid duct, facial nerve and lacrimal duct. TMJ dislocation Tongue laceration. Soft tissue injury and wounds to the neck.	To be able to recognise a threat to the airway – initiate emergency treatment and call for help. Assess the facio-maxillary bones and associated structures. Identify those patients who will need inpatient or outpatient care. To be able to manage torrential nasopharangeal bleeding Avoidance of facial tattooing by thorough cleansing. To ensure a good cosmetic result after facial suturing	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM

A4.7: Burns

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to evaluate patients with burns. To be able to commence resuscitation and refer appropriately whilst providing effective analgesia. To manage minor burns.	Know and understand the pathophysiology of burns. To recognise the particular risks to the upper airway from heat and lower airway from inhalation injury. To be able to assess the size and depth of a burn and calculate the fluid loss. To recognise the importance of burns in special areas (i.e. face, joints, perineum). Have knowledge of electrical and chemical burns (e.g. hydrofluoric acid).	To recognise the burns patient who has an airway at risk and the need for early intubation. The A, B, C, D approach. To be able to calculate fluid replacement. To identify those patients that need referral to a specialist centre. To be able to manage minor burns and arrange appropriate follow up. To be able to undertake escharatomy	LP LT GT PS LS SL ODA ODB	OC MC DOPS CBD AUD ME FCEM MCEM
To manage the child with burns	Be able to calculate % burn surface area for children.	**Skills** Be able to recognise possible patterns of child abuse in burn injuries and make the appropriate referral.	LP LT GT PS LS SL ODA ODB	OC MC DOPS CBD AUD ME FCEM MCEM

Burns

A5: Generic objectives for musculoskeletal conditions

Objectives:

- To be able to take an appropriate history, examination, investigation and initiate treatment of patients presenting with musculoskeletal pathology. This includes splintage, POP and pain relief.
- Emergency Physicians should be aware of the predicted clinical course and specific complications for these conditions.
- Recognise those that need further in- patient/outpatient care, the role of physiotherapy and those who can be discharged directly from the Emergency Department.
- Detailed knowledge including plain radiology of both traumatic and atraumatic pathologies is required (see below for specific anatomical regions).

Specific paediatric objectives

- Understand the likely types of soft tissue and bony injuries for each age group
- Be able to judge if these relate correctly to the stated mechanism of injury
- Be aware of rheumatological, infectious, malignant and non-accidental causes of musculoskeletal presentations
- Be able to examine a child in a way which localises the injury
- Understand the Salter-Harris classification of epiphyseal injuries
- Understand the likely time-frame for recovery in children

A5.1: Upper limb

Anatomical region	Knowledge	Skills / Attitudes	Learning	Assessment
Shoulder region.	**Trauma** Fracture of the clavicle, proximal humerus, scapula, ACJ and SCJ injuries Dislocation of shoulder, Rotator cuff injuries. **Non-trauma** Sub acromion bursitis Supraspinatus tendonitis Ruptured biceps tendon Shoulder joint inflammation including capsulitis and impingement syndrome	To be able to examine the shoulder region, identify injuries and any associated neurovascular problems. To be able to safely reduce a dislocated shoulder (anterior/posterior) and treat any associated conditions appropriately. Ensure appropriate follow up including physiotherapy. To be thorough and to identify serious underlying pathology, e.g. pathological fractures. Application of broad arm sling / collar and cuff / U slab	LP LT GT PS ODA	OC MC ME FCEM MCEM
Long bones of the upper limb	**Trauma** Fractures of the humerus, radius and ulna. Understand their common fracture patterns and associations /complications. Compartment syndrome.	To be able to undertake appropriate examination and determine any associated injuries and the need for urgent intervention. To be able to interpret plain radiology. To be able to splint appropriately including application of above and below elbow POP	LP LT GT PS ODA	OC MC DOPS ME FCEM MCEM

Elbow	**Trauma** Supracondylar, radial head, olecranon, condyle fractures Dislocated elbow and pulled elbow. **Non trauma** Bursitis Tendonitis.	Be able to exam the elbow region, identify injuries and any associated neurovascular problems. To be able to safely reduce a dislocated elbow / pulled elbow and treat the other conditions appropriately. To recognise which supracondylar fractures require urgent orthopaedic referral.	LP LT GT PS ODA	OC MC ME FCEM MCEM
Wrist	**Trauma** Colles' / Smith's, scaphoid and Barton's fractures. Management of the "clinical scaphoid" fracture Fractures of other carpal bones. To be able to recognise dislocation of the carpal bones. **Non trauma** Tenosynovitis Carpal tunnel syndrome	To be able to recognise the conditions listed and safely reduce distal wrist fractures and identify carpal dislocations. Application of below elbow POP/short arm backslab Arrange appropriate follow up.	LP LT GT PS ODA	OC MC ME FCEM MCEM

Hand	**Trauma** To be able to identify metacarpal and phalangeal fracture/ dislocations. To be able to evaluate wounds of the hand including nail bed injuries, nerve injury, foreign body, high pressure injection injury, amputations and crush injuries. Hand compartment syndrome Identify tendon injuries, Mallet finger and Boutoniere deformity. **Non trauma** Infections: paronychia, pulp space, flexor sheath infection, deep space hand infections.	Reduction of phalageal dislocation and simple phalangeal fractures To be able to assess the neurovascular function and tendon function of the hand. To be able to interpret x-rays. To be able to explore wounds appropriately and refer those who need inpatient care. Ideally tendons should be repaired by a hand surgeon especially flexor tendons.	LP LT GT PS ODA ODP (Hand Clinics)	OC MC ME FCEM MCEM

A5.2: Lower limb & Pelvis

Anatomical region	Knowledge	Skills / Attitudes	Learning	Assessment
Pelvis and hip.	**Trauma** Fractured neck of femur – types. Dislocation of the hip – types, including dislocation of THR. Pelvic fractures, sacral fractures, acetabular fractures, coccygeal fracture – types. To understand management of the exsanguinating pelvic fracture including the role of external fixation and arteriography/embolisation.	To be able to examine the hip, pelvis and SI joints. Recognise those patients who need urgent specialist care. To recognise the injury patterns and associations. Femoral nerve block and splintage of femoral shaft fractures. Apply a pelvic splint.	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM
Long bones of lower limb	Fractures of the femur, tibia and fibula Understand their common fracture patterns and associations / complications. Compartment syndrome.	To be able to undertake appropriate examination and determine any associated injuries and the need for urgent intervention. To be able to interpret plain radiology. To be able to undertake a femoral nerve block. To be able to splint appropriately, using Donway / Hare /Thomas splint	LP LT GT PS ODA	OC MC DOPS ME FCEM MCEM

Anatomical region	Knowledge	Skills / Attitudes	Learning	Assessment
Knee	*Trauma* Meniscal injury, Ligamentous injury (cruciate / collateral) Dislocation and fracture of the patella. Dislocation of the knee and, knowledge of associated injuries. Tibial plateau fractures, fractured neck of fibula, supracondylar fractures. Gastrocnemius tear. *Non trauma* Acute arthritis / bursitis Quadriceps & patellar tendon rupture. Ruptured Baker's cyst	To be able to examine the knee in detail. Use plain radiography (Ottawa Knee Rules) appropriately. To be able to reduce a patella dislocation and knee dislocation with limb threatening vascular compromise. Application of knee immobiliser Arthrocentesis Above and below knee POP.	LP LT GT PS ODB	OC MC DOPS CBD AUD ME FCEM MCEM
Ankle	**Trauma** To understand the classification of ankle fractures. To understand the grading of ligamentous injury and to recognise dislocation of the ankle joint. **Non trauma** Achilles tendonitis	To be able to examine and assess the ankle joint and identify who needs plain radiography (Ottawa Ankle Rules). Recognise those patients who need urgent reduction of a dislocated ankle, and to be able to reduce it. Recognition of those ankle fractures that require operative intervention.	LP LT GT PS ODA	OC MC DOPS CBD AUD ME FCEM

Anatomical region	Knowledge	Skills / Attitudes	Learning	Assessment
	Achilles rupture.			MCEM
Foot	**Trauma** Talar, calcaneal, tarsal bone, metatarsal and phalangeal fractures. Sub-talar, talar, mid-tarsal, tarso-metatarsal dislocations. Crush injury of the foot. **Non trauma** Plantar fasciitis and metatarsalgia. Stress fractures. Diabetic foot.	To be able to examine the foot. Recognise those patients who need urgent intervention (reduction of dislocations, compartment syndrome).	LP LT GT PS ODA	OC MC DOPS ME FCEM MCEM

A5.3: Spinal conditions

Anatomical region	Knowledge	Skills / Attitudes	Learning	Assessment
Spine	**Trauma** See Spinal Injury section above **Non trauma** Myotomes/Dermatomes. Cord syndromes, including cauda equina Low back pain – recognition of important causes. Ankylosing spondylitis, Rheumatoid Arthritis	To be able to immobilise the spine; log roll. Examine the spine. Understand the indications for radiology and interpret spinal X-rays. (http://www.nice.org.uk) Recognise associated injuries (neurogenic shock / spinal cord injury). Masking effect of spinal injury.	LP LT GT PS LS ODA	OC MC CBD AUD ME FCEM MCEM

Spinal conditions

A6.1: Vascular Emergencies - Arterial

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to under-take a history and examination focussed on the vascular system and identify those conditions that threaten life or limb.	The symptoms, signs, presentation, causes and treatment of peripheral ischaemia, abdominal and thoracic aortic aneurysms and aortic dissection. Mesenteric ischaemia. Intra-arterial drug injection Traumatic vascular injury and associated fractures/dislocations.	To be able to resuscitate, use appropriate investigations (bed side, ultrasound and CT) and to ensure timely referral to appropriate specialist.	LP LT GT PS ODA	OC DOPS CBD ME FCEM MCEM

Arterial emergencies

A6.2: Vascular Emergencies - Venous

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Differential diagnosis of the painful / swollen calf. Venous occlusion / DVT	Investigation and management of DVT including role of risk stratification, d-dimers and ultrasound. Proximal vein thrombosis	Focused clinical examination to establish most likely diagnosis	LP LT GT PS ODA CDU/ODB	OC MC CBD AUD ME FCEM MCEM

Venous emergencies

A7.1 Abdominal conditions - Undifferentiated Abdominal Pain

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to take a full history and examination, elicit relevant physical signs, commence resuscitation and investigation.	To have knowledge of the causes of acute abdominal pain, including peptic ulcer disease, pancreatitis, (www.bsg.org.uk/clinical_prac/guidelines.htm) cholecystitis, cholangitis, biliary colic, bowel obstruction, diverticular disease, viscus perforation, acute appendicitis and ischaemic colitis, AAA, hernias, renal calculi, pyelonephritis, chronic inflammatory bowel disease, volvulus and the medical and gynae - causes of abdominal pain.	To have an A, B, C, D approach ensuring effective fluid resuscitation, pain relief and appropriate use of a nasogastric tube and antibiotics. Identify those who need resuscitation and urgent surgery. Those that require admission and those who may be safely discharged. Investigation using plain radiology, CT, ultrasound and blood tests.	LP LT GT PS ODA	OC DOPS CBD AUD ME FCEM MCEM

Abdominal pain

A7.2 Abdominal conditions - Haematemesis / malena

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to undertake appropriate history and examination and initiate appropriate treatment for patients presenting haematemesis	Causes. Indications for blood administration, central venous pressure monitoring, urgent endoscopy and surgical involvement Specific knowledge of the management of bleeding oesophageal varices, including understanding of the appropriate use of pharmacological agents Scoring systems/risk stratifications Guidelines for management of non variceal/variceal haemorrhage www.bsg.org.uk/clinical_prac/guidelines.htm	Recognition of shock. IV access in the shocked patient. Coordination of teams	LP LT GT PS ODA	OC MC DOPS CBD ME FCEM MCEM

Haematemesis

A7.3 Abdominal conditions - Anal Pain and Rectal Bleeding

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to undertake appropriate history and examination to establish diagnosis and initiate appropriate treatment with patients presenting with anal pain or rectal bleeding.	Know the causes of anal pain, specifically thrombosed haemorrhoids, anal fissure, anorectal abscess, pilonidal disease, rectal prolapse. To know the causes of lower G I bleeding To know the causes of rectal bleeding including haemorrhoids / fistula / tumour / colitis etc. Options for appropriate and adequate analgesia	Identify those patients who need admission and those who can be appropriately managed as an outpatient. . Recognition and treatment of shock.	LP LT GT PS ODA	OC CBD ME FCEM MCEM

Anal pain and rectal bleeding

A8: Urology

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Acute urinary retention.	To recognise patients with acute urinary retention, relieve symptoms and establish diagnosis. Suprapubic catheterisation – its indications and how to do it	Urethral catheterisation.	LP LT GT PS SL	OC DOPS ME MCEM
Acute scrotal pain.	Knowledge of the common cause of scrotal pain, i.e. epididymo-orchitis, testicular torsion, torsion of testicular appendix, trauma, and tumour. Understand the role of ultrasound.	Recognition that testicular torsion is an emergency and ensuring timely referral.	LP LT GT PS	OC CBD ME FCEM MCEM
Other conditions	Priapism Renal colic/renal calculi Phimosis and paraphimosis Urinary tract infections Fracture of the penis Haematuria Gangrene of the scrotum Prostatitis		LP LT GT PS	OC CBD ME FCEM MCEM

A9: Sexually Transmitted Disease

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Sexually transmitted disease including HIV	Common presentations Common pathogens Appropriate testing Complications	Appropriate investigation and referral to specialist. Symptomatic and sensitive handling Importance of relevant health care advice	LP LT GT PS ODA	OC ME FCEM

STD

A10: Eye problems

Objectives: To be able to evaluate those patients presenting with red or painful eyes and those suffering sudden visual loss. To be able to assess visual acuity and undertake ophthalmoscopy and slit lamp examination. To understand the pharmacology of ocular drugs. See below for specific ocular problems.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Red eye	Conjunctivitis, corneal abrasions, corneal ulcers, keratitis, foreign bodies, ocular burns, scleritis, episcleritis	To be able to diagnose, recognise associations. Attempt removal of foreign bodies from the cornea and conjunctiva. To provide immediate treatment for those patients who have suffered ocular chemical burns.	LP LT GT PS ODA ODB	OC DOPS CBD ME FCEM MCEM
Sudden visual loss	Retinal haemorrhage, esp. diabetics Retinal vascular occlusions Vitreous haemorrhage Retinal detachment Optic neuritis Central causes of visual loss	To be able to undertake the examination to identify these conditions and ensure prompt referral.	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM
Painful eye	Glaucoma Uveitis, iritis	To be able to establish diagnosis and refer to ophthalmology	LP LT GT	OC CBD ME

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
			PS ODA ODB	FCEM MCEM
Trauma to the eye.	To be able to recognise hyphema, lens dislocation, orbital floor fractures and penetrating injuries of the eye. Lacrimal duct injuries Retinal detachment Lid margin laceration	To be able to recognise these conditions and refer appropriately.	LP LT GT PS ODA ODB	OC CBD ME FCEM MCEM
Other problems	Cellulitis (orbital, pre-orbital and endophthalmitis). Dacrocystitis Eyelid disorders – blepharitis Keratitis, Cavernous sinus thrombosis		LP LT GT PD ODA	OC ME FCEM MCEM

A11: ENT conditions

Objectives: To be able to undertake appropriate history, examination and investigation of patients presenting with ENT problems, ensuring appropriate treatment and referral. See below for specific ENT problems.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Painful ear	Otitis media Otitis externa Cholesteatoma Perforated tympanic membrane Mastoiditis Foreign bodies	To be able to use an auroscope Prescribe appropriately Identify those who need ENT referral Removal of foreign bodies. Aural toilet / insertion of wick.	LP LT GT PS ODA ODB	OC CBD AUD ME FCEM MCEM
Epistaxis	Common causes including trauma and medication Assessment of nasal fractures	To be able to undertake anterior nasal packing / use nasal tampon. To be able to do posterior nasal packing using a Foley catheter. Appropriate referral of nasal fractures. Identification of septal haematoma.	LP LT GT PS ODA ODB	OC DOPS ME FCEM MCEM
Sore throat	Epiglottitis Ludwig's angina Tonsillitis Pre-tonsillar abscess	To recognise these underlying pathologies and the risk to the airway and involve appropriate specialist in a timely fashion Indirect laryngoscopy	LP LT GT PS	OC CBD ME FCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Retro-pharangeal abscess		ODA ODB	MCEM
Foreign bodies	Foreign bodes in the nose, ear, oesophagus, pharynx and larynx. Risks of button batteries.	To be able to remove foreign bodies from the ear and nose and recognise those that need referral. Identify those with oesophageal foreign bodies and ensure prompt referral.	LP LT GT PS ODA	OC DOPS CBD ME FCEM MCEM
Other problems:	Causes of vertigo – labyrinthitis etc. Salivary gland problems and oral pathology Sinusitis Facial pain – dental abscess/neuralgia VII Nerve palsy Laceration to ear and injury to underlying cartilage Post tonsillectomy bleed		DOPS CBD	ODB OC MC DOPS FCEM MCEM
Traumatic ear conditions in children	Be aware of the possibility of abuse in cases of ear trauma	Be able to remove foreign bodies in the ear canal or pinna Be able to recognise a haematoma requiring surgical drainage	LP LT ODA	OC FCEM
Earache or discharge in children	Understand the presentation of otitis media and glue ear and their association with hearing loss in children	Be able to perform otoscopy correctly Be able to identify otitis externa and otitis media and treat them appropriately	LP LT ODA	OC FCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
		Recognise that language delay or attention deficit requires onward referral		
Acute throat infections in children	Be aware of life-threatening airway obstruction in epiglottitis, and how to avoid it	Recognise the potentially life threatening nature of post-tonsillectomy bleeding	LP LT	OC FCEM

A12: Dental Emergencies

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Dental emergencies	Normal dental development. Dental abscess Dental fractures Avulsed permanent teeth Post extraction complications	To be able to replace and temporarily splint avulsed permanent teeth. To provide appropriate analgesia and antibiotic therapy for patients with dental abscess. Identify those that require immediate referral for drainage. To be able to perform a local anaesthetic dental block.	LP LT GT PS ODA	OC CBD ME FCEM MCEM

Dental emergencies

A13: Gynaecology

Specific paediatric objectives: Know how to assess and manage children and adolescents presenting with gynaecologic disorders to the Emergency department. Understand when referral for specialist paediatric gynaecology assessment is appropriate. Understand when referral to child protection team is appropriate. Ensure follow-up for children with sexually transmitted disease

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Abdominal Pain (ectopic pregnancy, endometriosis, complications of ovarian/corpus luteum cysts, pelvic inflammatory disease, ovarian torsion, complications of fibroids, dysmenorrhoea)	A knowledge of the differential diagnosis, diagnostic features, investigation and management of gynaecological abdominal pain An awareness of the more unusual presentations of ectopic pregnancy Diagnostic criteria for PID http://www.rcog.org.uk/	**Skills** To be able to undertake a pelvic examination and use a speculum. To be able to take microbiological swabs from female genitalia *Attitudes* To be sympathetic and respectful. Ensure a chaperon is present	LP LT GT PS ODA	OC DOPS CBD ME FCEM MCEM
Abnormal Vaginal Bleeding (menorrhagia, postmenopausal, post traumatic, cervicitis)	Also see Obstetric section for bleeding in pregnancy An awareness of the appropriate investigation, initial management and follow up of abnormal vaginal bleeding	As above	LP LT PS	LP OC MC ME FCEM MCEM
Other (vaginal prolapse, cervicitis, Bartholin's abscess, emergency contraception, sexual assault)	An awareness of the appropriate investigation and management of these conditions Knowledge of the options and use for post coital contraception within the emergency department	As above Acknowledge that personal beliefs e.g. regarding emergency contraception should not compromise a patients care		

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	An awareness of the need for forensic evidence from assault patients and follow up requirements e.g. screening for STD			

A14: Obstetrics

Objectives: To safely manage emergencies / problems in pregnancy and establish a diagnosis. See below for specific conditions

Specific paediatric objectives: Understand when referral to child protection team is appropriate. Ensure specialist follow-up for children who are pregnant.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Bleeding in pregnancy (inevitable abortion, missed abortion, threatened abortion, ectopic pregnancy, abruptio placentae, placenta praevia)	Normal physiological and anatomical changes of pregnancy Role of anti-D immunoglobin http://www.rcog.org.uk/ Safe and appropriate use of radiology in pregnancy	**Skills** Management of haemorrhagic shock including uterine displacement. Use of Pinard/Doppler *Attitudes* To ensure the early involvement of other specialists.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Eclampsia / HELLP syndrome	http://www.rcog.org.uk/ Management of D.I.C.	As above	As above	As above
Trauma in pregnancy	Awareness of how trauma and pregnancy impact on one another Obstetric complications associated with trauma Role of anti-D immunoglobin http://www.rcog.org.uk/ Safe and appropriate use of radiology in pregnancy	As above Ability to lead an obstetric trauma team	LP LT GT PS ODA	OC ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Emergency delivery (normal delivery, complications of labour and delivery e.g. cord prolapse)	Awareness of the normal physiological process and stages of delivery The management of common complications	Resuscitation of the newborn	LP LT GT PS ODA LS	OC ME FCEM MCEM Obstetrics

A15: Cardiology

Objectives: To undertake a structured approach to the history, examination and investigation of patients presenting with symptoms that may be due to a cardiological cause. To be able to interpret the results of investigations such as ECG, chest x-ray and cardiac marker testing. See below for specific conditions.

Specific paediatric objectives: To have the knowledge and skills to be able to assess and initiate management of babies and children presenting to the Emergency department with cardiological disorders. To understand the life-threatening nature of some of these conditions and when to ask for the help of a cardiologist or those with more specialised expertise. To know the indications for cardiological investigations including ECGs at all ages and echocardiography.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Chest pain	Causes (cardiac/vascular, respiratory gastrointestinal, locomotor, psychological, trauma/musculoskeletal, other)	Appropriate monitoring, treatment and investigation and be familiar with local guidelines for the management of patients with chest pain of possible cardiac origin and pulmonary embolism. To be able to risk stratify patients with chest pain and to be able to follow appropriate departmental pathways.	LP LT GT PS LS SL ODA ODB	OC MC CBD AUD ME FCEM MCEM
Acute coronary syndromes	Understand stable and unstable angina and myocardial infarction. (ACS) Pathophysiology of STEMI/non STEMI. Recognise ECG changes related to ACS, including right ventricular infarct and posterior infarct. Indications, contraindications and complications of thrombolysis. Adjunctive treatments. Indications for interventional cardiology. Causes of ST elevation in the absence	Recognise the need for urgent assessment and prompt treatment with thrombolysis when indicated. To be able to obtain assent for thrombolysis. To identify and treat complications such as arrhythmias, pulmonary oedema and hypotension.	LP LT GT PS LS ODA ODB	OC MC CBD AUD ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	of myocardial infarction. Management of left ventricular failure in the setting of myocardial infarction. Management of cardiogenic shock Pharmacology of cardiac drugs.			
Patients presenting with syncope.	Causes (cardiac, neurological, endocrine and others) To be able to risk stratify. Appropriate diagnostic testing of patients with syncope.	To be able to identify those patients that require admission, those that need out patient follow up and those that can be safely discharged. To work with support services closely e.g. Syncope Clinics etc.	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM
Patients presenting in heart failure.	Causes, precipitating factors and prognosis. Knowledge of which drugs to use, contraindications and side effects. Non-invasive ventilation. Understand pathophysiology of cardiac failure.	Initiate investigations to identify the cause. Initiate treatment including non-invasive ventilation. To be able to identify those who require invasive ventilation.	LP LT GT PS LS SL ODA	OC MC CBD ME FCEM MCEM
Arrhythmias	ECG recognition of narrow and broad complex tachycardias and bradycardias. Indications, contraindication and side effects of anti-arrhythmic drugs. Knowledge of ALS guidelines for management of arrhythmias.	To recognise and correctly identify arrhythmias. Ability to perform carotid sinus massage. Explain the valsalva manoeuvre. Perform DC cardioversion.	LP LT GT PS	OC MC CBD ME

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Recognition of complex arrhythmias, eg Wolff-Parkinson-White in AF Indications for pacing.	Manage arrhythmias according to Resuscitation Council Guidelines. Use of external pacing equipment. To be able to manage those patients haemodynamically compromised	LS SL ODA	FCEM MCEM
Severe haemodynamic compromise	Cardiogenic shock, secondary to myocardial infarction, massive PE, aortic dissection, valve rupture etc. Emergency imaging including echocardiogram and CT. Role of thrombolysis / angioplasty / surgery. Use of inotropes.	Recognise the need for rapid assessment. Initiate investigation and treatment. Liaise with appropriate in-patient teams and co-ordinate investigation.	LP LT GT PS LS ODA	OC CBD ME FCEM MCEM
Other topics.	Endocarditis Implantable cardiac devices External and internal emergent cardiac pacing Hypertensive emergencies Disorders of the myocardium and pericardium Valve disorders Cardiac transplantation		LP LT GT PS ODA ODB	OC DOPS ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Congenital abnormalities as they present in adults Indications for exercise ECG testing			
Syncope in children	Understand the common causes of syncope	Be able to form a differential diagnosis for syncope Be able to recognise those patients who need immediate treatment, investigations and admission and those who can be managed as outpatients	LP LT GT	OC MC FCEM

A16: Respiratory Medicine

Objectives: To be able to undertake a history and clinical examination of the respiratory system and interpret the clinical signs. Detailed knowledge of investigations of the respiratory system including interpretation of blood gases and chest x-ray. Principles of invasive and non-invasive ventilation. Principles of oxygen therapy. See below for specific conditions.

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Asthma	Pathophysiology of asthma. BTS Guidelines (http://www.brit_thoracic.org.uk/) Including who may be discharged. Detailed knowledge of drug therapy including magnesium. To recognise the difficulties of rapid sequence induction and ventilation in asthmatics	To be able to recognise acute severe asthma and institute emergency treatment. To be able to recognise early those patients with life threatening asthma who may require ventilation. To be able to organise safe discharge of patients suffering from an acute asthma exacerbation.	LP LT GT PS LS ODA	OC MC DOPS CBD AUD ME FCEM MCEM
Spontaneous pneumothorax.	Causes BTS Guidelines (http://www.brit_thoracic.org.uk/)	To be able to aspirate a pneumothorax and insert a intercostal drain using open and closed (Seldinger) techniques	LP LT GT PS SL ODA	OC DOPS ME FCEM MCEM
Pulmonary embolism	Causes and risk factors. Differential diagnosis. BTS Guidelines	Recognise the need for urgent investigation (ECG, blood gas, analysis, echocardiography, CTPA) and treatment.	LP LT GT	OC MC CBD

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
	(http://www.brit_thoracic.org.uk/) Severity stratification, investigation and initial treatment including anticoagulation, thrombolysis and thromboembolectomy Other embolic phenomena, e.g. septic, air, amniotic fluid		PS LS ODA	AUD ME FCEM MCEM
COPD	BTS Guidelines for the management of acute exacerbations of COPD. (http://www.brit_thoracic.org.uk/) Oxygen therapy, drug therapy. Management of type II respiratory failure. Pathophysiology of respiratory failure. Principles of non-invasive ventilation	To be able to initiate appropriate therapy. Recognise and treat precipitating factors (infection, PE, pneumothorax). Identify those who can be safely discharged. Assessment and timely initiation of non invasive ventilation in appropriate patients Recognition of those patients who need intubation and ventilation	LP LT GT PS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM
Pneumonia	Assessment and management of community acquired pneumonia according to BTS Guidelines. (http://www.brit_thoracic.org.uk/) Recognition of the severity of pneumonia. Knowledge of the causes of pneumonia and appropriate antibiotic therapy.	To be able to undertake appropriate investigation (chest x-ray, arterial blood gases, full blood count, blood cultures). To be able to record the markers of severity of pneumonia. Identify co-morbidity (COPD, HIV, Cancer). Identify those patients needing	LP LT GT PS ODA	OC MC CBD AUD ME FCEM MCEM

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
		ventilation and intensive care. To initiate O_2 / IV antibiotics. To identify those patients suitable for community care. To identify those patients with associated septicaemia.		
Respiratory failure	Identification of the causes of respiratory failure and knowledge of appropriate investigations. Indications for ventilation.	Recognition of those patients in respiratory failure. Initiate therapy, including oxygen and bag valve mask ventilation if needed. Identify those that need non-invasive ventilation/invasive ventilation.	LP LT GT PS LS ODA ODB	OC CBD ME FCEM MCEM
Other topics	Aspiration pneumonia. Acute lung injury Pleural effusion. Foreign body inhalation. Haemoptysis. Presentation of TB, neoplasia and lung abscess. Physical and chemical irritants Non cardiogenic pulmonary oedema Pneumomediastinum Adult cystic fibrosis		LP LT GT PS ODA	OC ME FCEM MCEM

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Acute stridor in children	Understand the infective, allergic and obstructive causes of this condition	Be able to institute appropriate acute airways management		
Asthma in children	Understand and be able to apply the British Thoracic Society (http://www.brit_thoracic.org.uk/) asthma guidelines for the management of asthma in children Understand the pharmacological therapies available and their indications and complications Understand the indications and complications of drugs used in intubating severely asthmatic patients	Be able to recognize patients with life-threatening asthma who may require ventilation Be able to provide bag valve mask ventilation and recognise the need for intubation in life-threatening asthma	LP LT GT	OC MC FCEM
Bronchiolitis	Understand the common presentations of bronchiolitis	Be able to prioritise and interpret investigations and treatment Be able to formulate a differential diagnosis Be able to recognize other conditions with similar presentations including cardiac causes	LP	OC
Pneumonia in children	Understand the principles of management of community-acquired pneumonia according to local antimicrobial resistance	Be able to recognize the patient requiring admission and possible ventilatory support	LT GT	MC FCEM
Pertussis	Understand the age-dependent presentations and indications for admission	Be able to initiate appropriate treatment of patient and contacts Be able to identify those at risk of life-threatening complications		

A17: Neurological Emergencies

Objectives: To be able to undertake a full neurological history and examination and interpret the clinical findings in the Emergency Department setting. To be able to undertake appropriate investigation, and manage those with life-threatening neurological emergencies. See below for specific conditions.

Specific paediatric objectives: To be able to perform a developmental assessment using typical milestones. To understand and use a range of communication skills with disabled children, their families and other professionals.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Headache	Causes of headache presenting to the Emergency Department, in particular ▪ Subarachnoid haemorrhage, AV malformation, meningitis, encephalitis. ▪ Glaucoma ▪ Raised intracranial pressure. ▪ Temporal arteritis. ▪ Migraine and cluster headaches. ▪ Sinusitis	Initiate investigations to explore the differential diagnosis. Appropriate use of CT, ESR, LP. To be able to identify unusual headaches and liaise with Radiology / Neurology / Neuro-surgery. To be able to identify after appropriate investigation those who are suffering from benign headache and therefore suitable to be discharged.	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM
Status epilepticus.	Understand the appropriate use of pharmacological agents Follow an algorithm for status epilepticus and be aware of complications and side effects Indications for general anaesthetic. Causes and complications. Diagnosis of pseudo-seizures	A, B, C, D, E approach. Initial focus on the readily remediable causes, but ability to retain a broader differential and appropriate investigation.	LP LT GT PS LS ODA	OC CBD ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Coma	Assessment including GCS. Causes and treatment. Indications for intubation and ventilation. Indications for imaging.	Stabilisation and initiation of investigations. Be able to undertake a detailed neurological examination of the comatose patient	LP LT GT PS LS SL ODA	OC MC DOPS CBD AUD ME FCEM MCEM
Meningitis, encephalitis, brain abscess	Clinical features, antiviral and antimicrobial therapy, complications. Prognosis and differential diagnosis. Predisposing conditions, eg HIV etc.	Differential diagnosis, Urgent treatment Appropriate investigations: CT, LP antigen testing etc.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Cerebrovascular disease	Knowledge of the Royal College of Physicians guidelines for the Management of Stroke and TIA (http://www.rcplondon.ac.uk/) The aetiology of stroke, TIAs and stroke syndromes. Subarachnoid haemorrhage. Carotid artery dissection. Venous sinus thrombosis.	Recognise the value of Stroke Units. Ensure timely referral for further investigation of those patients suffering a TIA. Indications for thrombolysis	LP LT GT PS ODA ODB	OC MC CBD ME FCEM MCEM
Others	Understand vertigo, ataxia and dystonia (causes and how to investigate and treat these patients). Detailed knowledge of the acute presentation of myasthenia gravis, Guillain-Barré syndrome, MS and tetanus.	Recognise own limitations and know how to obtain appropriate advice	LP LT GT PS	OC ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Knowledge of cranial nerve disorders. Knowledge of dementia & Parkinsonism. Knowledge of peripheral neuropathy and entrapment syndromes. Recognition of raised intracranial pressure and its initial treatment. Knowledge of the causes and management of hydrocephalus, shunts and their complications. Knowledge of the presentation of brain tumours.		ODA	
Meningitis/ Encephalitis in children	Understand the bacterial and viral aetiologies for all age groups and the appropriate antimicrobial / antiviral treatment	Be able to recognize and institute treatment for life-threatening complications, including raised intracranial pressure	LT LP	OC CBD
Seizures including status epilepticus in children	Know the differential diagnosis of seizures including febrile convulsions	Be able to recognize and treat the life-threatening complications Be able to institute appropriate management for status epilepticus (e.g. APLS protocol)		FCEM OC
Blocked shunt in children	Understand the presentation, complications and management of children with blocked shunts	Be able to tap a blocked shunt in a child with signs of impending herniation	LT LP	CBD
Headaches in children	Know the causes and differential diagnosis in children	Initiate investigation and management		FCEM

A18: Hepatic Disorders

Objectives: To be able to undertake focussed history and examination of those patients presenting with symptoms and signs related to underlying liver disease. See below for specific problems.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Liver failure (Acute, Acute on chronic)	Causes and precipitants. Specific complications including encephalopathy, sepsis, fluid and electrolyte balance, renal impairment, hypoglycaemia, coagulopathy, bleeding and malnutrition. Interpretation of LFTs	Initiative investigations to establish diagnosis and cause. To manage the complications of liver failure. Avoid precipitating/exacerbating drugs. Recognise the need to discuss with heptatologists	LP LT GT PS ODA	OC ME FCEM MCEM
Alcohol withdrawal syndrome	Identify this syndrome and its complications, e.g. Wernicke Korsakoff Syndrome.	Recognise the need for vitamin administration. Initiate appropriate drug treatment. Involve other specialties e.g. psychiatry, social services, General Practitioner, rehabilitation services. To be sympathetic and non judgemental.	LP LT GT PS ODA	OC ME FCEM MCEM
Other topics	Spontaneous bacterial peritonitis. Jaundice Liver transplant Alcoholic liver disease Hepatorenal syndrome		LP LT GT PS ODA	OC ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Portal hypertension and variceal haemorrhage Hepatitis		MFAEM	

A19: Toxicology

Objectives: To be able to assess and initiate the management of patients presenting with toxicological problems. To be able to recognise common toxidromes, understand the role of antidotes. To be able to access poisons information and understand the legal, psychiatric and social aspects of overdose. To understand the pharmacology of common poisons. See below for specific problems.

Specific paediatric objectives: To understand the epidemiology and be able to identify the major types of ingestions by age. To understand how to manage the adolescent refusing treatment for a life-threatening overdose. To be aware of over dose as a self-harm presentation and know that repeated ingestions may be a presentation of neglect

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Poisoning and drug overdose.	Initial management of common poisonings with salicylates, paracetamol, antidepressants, opioids, benzodiazepines, carbon monoxide, SSRIs. (This list is not exhaustive.) The role of drug testing / screening. To be able to identify the psychiatric aspects of overdose.	*Skills* Assess and provide emergency care. To be able to use poisons information. and know the role of charcoal and alkalisation and antidotes. *Attitudes* To be sympathetic and non judgemental and supportive to those patients who have taken an overdose.	LP LT GT PS ODA	OC CBD AUD ME FCEM MCEM
Illicit drugs	Psychological and physiological effects of opioids, amphetamines, ecstasy, cocaine and alcohol. To understand addiction, dependence and withdrawal. To understand the role of rehabilitation services.	Recognise illicit drug use, acquire accurate history, and be able to use poisons information services.	LP LT GT PS ODA	OC ME FCEM MCEM

Other topics.	Industrial toxicology, pesticides, etc., bioterrorism, envenomation Ingestion of mushrooms and berries Carbon monoxide poisoning		LP LT GT PS	OC ME FCEM MCEM

Toxicology

A20: Acid Base and Ventilatory disorders

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be able to interpret arterial blood gases and establish the diagnosis or differential diagnosis. To understand how blood gas analysis can be used to determine treatment and monitoring.	Interpretation of arterial blood gas results. Alveolar Gas equation and A-a Gradient Metabolic (including lactic) acidosis. Acute and chronic respiratory acidosis, respiratory alkalosis and metabolic alkalosis. Anion and osmolar gap. Role of sodium bicarbonate as a therapeutic agent.	To be able to take an arterial blood gas from the radial or femoral artery safely. Arterial line insertion	LP LT GT PS	OC DOPS CBD AUD ME FCEM MCEM

Acid Base disorders

A21: Fluid and Electrolytes

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To understand the common electrolyte and fluid compartment changes and manage them safely.	Knowledge of volume and composition of the different fluid compartments. Know the constituents of common crystalloid and colloid solutions. Understand the common electrolyte fluid disturbances for sodium, potassium, magnesium, calcium and chloride and how they are managed.	Use of appropriate type of fluid and volume. Avoidance of fluid overload. To be able to treat the common electrolyte disturbances safely.	LP LT GT PS LS ODA	OC CBD ME FCEM MCEM
To understand acid-base and electrolyte abnormalities in children	Know the aetiology and pathophysiology of dehydration. Be familiar with the presentation of dehydration. Understanding of the presentation, investigation and treatment of life threatening electrolyte disturbances	Be able to recognize the life-threatening complications of dehydration Be able to calculate and prescribe fluid replacement, maintenance fluids and replacement for ongoing losses as per APLS	As above	As above

A22: Renal Disease

Objectives: To be able to undertake history and examination, establish diagnosis, differential diagnosis and initiate management of common renal emergencies. See below for specific problems.

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
Acute renal failure	To be able to identify pre-renal uraemia, causes of oliguria, strategies to treat reversible causes of acute renal failure. Identify the patient with possible urinary tract obstruction. First line methods of investigating the severity and cause of acute renal failure. Indications for dialysis. Understand the different type of dialysis and their complications.	Use clinical findings and laboratory results to detect and treat pre renal uraemia and urinary tract obstruction. Initiate investigations to identify the cause and assess the severity of renal failure. Liaise with renal physicians.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Urinary tract infections	To be able to diagnose lower urinary tract infection, pyelonephritis and recognise the patient with an infected or obstructed urinary tract. To be able to select appropriate antimicrobial agents and identify those patients who warrant further investigation, e.g. male with UTI. To be able to interpret urine dipstick, microscopy and culture results.	Identify those patients who require admission, those who require out patient follow up or those whose treatment can continue with Primary Care.	LP LT GT PS	OC CBD AUD ME FCEM MCEM

Patients with renal replacement therapy.	Recognise common emergencies in patients with a renal transplant or those on dialysis	Timely recognition and emergency treatment of life threatening conditions in these patients e.g. hyperkalaemia. To be able to initiate emergency management, identify those who need emergent dialysis and liaise with renal physicians.	LP LT GT PS ODA ODB	OC ME FCEM MCEM
Other topics.	Rhabdomyolysis, acute and chronic renal failure, haemolytic uraemic syndrome, hepato-renal syndrome. Haematuria, proteinuria Diabetes		LP LT GT PS ODA	OC ME FCEM MCEM
UTI in children	Understand the presentation, aetiology and management of urinary tract infections in the acute setting at different age groups Understand the range and accuracy of different methods of urine collection	be able to interpret common urine microscopic and culture findings and institute appropriate treatment according to local policy	LP LT GT	FCEM

A23: Diabetes and Endocrinology

Objectives: To be able to assess and initiate management of patients presenting with diabetic and the other common endocrinology emergencies. To understand the pathophysiology. See below for specific problems.

Specific paediatric objectives: The recognition of the life threatening complications of inborn errors of metabolism e.g. presenting as coma, hypoglycaemia. To be able to measure children accurately and assess their growth using appropriate growth charts

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Diabetic ketoacidosis	To be able to make the diagnosis and recognise the precipitating causes and undertake appropriate investigations. To be aware of protocols for the management of diabetic ketoacidosis.	*Skills* To be able to prescribe fluids, insulin and potassium appropriately. *Attitudes* To be meticulous and conscientious about reviewing and testing these patients regularly.	LP LT GT PS ODA ODB	OC CBD AUD ME FCEM MCEM
Hyperosmolar non-ketotic coma.	To be able to make the diagnosis and identify precipitating causes.	To prescribed fluids, insulin and potassium appropriately.	As above	As above
Hypoglycaemia	Clinical features and precipitating causes.	To be able to measure blood glucose at the bedside. To be able to rapidly administer glucose and Glucagon.	LP LT GT PS	OC ME FCEM MCEM
Acute adreno cortical insufficiency.	To be able to identify the types and causes of insufficiency and to be able to recognise an adrenal crisis.	To be able to manage the emergency, initiate appropriate investigations and treatment.	LP LT GT PS ODA	OC CBD ME FCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Other topics	Thyroid storm and hypothyroid crisis Phaeo-chromocytoma Pituitary failure Diabetes Insipidus Complications of long-standing diabetes		LP LT GT PS ODA	OC ME FCEM MCEM
Diabetic ketoacidosis in children	Understand local and national guidelines for the management of diabetic ketoacidosis, including the principles of fluid management and insulin therapies	Be able to formulate a likely diagnosis and recognise features of the presentation and complications Be able to recognise the features of cerebral oedema and be able to provide emergency treatment Be able to perform appropriate investigations and act on the results Be able to prescribe fluid, electrolyte and insulin therapy according to local guidelines	LP LT GT PS ODA ODB	OC CBD AUD ME FCEM MCEM

A24: Haematology

Objectives: By taking appropriate history, examination and investigation identify the following common haematological emergencies. See below for specific problems.

Specific paediatric objectives: To identify children presenting to the Emergency department with common haematological disorders. To understand the normal age-dependent haematological blood values

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Sickle Cell crisis and other common haemoglobinopathies	Understand their pathogenesis. Clinical features and precipitating circumstances. Complications: Sepsis, aplasia, acute sequestration, haemolysis. Treatment of crises and complications	Manage fluid balance and analgesia. Liaison with haematology. Patient education and prevention.	LP LT GT PS ODA	OC CBD AUD ME FCEM MCEM
Disseminated intravascular coagulation.	Understand the pathophysiology. Diagnostic criteria. Recognition of underlying causes: trauma, massive transfusion, fluid, embolism, sepsis etc.	To initiate emergency treatment Close liaison with haematology Initiate investigations to identify the underlying cause.	LP LT GT PS ODA	OC ME FCEM MCEM

Other topics.	Anaemia, haemophilia, recognition of marrow failure, complications of anticoagulants, especially in the head injured patient. Management of overanticoagulation. ITP. Presentation of the common haematological malignancies.		LP LT GT PS ODA	OC ME FCEM MCEM
Leukaemia / lymphoma in children	Understand the presentations	Be able to recognize and ensure referral		
Purpura and bruising in children	Understand the causes of purpura	Be able to recognise features in the presentation which suggest serious pathology including meningococcemia and leukaemia Be able to manage life- threatening causes of purpura Be able to recognize patterns suggestive of child abuse and organise care	LP LT GT	ME FCEM

A25: Infectious Diseases and Sepsis

Objectives: To be able to identify after complete history, examination and investigation those patients suffering from infectious diseases. See below for specific problems.

Specific paediatric objectives: To understand the epidemiology, pathology and 'natural history' of common infections of the newborn and children in Britain and the public health policies associated with them. To be able to follow agreed national and local guidelines on the notification of infectious diseases

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
In general	To be able to identify those patients who present as infectious disease emergencies, e.g. malaria, meningococcal septicaemia, Weils' disease, Tuberculosis, necrotising fasciitis and HIV. To understand the importance of universal precautions and vaccination (Tetanus Toxoid, Hepatitis B).	To recognise those patients whose presentation is due to infectious disease, initiate appropriate antibiotic and supportive therapy.	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM
Sepsis	Definition of sepsis, severe sepsis, septic shock and systemic inflammatory response syndrome. Early goal directed therapy. Complications of sepsis. Typical sites of origin and microbiology. Understand the pathophysiology of sepsis causing shock.	Assess severity. Select appropriate investigations. Recognise and rapidly resuscitate sick patients with presumed meningitis, toxic shock syndrome and severe sepsis / shock. Indications for vasopressors, and their initiation. To be able to select the appropriate antibiotic.	LP LT GT PS ODA ODB	OC CBD ME FCEM MCEM

Immunocompromised hosts.	To be able to identify those patients who are immunocompromised and have atypical presentation of infection (e.g. the elderly, those on steroids or other immunosuppressive drugs, chemotherapy, HIV).	High index of suspicion of infection especially in the higher risk patient population. To liase with the appropriate specialists regarding investigation and treatment	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Needlestick injury.	To identify those patients who need prophylactic treatment (HIV, hepatitis B, Tetanus). To understand the departmental needle policy.	Selection of appropriate investigations and treatments. Undertake procedures safely and ensure safe disposal of sharps. Recognise the importance of universal precautions.	LP LT GT PS	OC AUD ME FCEM MCEM
Fever from abroad.	Likely causes, especially malaria, typhoid, TB and sexually transmitted diseases.	To be able to take a travel history and check vaccination/prophylaxis especially compliance. To be able to select appropriate investigations.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Febrile child	Understand the implication of fever without a focus in different age groups	Be able to appropriately investigate and treat children with fever without a focus in all age groups	)) LP	OC
Kawasaki disease	Understand and recognise the signs of Kawasaki disease	Be able to recognise and manage life-threatening complications of Kawasaki Disease	) LT))	CBD FCEM

A26: Dermatology

Objectives: To be able to assess patients with dermatological problems. To be able to describe dermatological lesions and recognise dermatological emergencies. See below for specific problems.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Life-threatening dermatological emergencies (e.g. toxic epidermal necrolysis, Steven Johnson syndrome, staphylococcal scalded skin syndrome erythroderma, pemphigus,	Causes, emergency management and complications.	Assess mucosal involvement and systemic effects including estimation of fluid requirements. Start treatment rapidly. Liaise with dermatological and ophthalmology specialists.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Urticaria Angio-oedema Anaphylaxis	Understand precipitating causes associations and complications. Understand the pathophysiology of these conditions.	Assess airway patency and manage upper airway obstruction and initiate rapid treatment. Knowledge of anaphylaxis guidelines. (http://www.resus.org.uk) To be able to safely identify those who are suitable for discharge and those who need further observation. Recognise the importance of a follow up (allergy clinic) and the role of the Epipen.	LP LT GT PS LS ODA	OC CBD ME FCEM MCEM
Cellulitis, erysipelas, impetigo, necrotising infection	Causal microbial agents and appropriate antibiotics. Knowledge of associated underlying problems	Identify those patients who are systemically unwell and require admission, those who may be managed as an outpatient. To identify those who have abscess formation and organise drainage.	LP LT GT PS ODA	OC MC CBD AUD ME FCEM MCEM

Cutaneous Drug Reactions	Patterns and common precipitants. Serious complications, e.g. Stevens-Johnson syndrome.	To be able to assess mucosal involvement, especially the airway.	LP LT GT PS ODA	OC ME FCEM MCEM
Other topics.	Dermatitis, eczema, viral xanthems, macular rashes, maculopapular lesions Erythema multiforme and erythema nodosum Herpes Zoster. Dermatological manifestations of underlying systemic and neoplastic diseases. Skin malignancies. Blistering and purpuric rashes, especially meningococcal septicaemia.		LP LT GT PS ODA	OC ME FCEM MCEM
Eczema and seborrheic dermatitis in children	Understand the common treatments for eczema and reasons for treatment failure	Be able to manage eczema and seborrheic dermatitis Be able to advise patients and families about disease process and rationale for treatment	))) LP) LT) GT)	 OC FCEM
Rash in childhood	Know common childhood exanthemata.	Be able to advise on risk of contact with e.g. pregnant women	))	

A27: Rheumatology

Objectives: To be able to assess and initiate management of patients presenting with rheumatological problems, e.g. exacerbations of neck pain, shoulder pain, back pain. Specifically to be able to examine all joints, and interpret signs of rheumatological disease. See below for specific problems.

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Acute monoarthritis	Causes and disease associations	To be able to initiate investigations Joint aspiration. To explore the differential diagnosis and specifically to identify those patients who may have septic arthritis. Identify those patients who require admission.	LP LT GT PS ODA ODB	OC MC DOPS ME FCEM MCEM
Acute low back pain.	See Spinal Conditions above To know the causes – malignant, septic, locomotor, renal, urological, neurological, AAA. Cauda equina syndrome. Guidelines for the treatment and investigation of acute low back pain.	To be able to initiate investigations to explore the differential diagnosis. Identify when to consult with other specialties e.g. orthopaedics /neurosurgery Understand when plain radiology is required.	LP LT GT PS	OC MC CBD ME FCEM MCEM
Other topics	Acute polyarthritis and Crystal arthropathies Osteoarthritis		LP LT GT	OC ME FCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
	Rheumatoid arthritis (including cervical spine and masking of septic arthritis) Tendonitis / Tenosynovitis Bursitis Peripheral nerve syndromes Complications of drugs used in rheumatic diseases Reflex sympathetic dystrophy		PS ODA	MCEM

A28: Child Protection and Children in Special Circumstances

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Physical abuse	Understand the signs of physical abuse Understand the signs of common injury or illness that may mimic physical abuse Understand the common fractures seen in physical abuse	Be able to recognise patterns of injury or illness which might suggest child abuse Be able to initiate child protection procedures as per local policy	LP LT GT	OC CBD FCEM
Sexual abuse	Understand the ways in which children might reveal sexual abuse Understand and recognise the signs and symptoms of sexual abuse. Understand the importance of seeking help from experienced colleagues help in the assessment of children where child abuse might be an issue.	Be able to institute appropriate child protection procedures if sexual abuse suspected.	LP LT GT	OC CBD FCEM
Neglect	**Understand the ways in which children may present with neglect**	Be able to refer appropriately	LP	OC
Apnoeic episodes as an infant and a presentation of NAI/factitious or induced injury	Be aware of this as a possible presentation of imposed airway obstruction and know the indicators that this may be the case Understand the life- threatening nature of imposed airway obstruction	Refer to an experienced colleague for help	LP LT GT	OC CBD FCEM
Best Practice	Know the relevant national documents which underpin child protection policy in the emergency setting	Ability to translate recommendations into appropriate actions on a case by case basis and follow local guidelines		

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Legal framework	Understands consent, capacity to take decisions, and confidentiality in relation to children, and is aware of the issues of parental responsibility	Can engage children appropriately in their own decisions and protects the best interests of the child at all times	LP LT GT	OC FCEM
Child protection and welfare systems outside of hospitals	To have a basic understanding of the roles of other systems in protecting children, eg Social Services, the Child Protection Register, Police Child Protection and Domestic Violence Units, SureStart, Childline, Health Visitors, School Nurses, Area Child Protection Committee, Community Paediatricians	To respect the roles of these other agencies and use them appropriately To be aware of local agencies available, including the voluntary sector (e.g. drug and alcohol support)	LP GT LT	OC CBDS FCEM
Categorisation of child protection and welfare issues	Understand the types of issues and terminology to describe these issues, e.g. neglect, physical abuse, factitious or induced illness (FII), looked-after children, children with special needs or learning difficulties	Accurately identify such problems in children at risk and be able to convey concerns to others	PS	FCEM
Ability to identify children in need	Know the range of conditions presenting as a symptom of abuse or psychological distress, e.g. deliberate self harm, aggression or risk-taking behaviour, recurrent abdominal pain, headaches or faints, recurrent attendances in young children	Reliably picks up clues which should give rise to concern Refers concerns on in all cases	LP LT GT	OC FCEM CBD
Documentation of concerns	Knows national guidance on how much documentation is required	Reliably documents concerns, conversations with other professionals, and detailed descriptions of history or examination findings as appropriate.	PS	CBD
Infants at risk	Know which infants are most at risk	Can identify such infants in the emergency setting, e.g. excessive crying, infants with fractures, social circumstances which increase risk	LP	

Toddlers	Have a basic understanding of common problems e.g. toddler tantrums, food refusal	Refers problems back to the primary care team appropriately		
Schooling	To have an awareness of the effect of bullying, truancy, and work pressure upon children	Reports concerns to the school or school nurse, and involve parents where appropriate		

A29: Neonatology

Objectives: To have the knowledge and skills to be able to assess and manage neonates presenting to the Emergency department. To be able to formulate a differential diagnosis for a variety of common presenting symptoms. To be able to lead a resuscitation team as per APLS / EPLS / NLS guidelines. To understand the pathophysiological processes leading to neonatal cardio-pulmonary instability, including the role of thermoregulation. To be able to identify neonates requiring admission, requiring midwife or health visitor input and identify mothers requiring additional support

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Cyanotic/non cyanotic congenital heart disease	Importance and relevance of duct dependant heart disease	Be able to identify those neonates requiring urgent specialist opinion	ILP LT GT	OC FCEM
Sepsis	Know symptoms and signs of sepsis in children e.g., hypothermia, apnoea Understand the importance of timely treatment and the range of treatments for likely pathogens	Undertake resuscitation and appropriate investigations	LP LT GT	CBD FCEM

Neonatology

A30: Environmental Emergencies

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To identify, resuscitate, treat and appropriately refer environmental emergencies.	Heat stroke and heat exhaustion Drug related hyperthermias Hypothermia/Frost bite Electric burns / electric shock / lightning Decompression illness Barotrauma Near drowning Radiation exposure/ safety Industrial chemical incidents. High altitude cerebral / pulmonary oedema Bites and envenomation (snakes)	A, B, C, D approach To be able to provide specific treatments e.g. cooling / warming. Recognise associated problems e.g. myoglobinuria.	LP LT GT PS LS SL ODA	OC ME DOPS FCEM MCEM

Environmental emergencies

A31: Oncology

Specific paediatric objectives: Identify children presenting to the Emergency department with common oncological disorders

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Complications related to local tumour progression.	Acute spinal cord compression (Cauda Equina syndrome). Upper airway obstruction. Malignant pericardial effusion. SVC syndrome. Malignant pleural effusion. ↑ ICP	To be able to recognise and provide initial emergency management Involve specialists urgently.	LP LT GT PS ODA	OC ME FCEM MCEM
Biochemical complications of malignancy	Hypercalcaemia of malignancy. Inappropriate ADH. Adrenocortical insufficiency.	To be able to test for, diagnose and initiate treatment for these conditions.	LP LT GT PS ODA	OC ME FCEM MCEM
Complications related to myelosuppression (including sepsis, thrombocytopenia and haemorrhage)	To identify those patients at risk and to take appropriate microbiological samples. Initiate appropriate antibiotics.	Recognise urgency and need for oncological involvement.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Other topics	Paraneoplastic syndromes. Care of the terminally ill Pain management DNR orders / living wills		LP LT GT PS	OC CBD ME FCEM MCEM

A32: Psychiatry

Specific paediatric objectives:

- Understand normal behaviour patterns including response to injury and illness from birth to adolescence
- Be able to recognise abnormal child behaviour patterns
- Understand the influence of physical, emotional and social factors on development and health
- Understand excessive crying, its causes and the resources available to help families
- Understand about the roles of other professions, agencies and the voluntary sector
- Understand the emotional impact of hospitalisation on children
- Be able to recognise fabricated illness and injury in children
- Understand adolescent behaviour in maturation
- Be able to recognise, and refer patients presenting with self-harm
- Understand about the multi-disciplinary nature of child and adolescent mental health services
- Understand the signs and symptoms that indicate serious conditions such as depression and psychosis

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Deliberate self-harm/parasuicide	NICE guidelines for deliberate self-harm. http://www.nice.org.uk/ Risk factors for suicide. Liaison with psychiatric services.	Assessment of suicide risk. Management within the Emergency Department Appropriate referral and discharge. Identification of co-morbid psychiatric problems. Importance of prevention	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM MCEM

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Acute psychosis	Causes including organic. Initial management options including drug indications/contraindications.	Establish if organic causes present.	LP LT GT PS ODA	OC CBD ME FCEM MCEM
Alcohol and drug / substance related problems (intoxication, dependence, withdrawal)	See Toxicology section above Identification for those patients warranting admission. Recognition of associated co-morbidities. Identification of those who are alcohol and drug / substance dependant.	Recognition of associated conditions, e.g. head injury.	LP LT GT PS ODA	LP OC MC CBD ME FCEM MCEM
Other topics	Violent behaviour (domestic, sexual assault, staff safety, restraint) Violence guideline: http://www.nice.org.uk/ Dementia – assessment and causes Difficult patient (malingering, personality disorder, frequent attender) Mental Health Law (UK countries) and place of safety	Management including de-escalation techniques Working with other agencies	LP LT GT PS ODA	OC MC CBD ME FCEM MCEM

Self-harm in children and adolescents	**Recognise this as an expression of distress, acute or long-term** Recognise self- harm as indicating serious emotional distress	To be able to refer to the Child and Adolescent Mental Health Service team	LP LT GT	OC FCEM

Psychiatry

A33: Principles of Pre-hospital care

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be sufficiently familiar with pre-hospital care systems to ensure optimal patient care across the pre-hospital / E.D. interface. This is the minimum requirement of all Emergency Physicians.	To have sufficient experience of pre-hospital care so as to understand the organisation of pre-hospital services, scene safety, protective clothing, patient care (including splintage and spinal immobilisation, resuscitation in the pre-hospital environment and patient transport). To be able to communicate effectively to the next link in the evacuation chain. To be able to prioritorise multiple casualties.	To be able to work closely with Pre-Hospital staff, providing clear and concise “on-line” advice. Take a handover from the ambulance team. To be supportive and understanding, ensuring Pre-Hospital staff are part of the Emergency Department team.	LP LT GT PS LS ODA(Ambulance Service/BASICS/ HEMS) ODB	OC MC ME FCEM MCEM

Pre-hospital care

A34: Major Incident Management

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To understand the role of the E.D. and its staff in major incidents, to understand the planning and to be prepared for a major incident. to be able to take a senior coordinating and command role in the reception phase of a major incident in the E.D. To know the role of the Medical Incident Officer.	Definition of major incident. Understand typical major incident plan. To participate in major incident exercises. Understand the importance of triage, communication, equipment and documentation for the major incident. To understand the term CBRN and its implications for casualty handling and care. To be familiar with PPE and how to use it.	To be a good communicator, (to be able to use the radio) calm, co-operative, flexible and demonstrate leadership within a team. Ability to triage. Work with other agencies	LP LT GT PS MIMMS SACC ODA	OC MC CBD ME FCEM MCEM

Major Incident

A35: Legal Aspects of Emergency Medicine

Objectives	Knowledge	Skills / Attitudes	Learning	Assessment
To be familiar and compliant with the legal aspects of Emergency Medicine.	Consent, capacity to consent, refusal to consent, and documentation. Reporting to the Coroner / Procurator Fiscal Rules 1984 and 1999 The role of the Expert Witness Privacy and confidentiality (access to Health Records Act 1990/ Data Protection Act 1998) Mental Health Act Child abuse, domestic violence. Medical conditions and driving. Living Wills Death Certificates. Forensic: evidence, drug and alcohol testing, sexual assault. Road Traffic Act and Police Reform Act 2002, Giving evidence in Court. Freedom of Information Act 2000 Children's Act 1989 and 2004	To always have the patient's interest as central, whilst working within the legal framework and with legal agencies. Seek senior advice, including Medical Defence Societies and hospital legal departments. To be sensitive and sympathetic.	LP LT GT PS	OC ME FCEM MCEM

A36: Research

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
Literature evaluation	How to critically appraise the primary literature (especially therapy, diagnostic and meta-analysis papers).	Be able to search the common data bases (Medline, EMbase, CINAHL and Cochrane Library)	LP LT GT PS	ME FCEM MCEM
Which research design is best for the research question?	Common research designs: RCTs, Cohort studies, case studies. Sample size estimation and power calculation	Select the right design for the right question	LP LT GT PS	ME FCEM MCEM
Statistical testing	Hypothesis testing including type I and II errors Common parametric & non-parametric tests and confidence intervals. Understand RR, AR, NNT Diagnostic test descriptions (sensitivity, specificity, likelihood ratios, ppv npv)		LP LT GT PS	ME FCEM MCEM
Optional**:** Research question formulation.	Key characteristics of a good research question. Hypothesis formulation / research design. Ethical approval and application process.	To be persistent with the research idea, seek help from experienced researchers. To be able to use commonly available computer programmes e.g. SPSS.	LP LT GT PS	
Optional: Publication.	To know the standard research paper layout. Best BETS layout.	To develop authorship skills working with experienced authors.	LP LT	

Problem	Knowledge	Skills / Attitudes	Learning	Assessment
			GT PS	
Optional: Funding.	To know the common funding sources, e.g. College/BAEM, NHS R&D, MRC, Welcome Foundation.			

A37: Management

Appendix 2: - Radiology

a) Safety Issues/Requirements
b) Knowledge of and indications for the following common studies in Emergency Medicine (and interpretation where asterisked)

Plain radiology

- "Trauma" series*
- Chest*
- Abdomen*
- Limbs*
- Joints*
- Shoulder*
- Elbow *
- Wrist*
- Hand*
- Hip and Pelvis*
- Knee*
- Ankle*
- Foot*
- Spine (Cervical*, Thoracic*, Lumbo-sacral*)
- Skull*
- Soft tissue*

Contrast radiology

- Angiography (Limb, Abdominal, Pulmonary)
- IVP*
- Cystography and urethrography

Computed Tomography (CT)

- Brain
- C-spine
- Thoracic and lumbar spine
- Chest (including CT Pulmonary Angiography)
- Abdomen (including CT Urography)
- Limbs and joints
- Facial bones

Magnetic Resonance Imaging (MRI)

- Brain
- Spine
- Joints – wrist, knee

Ultrasound

- Focussed Abdominal Sonography In Trauma (F.A.S.T.)
- Vascular Doppler and Duplex
- Abdominal
- Pelvic, including pregnancy
- Limb
- Echocardiography
- Placement of central lines*

c) Knowledge of Normal Variants

- **Chest X-ray**
- **Abdominal x-ray**
- **CT Brain**
- **C-spine x-ray**
- Limb views

d) Medical precautions in Radiology

- **Contrast and allergic reactions**
- **Pregnancy and shielding**
- **The unstable patient – transfer and monitoring in radiology**

Appendix 2:- Procedures and Skills

Airway Techniques

a) **Basic Airway Techniques**
b) **Bag Valve Mask Ventilation / Mapelson "C" circuit**
c) **Intermediate airways – laryngeal mask, other**
d) **Tracheal Intubation**
   - Nasotracheal
   - Orotracheal

e) Rapid sequence induction (not in children)
f) Difficult intubation techniques (bougies, introducers and alternative laryngoscopes)
g) **Mechanical ventilation (not in children)**
h) Surgical Airway Techniques
   - Percutaneous transtracheal ventilation
   - Cricothyroidotomy

i) **Techniques for upper airway obstruction**
   - Heimlich manoeuvre

j) **Pharmacological agents in airway management**
k) **Tracheal suctioning**

Pulmonary Procedures

a) **Oxygen delivery techniques**
b) **Needles thoracentesis**
c) **Tube thoracostomy**
d) **Non-invasive ventilation (not in children)**
   - CPAP
   - BiPAP

Cardiac Procedures

a) **Cardiopulmonary resuscitation (CPR)**
b) **Carotid Sinus Massage**
c) **Direct Current Electrical Cardioversion**

d) Defibrillation
e) Emergency Transthoracic Cardiac Pacing
f) Pericardiocentesis
g) Resuscitative thoracotomy (not in children)

Vascular Access Techniques and Volume Support Techniques

a) Arterial puncture and cannulation
b) Peripheral intravenous access
c) High flow infusion techniques
d) Venous cutdown (not in children)
e) Central venous catheterisation techniques (including ultrasound guided)

- Subclavian (not in children)
- Internal jugular (not in children)
- Femoral

f) CVP measurements
g) Intraosseous infusion
h) Endotracheal drug administration
i) Blood and Blood Product Transfusion
j) Accessing indwelling vascular lines

Vital Sign Measurement

a) Clinical vital signs
b) Non-invasive monitoring
c) Invasive monitoring

Gastrointestinal Procedures

a) Orogastric tube placement
b) Balloon tamponade of gastroesophageal varices
c) Diagnostic peritoneal lavage
d) Hernia reduction
e) Proctoscopy and sigmoidoscopy
f) Management of thrombosed external haemorrhoids
g) Management of rectal foreign bodies

h) Management of rectal prolapse

Musculoskeletal Techniques

a) Immobilisation techniques

- Application of a Broad Arm Sling
- Application of a Collar and Cuff
- Application of a Knee Immobiliser
- Application of a Donway / Hare Splint
- Application of a Thomas Splint
- Pelvic Stabilisation Techniques

b) Fracture/dislocation reduction techniques

- Shoulder Dislocation
- Elbow Dislocation
- Pulled elbow
- Phalangeal Dislocation
- Supracondylar Fracture with limb threatening vascular compromise
- Colles Fracture
- Bennett's Fracture
- Simple phalangeal fractures and dislocations
- Patellar Dislocation
- Knee Dislocation with limb threatening vascular compromise
- Ankle, subtalar, toe dislocations

c) Plaster Techniques

- Above and below elbow backslab and POP
- Scaphoid POP
- Bennett's POP
- Volar Splint
- U SLAB
- Above and below knee backslab and POP

d) Spinal immobilisation techniques/log rolling
e) Arthrocentesis
f) Compartment syndrome Management

Genitourinary Techniques

a) Bladder catheterisation
- Urethral catheter
- Suprapubic catheterisation (not in children)

b) Testicular detorsion
c) Manual Reduction Paraphimosis
d) Needle Aspiration of Corpora Cavernosa

Obstetric and Gynaecological Procedures

a) Delivery
- Normal delivery
- Abnormal delivery

b) Examination of the sexual assault victim
c) Gynaecological Speculum Examination

Neurological Procedures

a) Lumbar puncture and CSF examination

Ophthalmic Procedures

b) Use of slit lamp
c) Rust ring removal
d) Ocular foreign body removal

ENT Procedures

a) Control of epistaxis
- Anterior packing
- Posterior packing and balloon placement

b) Foreign body removal
c) Aural toilet/wick insertion

Emergency Dental Procedures

a) Dental anaesthesia
b) Dental socket suture

Emergency Department Diagnostic Ultrasound – F.A.S.T

Heat Emergency Procedures

a) Management of Hypothermia
b) Management of Hyperthermia

Universal Precautions

APPENDIX F:

ACCS

INTENSIVE CARE MEDICINE SYLLABUS

During the ICM module all ACCS trainees will be expected to complete the Preliminary syllabus (Annex 1) for which the indicative duration is 3 months..

ACCS trainees doing more than 3 months training in ICM will follow the Core syllabus in part or in full (Annex 2) for which the indicative duration is 6 months. The exact units will depend on the length of the ICM module and local circumstances.

Any trainee who is unable for any reason satisfactorily to attain all the core competences during their ACCS training must complete the remainder as part of their primary specialty CCT programme if they wish to pursue a joint CCT in ICM. Core ICM training is also a part of the Curriculum for the CCT in Anaesthesia and similarly, if the competences are not acquired during ACCS, they must be acquired during Specialty training.

ANNEX 1 to APPENDIX F

ICM TRAINEES PRELIMINARY TRAINING IN ICM

Trainees will be expected to demonstrate a level of knowledge and skills which permit them to identify acutely ill patients, initiate appropriate emergency management, stabilise them for transfer, plan their care for the first hour in ICU, and identify serious complications which may arise during intensive care.

The assessments will be conducted in the workplace, usually during the third month.

The trainee will be assessed in the following:

a) CPR skills (if not already assessed in anaesthetic or internal medicine modules, or no ALS course in preceding 12 months)
b) Either:
    i. Airway management, *or*
    ii. Rapid sequence induction and tracheal intubation (3.i.c, in anaesthetic module)
c) Initial assessment of competence in the management of the acutely ill patient
d) Organ support and practical procedures
e) Communication skills, clinical judgement, attitudes and behaviour

Notes and guidance:

3.iii.a) Cardiopulmonary resuscitation assessment: See section 3.i.d
If within the last 12 months the trainee has been assessed as competent in CPR in either the anaesthetic or the intensive care modules, or has successfully undertaken an ALS course, this section can be omitted. If not, then the assessment must be performed using the forms in section 3.i.d

3.iii.b) Airway management, or Rapid Sequence Induction and tracheal intubation: (See also section 3.i.c)
These assessments may be omitted if the trainee has already successfully completed section 3.i.c (in the anaesthetic module). If not, then the airway management competences must be assessed. These assessments may be conducted either in the intensive care unit (if a suitable opportunity arises) or in theatres, whichever is the most appropriate. Patient safety must be assured at all times.

3.iii.c and 3.iii.d

Clinical skills & Knowledge:
The clinical skills that are to be assessed must be supported by knowledge of the presentation, identification and management of common medical and surgical conditions which may result in critical illness. The focus is on first-point-of-contact, and the initial stabilisation of a sick patient. This will include knowledge of applied physiology and pharmacology, and an understanding of appropriate methods for basic organ system support and their potential complications.

Setting:
Patients: Patients receiving intensive and high dependency care or acute care
Location: Intensive or high dependency care units, wards and Emergency Departments (ED) and other clinical areas caring for acutely ill patients
Situations: Supervised delivery of patient care

3.iii.b) Airway management skills

Object: to ensure that the trainee can manage an airway safely in the obtunded patient.

These assessments may be omitted if the trainee has successfully completed section 3.i.c (in the anaesthetic module). If not, then the airway management competences must be assessed. These may be conducted either in the intensive care unit (if a suitable opportunity arises) or in theatres, whichever is the most appropriate.

In these assessments the trainee demonstrates how to maintain a clear airway in an unconscious or anaesthetised patient by simple positional manoeuvres and the use of Guedel or nasopharyngeal airways; demonstrates or describes the use of the laryngeal mask airway; demonstrates bag and mask ventilation in an unconscious or anaesthetised patient; prepares a ventilator for use, with a basic set of safe settings; selects and prepares appropriate drugs and equipment for intubation of a patient with acute hypoxaemia; describes or demonstrates methods for minimising the risk of aspiration of gastric contents, including safe application of cricoid pressure (Sellick's manoeuvre); describes the actions required in the event of accidental displacement of an oral-tracheal tube and a tracheostomy tube; and demonstrates or describes the procedure for changing a tracheostomy tube, testing for correct placement.

Name of trainee:_____

The Trainee:

	Assessor
Demonstrates how to maintain a clear airway in unconscious patient	
Demonstrates safe use of airway adjuncts	
Demonstrates safe use of the laryngeal mask airway	
Demonstrates effective bag & mask ventilation (patient or mannequin)	
Prepares ventilator for use, with a basic set of safe settings	
Selects, prepares drugs & equipment for intubation in acute hypoxaemia	
Describes, demonstrates methods for minimising gastric aspiration risk	
Describes actions required for accidental displacement of endotracheal tube	
Describes or demonstrates procedure for displacement of, and elective replacement of, a tracheostomy tube	
These assessments were completed satisfactorily	

Signed …….. Print name…… …….. .Date ……..

Appointment ……..

Signed …… Print name ……... Date……..……

Appointment……

3.iii.c INITIAL ASSESSMENT OF COMPETENCE IN THE MANAGEMENT OF THE ACUTELY ILL PATIENT (form 3.ii.b)

Object: to ensure that the trainee can take simple diagnostic steps and safely manage common medical emergencies.

These competences may already have been assessed during Foundation Year training, or during training in GIM. Trainers should ensure that trainees have retained these skills if they were acquired some time before starting an ICM training post. The competences are specifically directed at the care of the acutely ill patient, and must be assessed in addition to generic skills in patient care such as history taking and clinical examination. The assessments will be conducted in acute care environments, which may include the wards, medical admissions units, accident and emergency departments, postoperative recovery areas, and intensive care units. Assessments will normally be undertaken when suitable opportunities arise, and will usually be performed by different assessors at different times.

Name of trainee:_____

The Trainee:	Assessor
Promptly assesses airway, breathing, circulation in the collapsed patient	
Identifies and responds to acutely abnormal physiology	
Establishes venous access with attention to infection control measures	
Delivers a fluid challenge safely to an acutely ill patient	
Reassesses acutely ill patients promptly following initiation of treatment	
Requests senior or more experienced help when appropriate	
Undertakes a secondary survey to establish a differential diagnosis	
Obtains an arterial blood gas sample safely, interprets results correctly	
Manages patients with impaired consciousness including fits	
Describes safe and effective use of common analgesic drugs	
Explains the principles of managing a patient following self-poisoning	
Describes the management of a patient with an acute psychosis	
Knows and applies local protocols for acute medical conditions	
Ensures safe continuing care of patients between shifts/on call staff	
Considers appropriateness of interventions according to patients' wishes	

Comments, or advice given by supervisors:

Assessments:

Signed …….. Print name…… …….. .Date …..……..

Appointment ……..……..

Signed ……. Print name ……... Date……..……

Appointment…….……

3.iii.d) Organ support and practical procedures

Object: to ensure that the trainee has developed competence at basic technical skills and understanding of the simpler aspects of organ support.
These assessments will usually be conducted in the ICU and related clinical environments. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box.

Name of trainee:_____

The Trainee:

	Assessor
Demonstrates aseptic peripheral venous cannulation (+ local anaesthetic)	
Demonstrates aseptic arterial cannulation (+ local anaesthetic)	
Discusses indications for and contraindications to arterial cannulation	
Demonstrates aseptic placement of central venous catheter (CVC)	
Discusses indications, contraindications & complications of CVCs	
Connects mechanical ventilator and selects initial settings	
Describes safe use of drugs to facilitate mechanical ventilation	
Describes safe management of a patient 'fighting the ventilator'	
Describes principles of monitoring cardiovascular function	
Describes principles of monitoring respiratory function	
Describes appropriate response to oliguria	
Describes advice for ward staff receiving a patient with a tracheostomy	
Prescribes safe administration of vasoactive drugs, electrolytes	
These assessments were completed satisfactorily	

IF NO, GIVE REASONS:

Assessments:

Signed …….. Print name…… …….. .Date ……..

Appointment ……..

Signed …… Print name ……... Date……

Appointment……

3.iii.e) Assessment of communication skills, attitudes and behaviour

These assessments will be conducted using the examples contained in Appendix K, which are provided for guidance only, and not as prescriptive or exclusive standards. Suboptimal performance must be recognised and discussed with the trainee as early as possible and appropriate remedial action taken. Trainees must not be presented with an adverse assessment at the end of their ICM module without extensive prior warning and attempts to resolve the problem(s) in a supportive and confidential manner.

Object: These attributes are required to assure good working relationships with colleagues, patients and relatives. They are an essential part of professional practice an must be assessed favourable before the trainee is recommended for progression to the next stage of training. They should be recorded using the form contained in Annex K. Any 'cause for concern' must be qualified with information. This form should be completed annually at least once during the ICM module, if difficulties arise, it can be used more frequently. The preferred method of assessment is multi-source feedback, but the observations made whilst using the other three tools should not be overlooked.

ANNEX 2 to APPENDIX F

ASSESMENT OF COMPETENCE IN ICM AT CORE (STEP 1)
SPECIALTY REGISTRAR LEVEL

This section contains the forms which must be completed by trainers and trainee to confirm that the trainee has satisfactorily met the minimum standards required for achieving competence in ICM at ST Core (Step 1) Level, and has completed the prior elements of the entire training programme satisfactorily.

Assessments should be performed by the Board Tutor or relevant College Tutor, or other designated consultants who meet the criteria to be trainers. The precise way in which the assessments are conducted will depend on circumstances and local practice. It will often be possible for assessments to take place during routine clinical work, and for different elements to have been assessed by different assessors at different times. However, the assessments must include all the items listed in the following forms, and each competency grouping must have been assessed by two consultants, who confirm that the trainee has achieved those competences. The assessments must be signed by both assessors and by the trainee. When individual topics within each grouping are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box.

Assessments of a more general nature should be carried out using a multisource feedback (MSF) process at least twice during Core training. If deficits in attitudes and inter-personal skills are demonstrated by these MSFs it may be necessary to carry out more than two iterations. The more clinical assessments should use Direct Observation of Procedural Skills (DOPS), Mini-Clinical Evaluation Exercises (mini-CEX) and Case Based Discussions (CBD) as the fundamental tools, but this does not exclude the use of other tools appropriate to the curriculum and attachment.

Copies of the outcome of these assessments must be held by the trainee, the Board Tutor-ICM, and the primary speciality College Tutor. They will need to be produced at the time that the trainee undergoes the formal intensive care RITA, together with the educational training record and other relevant documentation (e.g.: educational agreements, personal portfolio).

The trainee will be assessed in the following areas:

a) Practical procedures, comfort care and organ system support
b) Patient management: assessment, investigation, monitoring and diagnosis
c) Outreach and Transport care
d) Communication Skills, Attitudes and Behaviour
e) Cardiopulmonary Resuscitation

During Core Training it is a requirement that each trainee compiles ten case summaries. (See Part II, the Educational Training Record). The purpose of this exercise is to educate in the specific disease state and process described, to train in the arts of searching for information and writing medical text coherently, and to permit reflection on practice.

Notes and guidance on assessments 4.a), 4.b), 4.c), 4.d), 4.e)

Clinical Skills and Knowledge:

Object: After completing Core training the trainee will be expected to have acquired the clinical ability to manage the majority of patients on a general intensive care unit and to recognise the need and appropriateness of intensive care admission and to manage safe transport of the patient.

In these assessments, the trainee will be expected to support the demonstration of clinical skills with knowledge of the relevant areas as described in the syllabus. This will include establishing a safe environment for critically ill patients inside and outside the ICU, and one in which patient suffering is minimised by an humanitarian approach to patient care and the judicious use of drugs to relieve distress. The trainee should be able to develop clinical management plans for several hours of intensive care, and to modify those plans according to changes in the patient's condition. The trainee should be able to support junior or less experienced colleagues, and to prioritise work based on competing clinical needs.

Setting:

Patients: Patients receiving or requiring intensive and high dependency care

Location: Intensive or high dependency care unit, and other clinical areas caring for acutely ill patients

Situations: Supervised delivery of patient care

Guidance:

The trainee should be observed caring for a patient in the ICU. Each assessment can be conducted in its totality on one occasion, or separate items can be assessed at different times. However, the assessment should represent a summary view of the trainee's abilities over a period of time and, as for the other assessments, should represent the assessments of more than one trainer.

The assessor(s) should let the trainee proceed as far as possible without interference, while noting strengths and weaknesses of technique. This should be combined with a question and answer session covering the underlying comprehension of the trainee. Communication with patient and staff, and personal responsibility for standards of care are also important elements.

4.a) **Practical procedures, comfort care and organ system support**

These assessments will be conducted in the ICU or related clinical environments.

Name of trainee: _____

Hospital: _____ Dates: _____

The Trainee:

	Assessor
Is caring to the patient, considerate to clinical colleagues	
Plans procedures, and prepares working environment appropriately	
Performs cardiac output monitoring e.g. PAC, PiCCO, Doppler, LiDCO	
Interprets derived results from cardiac output measurement	
Discusses use of vasoactive drugs and fluids to optimal endpoints	
Describes technique for needle cricothyroidotomy	
Performs insertion of chest drain safely & aseptically	
Performs tracheal intubation of a patient in the intensive care unit	
Establishes a critically ill patient on mechanical ventilation	
Prescribes hypnotics, analgesics and neuromuscular blockers safely	
Manages fluid balance in patients receiving renal replacement therapy	
Describes suitable antimicrobial regimens for pneumonia, septic shock	

These assessments were completed satisfactorily

Signed …….. Print name…… …….. .Date ……..

Appointment ……..

Signed …… Print name ……... Date……

Appointment……

IF NO, GIVE REASONS:

4.b) Patient management: assessment, investigation, monitoring and diagnosis

These assessments will be conducted in the ICU or related clinical environments. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box

Name of trainee: _____

Hospital: _____ Dates: _____

The Trainee:

	Assessor
Ensures physiological safety as a priority	
Is able to obtain relevant clinical information from available sources	
Conducts an effective clinical examination with consideration	
Proposes appropriate clinical investigations	
Discusses and evaluates differential diagnoses	
Proposes appropriate initial treatment plans	
Evaluates patients' responses and modifies treatment plans accordingly	
Identifies major abnormalities on portable chest X-rays	
Interprets results of arterial blood gas analyses correctly	
Discusses techniques for cross infection prevention	
Discusses conditions in which senior/more experienced help is required	

These assessments were completed satisfactorily

Signed …….. Print name…… …….. .Date ……..

Appointment ……..

Signed …… Print name ……... Date……..……

Appointment…….……

IF NO, GIVE REASONS:

4.c) **Outreach and Transport care**

These assessments will be conducted in the ICU and in other acute care environments such as the ordinary ward. If individual items are assessed by different assessors at different times, the assessor should indicate that a specific topic has been assessed by entering his or her initials in the relevant box

Name of trainee: _____

Hospital: _____ Dates: _____

The Trainee:

	Assessor
Responds promptly and courteously for requests for help	
Makes an accurate initial assessment of patient complexity, dependence	
Informs senior colleagues of referral, actions proposed and taken	
Supports clinical staff outside the ICU in delivering effective care	
Manages and identifies common causes of hypotension & hypoxaemia	
Describes methods of managing postoperative pain safely in the ward	
Describes immediate management of status epilepticus	
Discusses factors which determine need for ICU/HDU admission	
Defines the risks and benefits of patient transfer (intra or inter-hospital)	
Stabilises the patient appropriately before transfer	
Anticipates and prevents complications during transfer	
Communicates effectively with receiving department or hospital	
Maintains a safe environment at all times	

These assessments were completed satisfactorily

Signed …….. Print name…… ……. .Date ……..

Appointment ……..

Signed …… Print name ……... Date……..……

Appointment…….……

IF NO, GIVE REASONS:

4.d) Assessment of communication skills, attitudes and behaviour. Notes

See Annex 1 3.iii.e) Assessment of communication skills, attitudes and behaviour

4.e) Cardiopulmonary resuscitation (CPR). Notes

4.e) Assessment of Cardiopulmonary resuscitation

The sections on notes and assessment for cardiopulmonary resuscitation form Section VI of the Curriculum and have been moved to there in recognition of the fact that they form a guide for many others than those undertaking a CCT in ICM. Their easy accessibility is therefore important. The appropriate assessment for CCT should be carried out at the different stages of training using Part VI documentation

Intercollegiate Board for Training in Intensive Care Medicine

SPECIALTY REGISTRAR
CORE (STEP 1)

Ten Case Summaries

Number	Date of completion	Title

TEN EXPANDED CASE SUMMARIES

These case summaries should be completed during Core (Step 1) level ST training. The Intercollegiate Board Tutor must confirm that the case summaries have been produced to an acceptable standard. They will be used as topics for discussion during one of the viva voce examinations if the trainee should choose to enter the UK Diploma of ICM.

A total of ten are required, with no more required for Enhanced (Step 2) training. They should be discussed with your local educational supervisor and should cover a broad range of topics relevant to intensive care practice. They could be selected either to complement areas of particular interest or to help develop areas of particular weakness for the trainee. Each expanded case summary should be approximately 1000 words long and typed on a separate sheet using the following subheadings as a guide:

1. Clinical problem
2. Relevant management
3. Further information
4. How would you change your future management
5. References.

- as in the example in Part II (the Educational Training Record) of these documents.

I certify that these case summaries have been completed to an acceptable standard.

Name and Signature of Intercollegiate Board Tutor:

Signed……. Name (print)…….

Date…….

APPENDIX G:

MATRIX OF TRANSFERABLE COMPETENCES FOR ACCS TRAINING

Annex 1	Generic Competences
Annex 2	Investigation Competences
Annex 3	Procedural Competences
Annex 4	Major Presenting Symptoms Competences

ANNEX 1 to APPENDIX G

GENERIC COMPETENCES

GENERIC COMPETENCY	SUB CATEGORIES	ANAES	GIM(A)	EM	ICM
GOOD CLINICAL CARE	HISTORY AND EXAMINATION	X	X	X	X
	DOCUMENTATION	X	X	X	X
	DECISION MAKING	X	X	X	X
	TIME MANAGEMENT	X	X	X	X
	SAFE PRESCRIBING	X	X	X	X
	CONTINUITY OF CARE	X	X	X	X
	THERAPEUTIC INTERVENTIONS	X	X	X	X
	INFECTION CONTROL	X	X	X	X
	UNIVERSAL PRECAUTIONS	X	X	X	X
COMMUNICATION SKILLS	WITH COLLEAGUES & AGENCIES	X	X	X	X
	REFERRALS	X	X	X	X
	WITH PATIENTS AND CARERS	X	X	X	X
	BREAKING BAD NEWS	X	XX	XX	XX
	TEAM WORKING	X	X	X	X

GENERIC COMPETENCY	SUB CATEGORIES	ANAES	GIM(A)	EM	ICM
MAINTAINING GOOD MEDICAL PRACTICE	LIFE LONG LEARNING	X	X	X	X
	AUDIT & CLINICAL OUTCOMES	X	X	X	X
	CRITICAL APPRAISAL			X	X
	INFORMATION MANAGEMENT	X	X	X	X
PROFESSIONAL BEHAVIOUR AND PROBITY	PROFESSIONAL ATTRIBUTES	X	X	X	X
	CAREER AND PROFESSIONAL DEVELOPMENT	X	X	X	X
ETHICAL AND LEGAL	INFORMED CONSENT	X	X	X	X
	DNAR	X	X	X	X
	COMPETENT ADULT	X	X	X	X
	CHILD PROTECTION	X	X	X	X
	MEDICOLEGAL ISSUES	X	X	X	X
	CONFIDENTIALITY	X	X	X	X
EDUCATION	DEVELOPING OTHERS LEARNING	X	X	X	X
MAINTAINING GOOD MEDICAL CARE	RISK MANAGEMENT	X	X	X	X
	PRIORITISATION OF PATIENTS' CARE & SAFETY	X	X	X	X

ANNEX 2 to APPENDIX G

INVESTIGATION COMPETENCES

INVESTIGATION	SUB CATEGORIES	ANAES	GIM(A)	EM	ICM
BIOCHEMISTRY		X	XX	X	XX
HAEMATOLOGY		X	X	X	X
MICROBIOLOGY			X	X	X
IMMUNOLOGY			X		X
PLAIN RADIOLOGY	TRAUMA SERIES			X	
	CHEST				
	ABDOMEN	X	X	X	X
	LIMBS &JOINTS		X	X	X
	SPINE		X	X	X
	ULTRASOUND			X	X
MEDICAL PRECAUTIONS IN RADIOLOGY		X	X	X	X
ECG	RHYTHM RECOGNITION	X	X	X	X
	PERI ARREST ARRHYTHMIAS	X	X	X	X
LUNG FUNCTION TESTS			X		X
BLOOD GASES	INTERPRETATION	X	X	X	X

ANNEX 3 to APPENDIX A

PROCEDURAL COMPETENCES

PROCEDURAL COMPETENCES	SUB CATEGORIES	ANAES	GIM(A)	EM	ICM
SYSTEMATISED PRIORITISED APPROACH TO THE CRITICALLY ILL	ASSESSMENT INVESTIGATION MONITORING MANAGEMENT	X X X X	X X X X	X X X X	X X X X
MANAGEMENT OF ARRHYTHMIAS		X	XX	X	X
ARTERIAL CANNULATION		X		X	X
LUMBAR PUNCTURE		X	X		
PLEURAL TAP AND ASPIRATION			X	X	X
INTERCOSTAL DRAIN INSERTION			X	X	X
ASCITIC TAP			X		
CENTRAL VENOUS CANNULATION		X	X	X	X
BASIC AIRWAY MANAOUVRES	USE OF ADJUNCTS, POSITIONING, BVM, LMAs.OXYGEN DELIVERY	X	X	X	X
ADVANCED AIRWAY INTERVENTIONS	INDICATIONS FOR INTUBATION. RAPID SEQUENCE INDUCTION. TRACHEAL INTUBATION FAILED AIRWAY DRILL INCLUDING LMA SURGICAL AIRWAY	X X X X		X X	X X X X
SIMPLE USE OF VENTILATORS		X			X
PERICARDIOCENTESIS				X	
ADVANCED LIFE SUPPORT		X	X	X	X
PAIN RELIEF	USE OF ANALGESIA LOCAL ANAESTHESIA NERVE BLOCKS	X X	X	X X X	X X
CONSCIOUS SEDATION			X	X	X
JOINT ASPIRATION			X	X	
EXTERNAL PACING			X	X	X

PROCEDURAL COMPETENCES	SUB CATEGORIES	ANAES	GIM(A)	EM	ICM
WOUND MANAGEMENT				X	X
BLOOD PRODUCTS ADMINISTRATION		X	X	X	X
REDUCTION OF DISLOCATIONS/ SPLINTAGE.				X	
SPINAL IMMOBILISATION				X	
OUTREACH TRANSPORT CARE					X X

ANNEX 4 to APPENDIX A

MAJOR PRESENTING SYMPTOMS

CATEGORY	SUB HEADINGS	ANAES	GIM(A)	EM	ICM
MAJOR PRESENTING SYMPTOMS					
CARDIO-RESPIRATORY ARREST		X	X	X	X
SHOCKED PATIENT		X	X	X	X
UNCONSCIOUS PATIENT		X	X	X	X
MAJOR TRAUMA	HEAD CHEST			X	X
	ABDOMINAL PELVIC			X	X
	SPINAL AND FACIAL			X	X
	TRAUMA.BURNS			X	X
SYNCOPE/COLLAPSE			X	X	X
BREATHLESSNESS			X	X	X
CHEST PAIN			X	X	X
ACUTE CONFUSION			X	X	X
FEVER			X	X	X
FALLS			X	X	
ANAPHYLAXIS	URTICARIA AND ANGIOOEDMA	X	X	X	X
SYSTEMS CLASSIFICATION					
CARDIOVASCULAR	ACS		X	X	X
	PALPITATIONS		X	X	
GASTROINTESTINAL	NAUSEA/VOMITING	X	X	X	X
	ABDOMINAL MASSES		X		
	ABDOMINAL PAIN		X	X	X
	DYSPEPSIA		X	X	
	DIARRHOEA		X	X	X
	HAEMATEMESIS AND MELAENA		X	X	X
	JAUNDICE		X	X	X
	RECTAL BLEEDING		X	X	
	ANAL PAIN		X	X	
	SWALLOWING DIFFICULTY		X	X	
	WEIGHT LOSS		X		
NEUROLOGICAL	WEAKNESS AND PARALYSIS		X	X	X
	PARATHESIA AND NUMBNESS		X	X	
	INVOLUNTARY MOVEMENTS		X	X	X
	MEMORY LOSS		X	X	
	SEIZURES	X	X	X	X

CATEGORY	SUB HEADINGS	ANAES	GIM(A)	EM	ICM
NEUROLOGICAL	WEAKNESS AND PARALYSIS		X	X	X
	PARATHESIA AND NUMBNESS		X	X	
	INVOLUNTARY MOVEMENTS		X	X	X
	MEMORY LOSS		X	X	
TRAUMA	HEAD INJURY			X	X
	LIMB INJURY		X	X	X
RENAL	ACUTE RENAL FAILURE		X	X	X
	POLYURIA		X		
	POLYDIPSIA		X		
	DIALYSIS		X	X	
	DYSURIA/UTIs		X	X	
	HAEMOFILTRATION				X
UROLOGY	HAEMATURIA		X		
	SCROTAL PAIN		X	X	
	LOIN PAIN		X	X	
	DIFFICULTY WITH MICTURITION		X	X	
RESPIRATORY	HAEMOPTYOSIS		X		
	HOARSENESS		X	X	X
	STRIDOR	X	X	X	X
	COUGH	X	X	X	
PSYCHIATRY	DISTURBED BEHAVIOUR		X	X	X
	ANXIETY PANIC DISORDER		X	X	X
	DSH		X	X	X
	OVERDOSE		X	X	X
	SUICIDAL IDEATION		X	X	X
	ACUTE PSYCHOSIS		X	X	X
	ALCOHOL AND SUBSTANCE DEPENDENCE		X	X	X
HAEMATOLOGY /IMMUNOLOGY	BRUISING	X	X	X	
	LYMPHADENOPATHY		X		
DERMATOLOGY	RASHES		X	X	X
	PRURITSU		X	X	X
	SKIN AND MOUTH ULCERS		X	X	X
RHEUMATOLOGY	JOINT SWELLING/ JOINT PAIN		X	X	
	ACUTE BACK PAIN		X	X	
	NECK PAIN		X	X	
EYE EMERGENCIES	RED EYE			X	
	PAINFUL EYE			X	
	VISUAL LOSS			X	

CATEGORY	SUB HEADINGS	ANAES	GIM(A)	EM	ICM
ENT EMERGENCIES	PAINFUL EAR SORE THROAT EPISTAXIS FOREIGN BODIES			X X X	
DENTAL EMERGENCIES	DENTAL ABSCESS DENTAL TRAUMA			X X	
OBSTETRIC EMERGENCIES	BLEEDING IN PREGNANCY			X	
VASCULAR EMERGENCIES	LIMB THREATENING ISCHAEMIA AAA MESENTERIC ISCHAEMIA		X X	X X	X X
MAJOR INCIDENT MANAGEMENT				X	X
MEDICAL COMPLICATIONS	SURGERY PREGNANCY ASSOCIATED		X X		X X
TOXICOLOGY	POISONING		X	X	X
GENITOURINARY	GENITAL DISCHARGE AND ULCERATION		X	X	
ENVIROMENTAL	HYPOTHERMIA	X	X	X	X

APPENDIX H:

PORTFOLIO AND LOGBOOK FOR

ACUTE CARE COMMON STEM TRAINING

Name: ……..

Training Period: ……..

Training Number: …….....

Programme Co-ordinator: ……

SUMMARY OF PROGRAMME

School …… **Deanery** ……..

Programme Director …….…….. **Regional Advisor** ……

	Date Start	Date Finish	Duration	Hospital(s)	Educational Supervisor(s)
Anaesthesia					
Intensive Care					
Emergency Medicine					
Acute Medicine					

Annual Leave ……
(Dates) ……
……..
……

Sick Leave (Total amount) ……
(Dates) ……
……
……

COURSES / EDUCATIONAL SESSIONS ATTENDED[1]

Date(s)	Description	Duration	Evaluation*

* Evaluated as Excellent (E), Satisfactory (S), or Unsatisfactory (U)

SUMMARY OF ASSESSMENTS

Date	Assessment	Satisfactory / Unsatisfactory	Assessors	
			PRINTED NAME	SIGNATURE

IN-SERVICE WORK PLACE ASSESSMENTS

Date	Type (CBD, DOPS, Mini-Cex, etc)	Subject Assessed	Satisfactory / Unsatisfactory	Assessors	
				PRINTED NAME	SIGNATURE

LOGBOOK OF CASES

APPENDIX I:

RECORD OF IN-TRAINING ASSESSMENTS (RITA): COPMeD policy on implementing RITAs

Introduction

The RITA process is the review by a speciality-based panel of consultant trainers of the assessments which have been carried out during a training post, as well as other evidence of achievements. The panel has two objectives:

- to review the adequacy of the documentation provided and (provided adequate documentation has been presented);
- to make a judgement about the trainee's suitability to progress to the next stage of training, or to confirm that training has been satisfactorily been completed satisfactorily.

In-training assessments

The RITA panel draws on the evidence of in-training assessments, such as directly observed procedures; case note review; log books; multi-source feedback reports; and other documented evidence of progress of the individual against the standards set out in the curriculum for the specialty. Most curricula state the assessment strategy that is to be used, and this should be made clear to the trainee from the start. Where the relevant College or Higher Training Committee has produced assessment instruments and logbooks or other forms, these should be used. The trainee and the educational supervisor should ensure that assessments are carried out in a timely fashion so that all documentation is completed well before the deadline for submission to the RITA panel. The results of all assessments, and the trainer's report, should be discussed with the trainee before they are submitted to the panel. Occasionally supervisors have been reluctant to do this and have submitted a neutral report, accompanied by a more negative phone call or confidential note to the panel. *This is unacceptable.* Trainees are entitled to a transparent process in which they are assessed against agreed standards, told the outcome of the assessment, and given the opportunity to address any shortcomings.

Appraisal

Appraisal as defined in the *Guide to Specialist Registrar Training* is a confidential two-way process during which the trainee and immediate supervisor share their views on how things are going, what has gone well, what could go better, and what needs to be done for the trainee to meet their objectives. This is the ideal opportunity for a discussion of reflective learning and the development of the trainee's personal learning plan. The introduction of *revalidation* based on five years of appraisals alters the ethos of appraisal somewhat, because it is no longer confidential. Given the importance of revalidation, it is important that the NHS appraisal is carried out by someone who is in a position to know the trainee's performance first hand. All trainees are expected to use the NHS Appraisal documentation in addition to, or integrated with, the assessment documentation relevant to their specialty. The NHS Appraisal documentation is

the property of the doctor appraised, and may be included as documentary evidence of progress to be considered by the RITA panel.

RITA Panels

The RITA panel has an important role, which its composition should reflect., It will normally be drawn from the specialty training committee and, where appropriate, may include an external trainer. All members of the panel should have undertaken equal opportunities training and attention should be paid to maintaining diversity in the pool of consultants carrying out this role. Since the panel will be taking a view on the adequacy of the documentation submitted, consultant supervisors should not participate in their own trainees' RITA.

Documentary Evidence

The documentary evidence provided will normally consist of the appropriate college assessment forms fully completed by all the relevant trainers and any additional documentation that the specialty may require e.g. exam results; log books; audits; outcomes of mandatory courses; multi-source feedback (also called 360 degree appraisal); evidence of reflective learning etc. Occasionally, it may be necessary for educational supervisors/consultants to provide an additional report giving more detail than the assessment form allows, for example detailing the events that led to a negative assessment. Any documentation taken into account by the panel must have been shared and discussed with the trainee prior to the review taking place. Provided the documentary evidence submitted is complete, and indicates satisfactory progress the trainee may not need to be interviewed in person by the RITA panel (this will be a matter for local agreement) in order for a Form C or G to be issued.

Where the documentary evidence submitted is incomplete, or otherwise inadequate to support a judgement, then no decision should be taken about the adequacy of the trainee until the deficiencies in the documentation have been addressed. It is not acceptable for an interview with the trainee to be used as an alternative to documented in-training assessments. Where there are concerns about the progress of the trainee, and a Form D or E is likely to be issued, it is appropriate to invite the trainee to attend in person and discuss with the panel any additional factors or documentary evidence he or she would like them to take into consideration. *This should not come as a surprise to the trainee, whose trainers should have discussed their concerns with him or her already.*

Questions of conduct

On occasion, trainees have brought allegations of bullying, harassment or other inappropriate conduct on the part of their trainer to the attention of the RITA panel. Such allegations must be taken very seriously, but RITA Panels are not set up to investigate handle allegations of this nature, and are not in a position to deal with them. Allegations about misconduct of either trainers or trainees brought to a RITA Panel should result in a termination of the Panel proceedings in order to allow an investigation by the Deanery, or the relevant employer, as appropriate.

Appeals

The right of appeal, and how to lodge one, should be made clear to every trainee going through the process. It is possible for a trainee to wish to appeal against Form C or G, on the grounds of needing further training time. The details of the appeals process are set out in the *Guide to Specialist Registrar Training.*

Career counselling/rotation planning/evaluation of posts

All of these are important activities, but they are separate tasks from ensuring that in-training assessments are properly documented and reviewed, and used to determine the suitability of the trainee to progress in the programme. In small programmes it may be convenient to carry out several of these tasks on the same occasion, but in larger programmes it will often be more satisfactory for career counselling and rotation planning to be carried out by the programme director or educational supervisor on another occasion. Hearing the trainee's opinion of the post is also important, but it should not be sought at the same time as a judgement is being taken on the trainee's performance.

COPMeD June 2004.

Edition 1: January 2007

APPENDIX J:

THE MANAGEMENT OF SICKNESS, PARENTAL AND MATERNITY LEAVE

1. The effect of any absences or changes to the training programme resulting from *any* type of sickness, parental or maternity leave should be assessed on an individual basis by the Local Specialty Training Committee. The legal requirement is set out in Schedule 5 to the General and Specialist Medical Practice (Education, Training and Qualifications) Order 2003 which relates to this issue *and is non-negotiable,* stated that:

   "Training may be interrupted for reasons such as military service, secondment, pregnancy or sickness. The total duration of the training shall not be reduced by reason of any interruption".

2. ***Sickness, parental or maternity leave*** In a competency based programme trainees are to be assessed and signed off on the basis of competencies achieved not the time taken to obtain them. Thus normally periods of absence due to sickness, parental or maternity leave are irrelevant. In the event of prolonged absence a period of re-orientation may be needed before further competencies can be taught and assessed.

3. ***Casual sick leave*** When casual sick leave starts to affect training, all that is required is a simple statement from the Regional Adviser that the effect of the leave has been discussed, that the programme has been adjusted to take account of the individual trainee and that the forecast CCT date has been revised as necessary.

4. ***Long term sick/parental/maternity leave*** The College expects Local Specialty Training Committees and Programme Directors to come up with sensible recommendations for individual cases. An example of the way the College expects this to be applied in practice is:

   - A trainee has a car accident or is pregnant which results in her being absent from work for a period of 4 months. Her projected CCT date would *provisionally* be advanced by 4 months. On returning to work, the situation would be discussed with the Programme Director to agree a plan for future training and a revised CCT date.
   - If the trainee had missed a crucial 3-month block of training that could not be obtained within the remaining period of the CCT programme, the CCT date would have to be delayed until that period of training was covered.
   - If on the other hand the missed training objectives were more general e.g. obtaining management or teaching experience, then it is more likely that with extra effort some of the lost time could be made up in the remaining time available. In this instance the CCT date would still be delayed, but by a reduced amount.

5. ***Clinical duties of pregnant trainees*** - This is a potentially complex area where advice must be sought from the occupational health and personnel departments. With regard to out of hours duties Croner's information service states that:

"Where a new or expectant mother works at night and a certificate from a registered medical practitioner or a registered midwife shows that it is necessary for her health and safety that she should not be at work for any period, the employer must find suitable alternative work or suspend her from work for so long as is necessary … the employer is not required to take the above actions until the employee has notified them in writing that she is pregnant, has given birth within the previous six months or is breastfeeding. The employer may request, in writing, a certificate from a registered medical practitioner or a registered midwife confirming the pregnancy. If within a reasonable period of time, the employee has not produced the certificate, the employer is not required to continue with the requirements detailed above."

APPENDIX K:

Examples of communication skills, attitudes & workplace behaviour that might cause concern

The table below gives examples of the types of behaviour pattern, which may cause concern. The descriptions in the boxes are intended only to be vignettes of possible adverse occurrences: they are not intended to be either prescriptive or exclusive.

Attitude or behavioural pattern	Example of minor problem	Example of serious problem
Communication Skills (I: with patients and relatives)	Occasional communication difficulties with patients or relatives have been noticed	Repeated communication difficulties with patients and relatives have been noticed. Others have commented on them.
Communication Skills (II: with staff)	Occasional communication difficulties with staff have been noticed e.g. handover, ward round	Repeated communication difficulties with staff have been noticed. Others have commented on them. Fails to pass on important clinical information.
Communication Skills (III: sensitivity to another's needs)	On occasions fails to listen to patients or relatives or to respect their wishes Occasionally lacks sensitivity in handling patients.	Appears oblivious of what patients and relatives say. Seems to press on within his/her own cultural and ethical reference frame despite the wishes of patients and relatives
Reliability and time-keeping	Isolated episodes of lateness, sometimes fails to warn of problems, tends to need reminding to get things done.	Repeated episodes of lateness, often fails to warn of problems, usually needs reminding to get things done
Control of moods and emotions	Occasionally shows irritability or bad temper with no apparent cause. Although other staff are aware of it, work continues normally.	Is well known for being moody, irritable and bad-tempered. Other staff modify their behaviour to accommodate them. The pattern of work is adversely affected
Personal presentation	When seeing patients, occasionally dresses in an unprofessional way. Occasionally wears inappropriate accessories.	Frequently dresses in an unprofessional way when seeing patients. Wears accessories which patients may find distasteful. Other aspects of personal hygiene sometimes cause offence
Social behaviour	Social life occasionally impinges on professional life causing lateness, tiredness at work, and difficulty with studies.	Social life repeatedly affects professional performance, is likely to be causing problems with self-directed learning and affects patient care.
Conscientiousness in safe practice	Usually satisfactory but has occasional lapses (e.g. doesn't sign controlled drugs book, forgets to switch alarms on). If running late may omit routine checks.	Frequently observed not to carry out routine checks of equipment. Has too many 'near misses' for comfort. Theatre staff comment on 'slap dash' approach. Doesn't record critical incidents

Initiative	Rather passive. Tends to need pushing when things have to be done. Slower than he/she should be to take responsibility.	Actively avoids taking up challenges and very slow in adopting responsibility as and when problems arise
Over or under assertiveness	(I) On occasions undertakes inappropriate procedures because of pressure from others. Known to be someone who usually 'won't argue'. (II) On occasions insists on a course of action in the face of reasonable advice to the detriment of patients and/or colleagues	(I) Rarely presses their argument, even when they know they are right. Fails to be assertive when necessary even to the patient's detriment. Unable to control any situation. (II) Frequently causes problems and offends patients and/or colleagues by insisting on a course of action in the face of reasoned argument.
Over-confidence	Occasionally takes on cases which are beyond level of competence. Occasional clinical crises occur because of lack of proper planning and assessment.	Frequently exhibits lack of care in planning and execution of tasks. Works without concern beyond his/her level of training, knowledge or experience.
Under-confidence	Reluctant to extend clinical experience. Anxious when working alone on clinical cases that should be within his/her competence.	Frequently demonstrates and transmits anxiety to the theatre environment. Is sufficiently stressed by work that symptoms of stress become an issue and affect performance.
Departmental involvement	Participation below the usual expected. Tends not to attend meetings unless he/she has to. Reluctant to take part in social activities related to the department.	Rarely participates in any departmental activity. Rather isolated socially from other members of the department.
Team working	Doesn't always consider the needs of others. Tends to press ahead with his/her own plan and expects others to adapt around it.	Careless of the needs of others. Often arrogant and thoughtless. Sufficient lack of insight that his/her behaviour frequently causes problems.
Personal organisation	Can be unprepared for the task in hand: sometimes forgets to bring essential items to meetings etc. Can be slow to implement agreed policy changes.	Frequently poorly prepared and disorganised. Unreliable to the extent that other staff are affected. Appears unaware of the impact their behaviour has on the working environment.
Honesty and trustworthiness	Has been found to tell manipulate the truth to prevent criticism; e.g. says a premed was not given when it was never actually written up; blames others for his/her own shortcomings	Deliberately misleads staff, patients or trainers by mis-information e.g. fills in logbook with non-existent cases; does not report serious adverse event; alters records after a problem has occurred. Fails to answer patients queries honestly (e.g. risks of a procedure)
Enthusiasm	Usual response to new opportunities is rather flat. Gives the appearance that work is an onerous duty rather than something to give satisfaction	Negative response to new opportunities. Every silver lining is surrounded by a black cloud. Never volunteers and is unco-operative in solving departmental problems
Record keeping	Occasionally fails to keep a good record or is rather economical with basic information. Always has to be asked to sign the controlled drugs' book.	Case notes review demonstrates frequent poor record keeping; key items of information missing or incorrectly documented. Training record poorly maintained, possibility of false entries.

ASSESSMENT OF COMMUNICATION SKILLS, ATTITUDES AND BEHAVIOUR

Please put a tick in the appropriate box. Any 'cause for concern' must be qualified with information. This form should be completed annually or whenever a trainee rotates between hospitals. If difficulties arise, it can be used more frequently.

Attitude or behavioural pattern	Satisfactory	Cause for concern	Please give examples of cause for concern, noting date. Expand on a separate sheet if necessary	Initials of assessors (with dates)
Communication Skills (I: with patients and relatives)				
Communication Skills (II: with staff)				
Communication Skills (III: sensitivity to another's needs)				
Reliability and time-keeping				
Control of moods and emotions				
Personal presentation				
Social behaviour				
Conscientiousness in checking				
Initiative				

Over or under assertiveness				
Over-confidence				
Under-confidence				
Departmental involvement				
Team working				
Personal organisation				
Honesty and trustworthiness				
Enthusiasm				
Record keeping (log book and anaesthetic records)				

I confirm that any 'causes for concern' have been discussed with the trainee. The outcome of these discussions was as follows:

……

……

Signed…… Name (print)……Date……