



ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN GENERAL INTERNAL MEDICINE



This curriculum of training in General (Internal) Medicine was developed in 2010 and undergoes an annual review by Dr Christina Donnellan, National Specialty Director and Dr Colm Quigley, National Specialty Director, Dr. Ann O'Shaughnessy, Head of Education and Professional Development and by the General (Internal) Medicine Specialty Training Committee. The curriculum was approved by the Irish Committee on Higher Medical Training.

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Introduction

A trainee in General Internal Medicine (GIM) requires expert knowledge and skill in diagnosis and treatment of a broad range of common acute disorders. The fundamental basis of training in General Internal Medicine is rotation with experience developed from exposure to different units, different specialties and different trainers.

Besides these specialty specific elements, trainees in General Internal Medicine must also acquire certain core competencies which are essential for good medical practice. These comprise the generic components of the curriculum.

Aims

Upon satisfactory completion of higher specialist training in General Internal Medicine, the doctor will be **competent** to undertake comprehensive medical practice in that specialty in a **professional** manner, unsupervised and independently and/or within a team, in keeping with the needs of the healthcare system.

Competencies, at a level consistent with practice in the specialty of GIM will include the following:

- Patient care that is appropriate, effective and compassionate dealing with health problems and health promotion.
- Medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care.
- Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Appraisal and utilisation of new scientific knowledge to update and continuously improve clinical practice.
- The ability to function as a supervisor, trainer and teacher in relation to colleagues, medical students and other health professionals.
- Capability to be a scholar, contributing to development and research in the field of GIM.
- Professionalism.
- Knowledge of public health and health policy issues: awareness and responsiveness in the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, the practice of cost-effective health care, health economics and resource allocations.
- Ability to understand health care and identify and carry out system-based improvement of care.

Professionalism describes the knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (*as a doctor*). It includes such concepts as:

- The skills of lifelong learning and the maintenance of competence
- Information literacy
- Ethical behaviour
- Integrity, honesty
- Altruism
- Service to, justice and respect for others
- Adherence to professional codes

Entry Requirements

Applicants for Higher Specialist Training (HST) in GIM must have completed a **minimum** of two years Basic Specialist Training (BST) in approved posts and obtained the MRCP or UK.

BST* should consist of a minimum of 24 months involved with direct patient care.

BST in General internal Medicine is defined as follows:

- A minimum of 24 months in approved posts, with direct involvement in patient care and offering a wide range of experience in a variety of specialties.
- At least 12 of these 24 months must be spent on a service or services in which the admissions are acute and unselected.
- For further information please review the BST curriculum

Those who do not hold MRCP/MRCPUK must provide evidence of equivalence.

Duration & Organisation of Training

The duration of HST solely in General Internal Medicine is 4 years, one year of which **may** be gained from a period of full-time research. The duration of HST in GIM and another specialty is at least 5 years. Those interested in dual specialty training must apply to the other relevant programme (e.g. Respiratory Medicine) indicating a request for dual training in the other specialty and GIM.

HST in General Internal Medicine ALONE:-

Specialist training in GIM alone is a perfectly acceptable choice. It may for example be attractive to doctors with a special interest for working in an Acute Medical Unit, a Hospitalist Type Programme, Emergency Medicine, or to certain academics who foresee the need to combine clinical practice with their academic and research interests. The training of such doctors **can be completed in 4 years of high intensity medicine following entry to the programme.**

Options for DUAL Training in General Internal Medicine and another specialty:-

There are three options available for dual training.

Option A: 1 Year High Intensity Training (1xHI) + 2 Years Low Intensity Training (2xLI)

Option B: 2 Years High Intensity Training (2xHI)

Option C: 5 Years Low Intensity Training (5xLI)

For further details on these dual training options in GIM please see the Training Programme section.

Essential Training: Trainees must attend study days as advised by the National Speciality Director.

Minimum Procedures: Practical skills needed in the management of medical emergencies, particularly those occurring out of normal working hours.

No particular order or sequence of training will be imposed and programmes offered should be flexible i.e. capable of being adjusted to meet trainees' needs.

The earlier years will usually be directed towards acquiring a broad general experience of GIM under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence is gained and abilities are acquired, the trainee will be encouraged to assume a greater degree of responsibility and independence.

If an intended career path would require a trainee to develop further an interest in a sub-specialty within GIM (e.g. *Respiratory Medicine*), this should be accommodated as far as possible within the training period, re-adjusting timetables and postings accordingly.

“Generic” knowledge, skills and attitudes support competencies which are common to good medical practice in all the medical and related specialties. It is intended that all Specialist Registrars should re-affirm those competencies during Higher Specialist Training. No time-scale of acquisition is offered, but failure to make progress towards meeting these important objectives **at an early stage** would cause concern about a SpR's suitability and ability to become independently capable as a specialist.

Flexible Training

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

Part-time training shall meet the same requirements as full-time training, from which it will differ only in the possibility of limited participation in medical activities to a period of at least half of that provided for full-time trainees;

The competent authorities shall ensure that the total duration and quality of part-time training of specialists are not less than that of full-time trainees.

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

For details of appointment and funding arrangements for flexible trainees, please see the current issue of the HST training Handbook.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for GIM. There will be posts in both general hospitals and teaching hospitals. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialty Director for GIM or the Regional Specialty Advisor. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop a sub-specialty interest.

Training in GIM may be undertaken as a **Single Specialty** or in a **Dual Specialty Programme**, concurrently with a second medical specialty.

Specialist training in GIM **alone** can be completed in 4 years of high intensity medicine following entry to the programme.

Dual Specialty Training: -

There are three options available, which allow training in GIM **and** another specialty as follows:

Option A: 1 Year High Intensity Training (1xHI) + 2 Years Low Intensity Training (2xLI)

In this the preferred option, the GIM training consists of 1 year high intensity GIM and two years low intensity GIM. The trainee will also have to complete training in his/her second specialty during this time.

If the trainee is not involved in the acute/ongoing care of patients admitted to a CCU/ITU or High Dependency Unit (HDU) or suitable alternative agreed by the STC, he/she must be seconded to a CCU or ITU/HDU for a period of 6 weeks involving residential clinical responsibility. A dual specialist trainee may, during a high intensity year, spend 20% of the time with a non GIM trainer, for the purpose of maintaining specialist skills. This must be the same training institution and also must be prospectively agreed between the GIM trainer and the specialty trainer. Prospective approval of the GIM Committee for HST and the Dean is required.

Trainees should note that although a period of research is encouraged during training **no credit** is given for any clinical training undertaken during the **first year** of a period of full-time research.

Option B: 2 Years High Intensity Training (2xHI)

This allows for a trainee to train in one specialty and obtain dual certification by completing two years high intensity GIM. This option is currently adopted by the Cardiology Specialty Training Committee and is increasingly favoured as a training route in the UK. This requires training in the one specialty programme, plus two additional years training of High Intensity General Internal Medicine.

Option C: 5 Years Low Intensity Training (5xLI)

In this option 5 years of low intensity GIM are required. Option C must be prospectively approved by the General Internal Medicine and relevant Specialty Training Committees, in consultation with the Dean of Higher Specialist Training.

A high intensity GIM year should have the following components: A minimum commitment of 4 days per month (*resident on-call*) of acute unselected emergency admissions. A low intensity year of GIM is similar in all respects of the high intensity year except that the requirement for acute medical take is reduced to an average of 2 days per month.

Emergency Medicine

Acute Emergency "Take" Responsibilities:

There must be evidence of direct supervision of the activity of the more junior members of the "on-take" team and a minimum of 10 (480 per year) emergency admissions during the 24-hour period are expected. In addition, the trainee will be expected to have ongoing care/responsibility for a proportion of the patients admitted, "on-take" and a post take ward round with his/her trainer.

CCU, ITU and HDU Experience:

The minimum requirement is that the trainee must have front line responsibility for acute emergency patients admitted to the above units. If this is not possible in a particular hospital/training institution then a period of secondment to the appropriate unit will be required.

Inpatient Responsibilities:

The trainee will have front line supervisory responsibilities for general medical inpatients. This will require supervising the activities (*e.g. being available for advice*) of the more junior members (*SHO/Intern*) of the clinical team at all times. In addition to personal ward rounds, a minimum of two ward rounds with the consultant each week is expected for educational experience. On going responsibility for shared care of the team's inpatients whilst in the ITU/HDU/CCU is also essential.

Outpatient Responsibilities:

The trainee is expected to have personal responsibilities for the assessment and review of general medicine outpatients with a minimum of at least one consultant led GIM clinic per week. The trainee should assess new patients; access to consultant opinion/supervision during the clinic is an essential.

In the event of clinics being predominantly subspecialty orientated, a trainee must attend other clinics to ensure comprehensive General Internal Medicine training.

High intensity training in an AMAU and Emergency Medicine is acceptable. Models are still evolving and the Medical Director should submit a proposal to the GIM STC detailing plans for SpR GIM training in the unit. The post will be inspected and approved in the normal way. In addition all trainees must comply with the conditions for General Education in Training,

General Education in Training:

The trainee is expected to spend four hours per week, in formal general professional education for certification of training. In the types of experience noted below, time must be fairly distributed between GIM and the other specialty in dual training programmes. Review of all these activities will form part of the training record for each trainee.

All trainees will be required to undergo training in management. This will take the form of day-to-day involvement in the administration of the team/firm and must include attendance at a management course during their training period.

Trainees will be expected to be actively involved in audit throughout their training and should have experience of running the unit's audit programme and presenting results of projects at audit meetings. They should also regularly attend other activities, journal clubs, x-ray conferences, pathology meetings etc.

Trainees should be expected to show evidence of the development of effective communication skills. This can be assessed from taking part in formal case presentations or in giving lectures/seminars to other staff or research/audit presentations at unit meetings.

All trainees must have a **current** ACLS certificate throughout their HST.

Procedures:

During training the trainee should acquire those practical skills that are needed in the management of medical emergencies, particularly those occurring out of normal working hours. Some exposure to these skills may have occurred during the period of BST but experience must be consolidated and competencies reviewed during HST. The procedures, with which the trainee must be familiar and show competencies in, either as **essential** to acquire, or as **additional** procedural skills *i.e. desirable to acquire*.

Essential & Additional Experience:

The trainee will be expected to have had experience of/be familiar with the management of a wide range of cases presenting to hospitals as part of an unselected acute medical emergency "take". Whilst trainees will not need to be expert in all of these areas they will be expected to be able to plan and interpret the results of immediate investigations, initiate emergency therapy and triage cases to the appropriate specialist care. These emergency situations have been considered under each specialty section and are indicative of what should be covered but are not prescriptive. It should form the basis of regular discussions between the trainee and trainers as training progresses. The various clinical situations listed for experience have been divided into those, which are considered "essential" and others, which are "additional":

It should be stressed that the items listed in the specialty section are not meant to define the entire training programme for the achievement of a Certificate of Satisfactory Completion of Specialist Training (CSCST) in GIM. They are intended to highlight particularly the emergency situations, which may confront any physician. The CSCST in GIM implies knowledge and competencies across the wide spectrum of medical disorders.

The experience gained through rotation around different departments is recognised as an essential part of HST. A Specialist Registrar may **not** remain in the same hospital for longer than 2 years of clinical training; or with the same trainer for more than 1 year.

Where an essential element of the curriculum is missing from a programme, access to it should be arranged, by day release for example, or if necessary by secondment.

Teaching, Research & Audit

All trainees are required to participate in teaching. They should also receive basic training in research methods, including statistics, so as to be capable of critically evaluating published work.

For trainees in GIM alone a period of at least one year of supervised research relevant to GIM and/or a period of up to one year could be gained through periods spent in specialties relevant to General Internal Medicine. These specialties must be recognised by the GIM Specialty Training Committee. A period spent in supervised research and/or in GIM subspecialties is considered highly desirable and will contribute towards the completion of training.

Some trainees may wish to spend two or three years in research leading to an MSc, MD, or PhD, by stepping aside from the programme for a time. Additional educational credit may be granted at the discretion of the NSD and STC for clinical work relevant to the curriculum undertaken during the second and subsequent years of this research, up to a maximum of six months credit. For those intending to pursue an academic path, an extended period of research may be necessary in order to explore a topic fully or to take up an opportunity of developing the basis of a future career. Such extended research may continue after the CSCST is gained. However, those who wish to engage in clinical medical practice must be aware of the need to maintain their clinical skills during any prolonged period concentrated on a research topic, if the need to re-skill is to be avoided.

Trainees are required to engage in audit during training and to provide evidence of having completed the process.

Logbook

Up-to-date training records and a portfolio of achievements will be maintained by the trainee throughout HST. The training records will be countersigned as appropriate by the trainers to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the GIM Curriculum. They will remain the property of the trainee and must be produced at the annual assessment review.

Each trainee is responsible for maintaining an up-to-date record of progress through training and compiling a portfolio of achievements for presentation at annual assessment review. The trainee also has a duty to maximise opportunities to learn, supplementing the training offered with additional self-directed learning in order to fulfil all the educational goals of the curriculum. Trainees must co-operate with other stakeholders in the training process. It is in a SpR's own interest to maintain contact with the Medical Training Office and Dean of Higher Specialist Training, and to respond promptly to all correspondence relating to training. "Failure to co-operate" will be regarded as, in effect, withdrawal from the HST's supervision of training (see *the HST Training Handbook*).

At annual review, the Training Record will be examined. The results of any assessments and reports by educational supervisors, filed in the portfolio submitted, together with other material capable of confirming the trainee's achievements, will be reviewed.

Assessment Process

The methods used to assess progress through training must be valid and reliable. The GIM Curriculum has been re-written, describing the levels of competence which can be recognised. The assessment grade will be awarded on the basis of direct observation in the workplace by consultant supervisors.

Time should be set aside for appraisal following the assessment e.g. of clinical presentations, case management, observation of procedures. As progress is being made, the lower levels of competence will be replaced progressively by those that are higher. Where the grade for an item is judged to be deficient for the stage of training, the assessment should be supported by a detailed note which can later be referred to at annual review. The assessment of training may utilise the Mini-CEx, DOPS and Case Based Discussions (*CBD*) methods adapted for the purpose. These methods of assessment have been made available by HST for use at the discretion of the NSD and nominated trainer. They are offered as a means of providing the trainee with attested evidence of achievement in certain areas of the Curriculum e.g. *competence in procedural skills, or in generic components*. Assessment will also be supported by the trainee's portfolio of achievements and performance at relevant meetings, presentations, audit, in tests of knowledge, attendance at courses and educational events.

The ACP GIM In-Training Exam is listed as one of the assessment methods in the specialty section of this curriculum. The purpose of this exam is not as a certifying or qualifying examination but to be used as a self- assessment tool designed to gauge knowledge of general internal medicine.

Annual Review – The PeTRA Process

An annual review of progress through training will be undertaken on behalf of HST. The training record will be examined at the review. Assessments and reports by educational supervisors, confirmation of achievements and the contents of the logbook will be reviewed. A decision is made regarding progress, as detailed in the Training Handbook. At some or all of these annual reviews a non-specialty assessor will be present capable of addressing core competencies. An external assessor will participate in the penultimate year review (PYA) which is held to a standard format usually 12-18 months before the planned end of training. The award of a CSCST will be determined by a satisfactory outcome after completion of the entire series of PeTRA assessments.

Each year trainees undergo a formal review by a panel including the Dean, or the Dean's representative, the National Specialty Director, and whenever possible, a representative member from another specialty. The panel will review in detail the training record, will explore with the trainee the range of experience and depth of understanding which has been achieved and consider individual trainer's reports. Attendance by the trainer is highly desirable and essential for the first year and PYA assessments. An opportunity is also given to the trainee to comment on the training being provided; identifying in confidence any deficiencies in relation to a particular post.

A decision on progress through training is reached at each of these annual assessments. The determination and the evidence considered is entered on one of a set of standard PeTRA Forms as follows:

successful completion of a year of training – **PeTRA Form C**

completion but with a need for additional targeted training – **PeTRA Form C₁**

repeat training year – **PeTRA Form C₂**

During the penultimate year, an assessment (*the PYA*) reviews the evidence provided in the logbook on the results of the assessment methods employed (*see above*); the evidence provided will be further questioned during the assessment. At the PYA, the panel identifies the residual training outstanding, advising adjustments to the training schedule as necessary, and finally confirming the estimated date for completion (**PeTRA Form T and CSCST issuance**).

Facilities

A consultant trainer/educational supervisor has been identified for each approved post. He/she will be responsible for ensuring that the educational potential of the post is translated into effective training which is being fully utilized. The training objectives to be secured should be agreed between trainee and trainer at the commencement of each posting in the form of a written training plan. The trainer will be available throughout, as necessary, to supervise the training process.

All training locations approved for HST have been inspected by the Medical Training department. Each must provide an intellectual environment and a range of clinical and practical facilities sufficient to enable the knowledge, skills, clinical judgement and attitudes essential to the practice of GIM to be acquired.

Physical facilities include the provision of sufficient space and opportunities for practical and theoretical study; access to professional literature and information technologies so that self-learning is encouraged and data and current information can be obtained to improve patient management.

Trainees in GIM should have access to an educational programme of e.g. lectures, demonstrations, literature reviews, multidisciplinary case conferences, seminars, study days etc, capable of covering the theoretical and scientific background to the specialty. Trainees should be notified in advance of dates so that they can arrange for their release. For each post, at inspection, the availability of an additional limited amount of study leave for any legitimate educational purpose has been confirmed. Applications, supported if necessary by a statement from the consultant trainer, will be processed by the relevant employer.

**Teaching, Learning & Assessment
Methods**

Teaching, Learning & Assessment Methods

This section relates to the clinical competencies that are required for your training. During your training you will be assessed by methods such as miniCEX, DOPS, Case and Based Discussion. It is extremely important that you read this so that you are aware of the requirements of your training.

Record of Training

The evidence required to confirm progress through training includes:

- Details of the post(s) occupied, the training plan agreed with weekly timetables and duty rosters; case-mixes and volumes, numbers of practical procedures and outcomes.
- Confirmation of attendance at events in the educational programme, at departmental and inter-departmental meetings and other (optional) educational events.
- Confirmation (certificates) of attendance at subject-based/skills-training/instructional courses; (certificate or diploma from appropriate authority).
- Recorded attendance at conferences and meetings.
- A properly completed logbook with entries capable of testifying to the training objectives which have been attained and the standard of performance achieved.
- Evidence of regular contact with trainers, i.e. appraisals; confirmation of workplace/clinical encounters significant in relation to activities specified in the curriculum.
- Evidence of personal study, e.g. journals taken, membership of specialist society, web-based research and special interest developed.
- CPD/CME activity, returns, study leave records.
- Copies/examples of material prepared for presentation e.g. for audit, teaching, best-practice development, collection of cases, topic reviews, output from research.
- Educational supervisor's reports on **observed** performance (in the workplace): of duties, practical procedures, of presentations made and teaching activity: of advising and working with others, of standards of case notes, correspondence, communication with others e.g. at handover. Results of Mini-CEX, CBDs and DOPS encounters.
- Collective opinions – as used to ascertain a range of generic skills e.g. professionalism, maintaining trust.
- Result (diploma, certificate from recognised body) of completed knowledge-based test and/or practical examination.

Assessment of Competencies

The competencies to be acquired during training are listed within the Generic and Specialty Sections of this Curriculum.

The competencies will be assessed on a regular basis during your training programme and must be documented in the Training Record (*Logbook*). Progress through training is confirmed by entries which must be authenticated/ countersigned by the educational supervisors.

Documents which provide evidence of satisfactory completion of other necessary components of the curriculum must be filed in the portfolio of achievements compiled by the trainee and reviewed annually.

A report from the educational supervisor will be included. This will be prepared following appraisal, based on his/her assessment of observed performances by the trainee of practical procedures and other duties. The standard of case notes, summaries, correspondence and

other material, of presentational ability can also be the subjects of such report, as could the trainee's enthusiasm, judgement, team working or professionalism.

The trainer's report will also be based on a structured pro-forma, as used in the short form of clinical evaluation exercise (*Mini-CEx*); following observation and appraisal of the performance of a procedure (*DOPS*); after discussion of the (*clinical*) reasoning involved in the management of a problem faced by a trainee (*Case-Based Discussion, CBD*).

The results of any summative tests of knowledge taken, e.g. *MCQs and problem-solving tests, including self-administered tests*, should be filed and retained. Confirmation of the acquisition at a particular stage of a specified professional examination may be required in order to make progress towards the completion of training.

Learning Methods

This section gives examples of the learning methods that can be used as guidance to acquire competencies as they appear in the curriculum.

Experiential:

- Working under supervision
- Documenting/reporting progress (*case notes*), preparing summaries (*discharge notes*) other professional correspondence; communicating information to patients/to other health professionals.
- Consults, referrals between departments, handover, providing cross-cover.
- (*In certain specialties*), procedure room and investigation/assessment sessions offer practical opportunities to learn and develop skills under supervision and to exercise judgement when to seek assistance.

Self-directed learning:

- Curriculum-based personal study e.g. *textbooks, journals, literature search, retrieval of web-based information*.
- Information gathering and evaluation
- Active participation in audit
- Tests of knowledge

Group learning:

- Workplace discussions
- Multidisciplinary meetings
- Programmed meetings within the workplace

Performance based:

- Observing, learning, assisting, performing, demonstrating a technique or practical procedure.
- Simulations, role-play

Learning through teaching and research:

- Teaching, giving tutorials, lecturing.
- Mentoring and supervising junior colleagues and other staff.
- Presenting at meetings - local and international.
- Research
- Publication

External Courses:

- Specialty study/training days
- Attending mandatory and non-mandatory courses
- Attendance at seminars, relevant conferences, regional, national and international meetings.

Reflection:

- In your logbook there is an area to record reflections on training, learning, clinical events and career discussions. In recent years the importance of reflecting as part of the learning process on what you are doing has been shown to improve professional practice. Reflection on what you know and don't know helps to understand that learning is individual and reflection of professional activities can be used to highlight your strengths, weaknesses and areas for development.

Assessment Methods

Mini-CEx

Definition: Mini-CEx is designed to provide feedback on skills essential to the provision of good clinical care by observing an actual clinical encounter.

Description: The mini-CEx is a “snapshot” of a doctor/patient interaction and is based on a 15 minute observation of a single interaction. It is designed to assess the clinical skills and behaviors of trainees assessing such skills as history taking, physical examination skills, clinical judgement, professionalism, organisation/efficiency and overall clinical care. Not all elements will be assessed on each occasion. Immediate feedback should be provided after each encounter by the observer assessing the trainee.

Frequency of assessment: At least two miniCEx assessments should take place in each year of training. Where appropriated, one should be based in an outpatient setting and one in an acute setting. The assessments include assessment of skills in history taking, physical examination, appropriate use of investigations, cost-effectiveness, interpretation of investigations, making medical notes, making a diagnosis, treatment and management of disease, appropriate referral to other specialities, standards of care.

Competencies assessed:

- Consideration/Professionalism:
- Recognises/accepts patient’s rights (to consent, confidentiality, information). Establishes trust, shows professional approach.
- Communication:
 - Informs, explains, advises using appropriate language. Obtains consent, enlists patient’s co-operation.
- Interviewing Skills:
 - “Active” listening facilitating relevance; effectively using questions, responding to non-verbal clues.
- Examination Skills:
 - Prepares patient, minimises discomfort/unease. Proceeds logically, efficiently, thoroughly, completely.
- Judgement:
- Correctly identifies/lists problems, prioritises actions in realistic and timely schedule.

Opportunities for assessment: The assessment should take place in the usual place of work (*in-patient, clinic, office or department*) where the assessor must directly **observe** the trainee’s performance.

DOPS

Definition: Directly Observed Procedural Skills (DOPS) is a method, similar to the mini-CEX that has been designed specifically for the assessment of practical skills. DOPS assess the capabilities of a trainee while they perform a procedure.

Description: The DOPS is a structured assessment of actual performance. Each DOPS should represent a different procedure. The trainee chooses the timing, procedure and observer.

Frequency of Assessments: The number and frequency of assessments of procedural skills will vary from specialty to specialty.

Competencies assessed:

- Understanding of Procedure:
 - Relevant anatomy; purpose, indications, contra-indications; outcomes, risks, complications; choice of methods available, technique of procedure.
- Consideration for the Patient:
 - Gives reassurance, minimises discomfort, explains procedure fully; confirms informed consent obtained.
- Preparation:
 - First re-checks all relevant details correct. Safety check; instrumentation, equipment (drugs); positioning; cleansing/aseptic technique; sedation, analgesia, anaesthesia confirmed.
- Professional/technical ability:
 - Dexterity, accuracy, efficiency; obtains, interprets diagnostic material/information; informs, directs staff courteously; recognises own limitations; seeks help where appropriate; manages risk.
- Post-Procedure:
 - Completes documentation; regulates recovery phase, observations; anticipates/deals with complications. Informs/counsels patient/relatives.
- Overall ability to perform Procedure:
 - Ability to complete/undertake procedure; technical abilities as demonstrated; appropriately confident, team/ leadership skills.

Opportunities for assessment: While supervising, assisting, observing actual performance in appropriate setting (office, theatre, day procedure, ICU etc.). The assessment should be made under appropriate conditions e.g. with all equipment and personnel necessary to support the procedure.

Case Based Discussion (CBD)

Definition: Case-based discussion (CBD) is used to enable the documenting of conversations about, and presentations of, cases by trainees. This activity happens throughout training, but is rarely conducted in a way that provides systematic assessment and structured feedback. CBD is used to evaluate core skills that can be demonstrated during an interactive discussion based on a single case in which the trainee has been actively involved.

Description: CBD is designed to assess clinical decision-making and the application or use of medical knowledge in relation to patient care for which the trainee has been directly responsible. It also enables the discussion of the ethical and legal framework of practice, and in all instances, it allows trainees to discuss why they acted as they did. Although the primary purpose is not to assess medical record keeping, as the actual record is the focus for the discussion, the assessor can also evaluate the record keeping in that instance. The case for discussion can either be selected by the trainee or chosen by the assessor. The assessment will be based on oral discussion and written information available. It includes a bi-lateral (trainee's and trainer's) critical appraisal of the reasoning and judgements made, and of the management of the case. Whenever possible the assessment should include issues such as disease notification, health promotion and screening.

Frequency of Assessment: This method of assessment has not been validated as yet, however it is a very useful method and can be easily incorporated into journal clubs, post-graduate teaching sessions or on-line etc

Competencies assessed:

- **Problem Definition:**
 - All relevant facts established, from current/previous history, investigations, interventions; reports, correspondence reviewed.
- **Record Keeping:**
 - Legible, tidy, legally defensible records seen.
- **Reasoning:**
 - Appropriately selected, sequenced investigations/procedures planned. Evidence-based, logical judgements made; (differential) diagnosis established; action plan made with realistic goals.
- **Case Management:**
 - Effective, safe (responsible) prescribing; aware of protocols/guidelines, best practice; monitoring progress, handling complications/mistakes; timely, appropriate referrals, case closure.
- **Reflective Practice:**
 - Shows analytical, constructive approach to case, willingness to learn; acknowledges and prepared to consider other management options; aware of change, possible advances, when to seek help.

Opportunities for assessment: The presentation should take place in a suitable environment, with due consideration given to the patient's sensitivities, to confidentiality e.g. in any ward or clinical setting; an office, side- or seminar-room may be found convenient. Case presentations and discussions; e.g. at handover, ward-rounds (inter-) departmental meeting.

Mandatory Training Courses

(Note: this list only included the generic mandatory courses)

Mandatory Communication course:

To be completed in Year 1. The course is a short 1-2 hour course at the start or the end of specialty study days to reduce time spent away from the hospitals. Communication skills will be assessed as part of the MiniCEX assessments.

Audit:

Mandatory 1/2 day on audit to be completed in Year 1.
Audit reports are submitted on a yearly basis

Ethics:

Four mandatory study days are to be completed during the training programme. Three study days are for all specialities - Ethics & Law, Ethics in Research and Professionalism. The fourth day 'End of life' is for all specialties except Public Health Medicine, Occupational Medicine and Histopathology who have a speciality specific ethics day.

Leadership Skills:

Mandatory 3 day course to be taken in year 3-5.

ACLS:

ACLS compliant in appropriate specialties

Specialty Study Days

The study day requirements will be advised to trainees at the start of each training year.

The American College of Physicians Internal Medicine In Training Examination is run once a year and it is mandatory for trainees to sit the examination at least once throughout the training programme.

Annual Assessments

Consultant feedback:

End of year assessment completed by the Trainers include assessment in areas such as: Team working skills, Leadership skills, Handling of complaints, conflict management
Questions such as the following are included in the assessment form:

- Have there been any complaints from nursing staff, AHP, patients regarding this trainee or their team?
- If so:
 - How did the trainee respond to a complaint about a member of his/her team?
 - How did the trainee respond to a complaint against him/her?.
- Have you any serious issue with your SpR?
- Where there any instances of serious conflict?
- Do you think he/she behaved appropriately?

Audit:

It is difficult to complete the audit cycle in a one year period. Each year the trainee should take part in an audit - either to develop and start an audit or to review and change practice as a result of an audit - the complete audit cycle should be understood. In hospitals that have audit systems set up, the trainee should complete a full audit.

Trainees will be required to submit a full audit report and will be encouraged to present audit results at local, national or international meetings.

Attendance at In- Hospital Speciality Radiology conferences

Time spent in Laboratory/Pathology or attendance at Laboratory/Pathology conferences (Depending on specialty)

Committee membership:

Many specialty curricula have identified participation in committees.

Teaching skills

Number of undergraduate and postgraduate tutorials, number of membership tutorials.

Presentations/Publications

On-Call take

GENERIC COMPONENTS

Communication & Interpersonal Skills

Objective: To be able to communicate effectively and sensitively with patients, their relatives, carers and with professional colleagues in different situations.

Medical Council Domains of Good Professional Practice: No. 2: Relating to Patients; No 3. Communication and Interpersonal Skills.

KNOWLEDGE

Within a consultation

- How to structure an interview to obtain/convey information; how to identify concerns, expectations, priorities; how to promote understanding, reach conclusions; use/choose appropriate language. Knowledge of procedures/investigations available and alternative options; of strategies to promote compliance through understanding of objectives.
- Able to elicit facts, question using open, followed by closed questions; “active listening”. Gives information clearly, avoids jargon, confirms understanding, is able to encourage co-operation, compliance; obtain informed consent.
- Considerate, shows respect for other’s culture, opinions, patient’s right to be informed, make choices.

In difficult circumstances

- Understands potential areas for difficulty “awkward situations”, knows how and when to break bad news, how to circumvent cultural, language barriers, deal with sensory or mental impairments, how to deal with challenging or aggressive behaviour.
- Able to communicate essential information where difficulties exist, appropriately uses assistant, interpreter, chaperone, relatives. Able to deal with anger, frustration in self and others.
- Selects an appropriate environment; seeks assistance, makes and takes time. Avoids unrealistic optimism or pessimism.
- Respects another’s right to opinions and to accept or reject advice.

With professional colleagues and others

- How best and when to communicate with doctors and other members of the healthcare team; how to provide concise, problem-orientated statement of facts and opinions (*written, verbal or electronic*). Knows legal context status of records and reports, of data protection (*confidentiality*), Freedom of Information (FOI) issues.
- Understands relevance to continuity of care and the importance of legible, accessible, authenticated records. Knows when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, written communication.
- Communicates effectively, promptly; recognises roles and skills of other health professionals.
- Able to judge own abilities/limitations and when to seek help or give assistance, advice to others; when to delegate responsibility, when to refer.
- Values perspectives of others contributing to management decisions.

In maintaining continuity of care

- Understands the relevance to outcome of continuity of care, within and between phases of healthcare management.
- The importance of completion of tasks and documentation *e.g. before handover (to another team, department, specialty)*, of identifying outstanding issues, uncertainties.
- Maintains (*legible*) records, is available, contactable, time-conscious, sets (*and attempts to reach*) realistic objectives, identifies/prioritises outstanding problems.
- Alert to avoid potential confusion or misunderstanding through communications failure.

Giving explanations

- The importance of possessing the full facts, and of recognising uncertainty and conflicting evidence on which decisions have to be based.
- How to secure, retain attention avoid distraction. Understand how adults receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention. Risk of information overload.
- Need to interpret results, significance of findings, diagnosis, to explain objectives, limitations, risks of treatment, in terms and by means adjusted to recipients' ability to comprehend.
- Uses language, literature (*leaflets*) diagrams, educational aids and resources appropriately.
- Able to achieve level of understanding necessary to achieve co-operation (*compliance, informed choice, acceptance of opinion, advice, recommendation*).
- Prepared to discuss, repeat information, resolve uncertainty, confusion, respond to questioning, challenge.

Responding to complaints

- Value of hearing and dealing with complaints promptly; the appropriate level, the procedures (*departmental and institutional*); sources of advice, assistance available.
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources.
- Able to establish facts, identify issues and respond quickly and appropriately to a complaint received.
- Accepts responsibility, involves others, consults appropriately.
- Open, prepared to accept criticism, acknowledge shortcomings where they exist, offer an apology.

SKILLS

- Communication
- Conflict resolution
- Dealing with complaints
- Communicate decisions in a clear and thoughtful manner
- Presentation skills

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Consultant feedback at annual assessment
 - Workplace based assessment e.g Mini-CEx, DOPS, CBD
 - Educational supervisor's reports on observed performance (in the workplace): communication with others e.g. at handover. ward rounds, multidisciplinary team members
- Presentations

Professionalism & Autonomy

Objective: To have the knowledge, skills and attitudes to act in a professional manner at all times and in partnership with patients and colleagues. To develop the attributes of someone trusted to be able to manage complex human, legal and ethical problems.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No 2. Relating to Patients; No. 7 Professionalism

KNOWLEDGE

Patient Centred Care;

- The provision of Patient Centre Care should be at the core of the service a doctor provides
- To put the quality and safety of patient care as a prime objective

Behaviour in the workplace;

- **Relationships with patients**
 - Know patients' rights e.g. to be informed sufficiently to enable them to be involved in decisions about their treatment and care. Know boundaries limiting consultations including ethical, duty of care.
 - How to deal with inappropriate behaviour e.g. aggression, threats, violence, harassment, racism.
 - Potential obstacles e.g. cultural, educational, ethical – also preconceptions and prejudices.
 - Ensures confidentiality, respects privacy. Focuses investigation on patient's needs and expectations. Shows sensitivity, develops empathy but avoids personal involvement.
 - Non-judgemental in approaching patient's perceived problems. Prepared to accommodate idiosyncrasies, respecting patients as individuals. Altruistic.
- **Working with colleagues**
 - Know the potential roles and contributions of other specialists – medical, surgical, general practitioners and of other hospital or community-based agencies e.g. social services, also patient support groups and other providers of care.
 - How to arrange cover, safeguarding the handover process, know where responsibility begins and ends, when and where to seek advice.
 - Aware of the extent and limitations of own areas of practice/expertise; recognises and respects others' inputs, capabilities; is able to work co-operatively with other health professionals; refers, delegates appropriately.
 - Realistically schedules and completes tasks and provides full documentation for handover, referral; strives to maintain continuity and standard of care especially across shifts and when arranging rotas and covering absences.
 - Conscientious, reliable, responsible and professional at all times, considerate, shows respect for opinions of others, values good advice, accepts constructive criticism.

Creating an environment conducive to learning and improvement

- Endeavours to foster an environment conducive to learning
- Shares knowledge with trainees, students and other members of the multidisciplinary team
- Encourages and is open to reflective practice
- Seeks out role models and learns from the best practice behaviours of others.
- Participates in quality assurance and clinical improvement systems & training
- Uses evidence based practice in decision making
- Participates in journal clubs, case presentations, grand rounds

Time management & continuity of care

- Is punctual for duty, meetings, handovers and other duties
- Prioritises workload
- Delegates when appropriate to do so
- Knows when to call for help
- Ensures satisfactory handover to ensure continuity of care
- Ensures satisfactory transfer of patients to other medical teams or services when required
- Makes adequate arrangements to cover holidays, study and other leave

Honesty & Integrity

- Acts with honesty and integrity at all times in the delivery of patient care and in working with professional colleagues
- Acts fairly in all situations.

Moral Reasoning & Legal and ethical issues (see also Ethics section)

- Describes and demonstrates an understanding of the main principles of medical ethics including autonomy, justice and confidentiality
- Understands correct procedures for obtaining consent (for treatment, investigations, procedures, research project, post mortem). Legal responsibilities surrounding death/disease certification; regarding mental illness; referrals to coroner; also in criminal cases.
- Understands issues surrounding confidentiality, disclosure/release of information; discovery (FOI) of records. Legal and ethical issues in context of resuscitation, organ donation/transplantation.
- Able to complete certificates, documents, respects patient's wishes, rights, but accepts a doctor's (legal) obligations to society. Able to obtain/provide in full, information relevant to consent.
 - Alert to possible legal implications and ethical aspects of actions
 - Ensures privacy when discussing sensitive issues
 - Seeks timely advice where patient abuse is suspected

Team working and leadership

- How teams work, know how to assign individual and collective responsibilities which respect an individual's (*professional*) status within a team. How to set goals, initiate/co-ordinate action, audit performance, give feedback, e.g. developing guidelines, protocols.
- Positively contributes to planning, motivating, organising activity, employs negotiating, human relations, interpersonal skills appropriately.
- Able to set and apportion individual and team objectives, energise and fortify others to sustain efforts to achieve goals, appraise performance.
- Co-operates as team player; respects the contributions, expertise of others; tolerant but determined as team leader.
- Adopts a holistic approach to patient care
- Knowledge of principles of audit and self assessment

Health-Physical health and Handling Stress & Fatigue

- Know how stress can affect performance, how to reduce stress and develop coping mechanisms to deal with pressure. When to enlist support.
- Understand the relevance of personal health to performance at work: the risks of self-medication, potential for drug and alcohol abuse: know that support is available from Occupational Health Services.
- Able to recognise, cope with stress; asks for help when necessary, is aware of responsibility (*to others*) of having health problems dealt with. Willing to take time off; and, if necessary, re-train/redevelop skills.

Commitment to Continuous Improvement in Health care Systems

- Understands the principles of quality and safety improvement
- Participates in quality improvement activities, including standard setting, follows established practice guidelines, research and audit
- Undergoes training in this area where appropriate

SKILLS

- Professionalism
- Multidisciplinary team working
- Ethical issues
- Leadership
- Time management
- Stress management

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (mandatory)
- Consultant feedback at annual assessment
 - Workplace based assessment e.g. Mini-Cex, DOPS, CBD
 - Educational supervisor's reports on observed performance (in the workplace): communication with others e.g. at handover. ward rounds, multidisciplinary team members
- Leadership Programme (Year 3 – 5)

Maintaining Good Practice

Objective: To adopt the habits of lifelong learning, and to appreciate and implement the practices of clinical governance.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care, No. 6 Scholarship, No 7 Professionalism, No 8 Clinical Skills

KNOWLEDGE

Lifelong learning

- Aware of CME/CPD obligations, systems/process for competence assurance/revalidation. Understand the role of appraisal, assessment methods available their application.
 - Sources, resources, opportunities for self-directed and group learning including IT. Know how adults learn.
 - Recognises and makes effective use of learning opportunities, maximises the potential for personal study, plans personal development.
 - Self motivated, inquisitive, eager to learn.

Application of clinical governance

- Understand the principles of evidence-based practice, clinical audit and effectiveness, the development/application of best-practice protocols.
- Able to appraise and apply data from research, and to use audit to establish best practice and clinical effectiveness. Utilizes and practices evidence-based medicine.
- Accepts the need for reflective practice and to critically evaluate own work and make changes.

Risk management

- Systems, procedures for identifying (*clinical*) risk; correct procedures and action when things go wrong; how to handle complaints.
- Employes procedures and policy for accidents, injuries; for confirming skill and staffing levels, arranging cross-cover, on-call, for supervision.
- Potential complications or side effects of treatments, procedures and investigations; importance of accurate, recent information and available records. The assessment of risk, relative risk.
- Able to assess, anticipate, risks; recognise failure. Openly discuss bad outcomes, locate system weakness, analyse critical incidents.
- Able to discuss potential risks *e.g. with patients, to analyse and balance risk with benefit*. Able to learn from previous experience, from complaints received, errors.
- Is honest in recognising misjudgements.

Evidence, audit, guidelines

- Basis for developing evidence-based medicine, kinds of evidence, evaluation; methodologies of clinical trials.
- Sources from which useful data for audit can be obtained, the methods of collection, handling data, the audit cycle.
- Means of determining best practice, preparing protocols, guidelines, evaluating their performance.
- Capable of accessing relevant data (library, internet use). Able to appraise available evidence critically.
- Able to complete an audit cycle relevant to practice; to develop, evaluate, review and update a set of guidelines.
- Uses evidence / guidelines appropriately having due regard for the individual.

SKILLS

- Personal development planning
- Evidence -based practice
- Risk Management
- Audit
- Research

ASSESSMENT & LEARNING METHODS

- Record of attendance at journal clubs, medical grand rounds, SpR teaching sessions, local and national academic meetings
- Record of attendance at CME accredited international meetings
- Attendance at local radiology conferences
- Time spent in laboratory or attendance at laboratory conferences
- Audit Study Day (Year 1)
- Annual Audit
- Leadership Skills Course (Year 3- 5)
- Research Publications
- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD

Standards Of Care

Objective: To be able to assess patients' problems investigate and treat them appropriately, efficiently, and consistently over time.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 2 Relating to Patients; No. 3 Communication and Interpersonal Skills; No. 4 Collaboration and Teamwork; No. 5 Management (including Self Management; No. 8 Clinical Skills,

KNOWLEDGE

History taking and examination

- Diagnostic significance of patterns of symptoms, pathophysiology and physical signs.
- Able to take and analyse a clinical history and perform a reliable and appropriate examination, arrive at a differential diagnosis.
- Exhibit empathy and show consideration for all patients, their impairments and attitudes irrespective of cultural and other differences.

Investigation, indications, risks, cost-effectiveness

- Understand the pathophysiological basis of the investigation undertaken.
- Know and be able to explain the procedure for the commonly used investigations, preparations, effects or risks, the reason for the investigation, the information sought and its relevance to management.
- Sensitivity and specificity of results, possible interferences, artefacts.
- Able to understand significance, interpret and explain results of investigations.
- Shows logical approach in choosing, sequencing and prioritising investigations.
- Able to liaise, discuss, negotiate effectively with those undertaking the investigation.
- Careful to select investigations appropriately, considering (*patients'*) needs, risks, value.

Treatment and management of disease

- Understand the pharmacology, therapeutics of treatments prescribed, choice of routes of administration, dosing schedules, compliance strategies; the objectives, risks and complications of treatment cost-effectiveness. Natural history of diseases; quality of life concepts.
- Able to assess accurately patient's needs, to prescribe administer, deliver, arrange treatment; recognise and deal with reactions / side effects. Sets realistic therapeutic goals, utilizes rehabilitation services, palliative care appropriately.
- Able to discuss rationale, objectives, risks and alternative options openly, taking into account patients' / their relatives' attitudes, beliefs or other philosophical concepts.
- Recognises that the degrading effects of illness, especially incapacity which is chronic, impacts on relationships and family, having financial as well as social effects.
- Discusses, plans, delivers care appropriate to patient's needs and wishes.

Disease prevention and health education

- Disease notification; methods of collection and sources of data. Screening for disease, (*methods, advantages and limitations*). Health promotion and support agencies; means of providing and sources of information for patients.
- Risk factors, preventive measures, strategies applicable to smoking, alcohol, drug abuse, lifestyle changes.
- Able to advise on and promote lifestyle change, stopping smoking, control of alcohol intake. Able to assess and explain risk, encourage positive e.g. *immunisation* and negative preventive measures.

- Enlists / requires patients' involvement in solving their health problems, provides information, education. Avails of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services.
- Non-judgemental approach to patient's problem: values contributions of health education and disease prevention to health in a community.

Notes, records, correspondence

- Understand the functions of medical records, their value as an accurate up-to-date commentary and source of data.
- Understand the need and place for problem-orientated discharge notes, letters, more detailed case reports, concise out-patient reports, focused reviews.
- Compiles adequate case notes, with results of examinations, investigations, procedures performed, sufficient to provide an accurate, detailed account of the diagnostic and management process and outcome. Provides concise, informative progress reports orally.
- Maintains legible, authenticated records, uses dictation, telephone, e-mail appropriately.
- Appreciates importance of up-to-date, accurate information, its availability, transfer and the need for communicating promptly *e.g. with primary care*.

Time management and decision taking

- How to prioritise demands, respond to patients' needs, sequence urgent tasks. Understand how to establish (*clinical*) priorities *e.g. for investigations, intervention; how to set realistic goals; understand the need to allocate sufficient time, know when to seek help*.
- Understands the need to complete tasks, reach a conclusion, make a decision, take action with allocated time.
- Able to recognise when falling behind and can adjust accordingly; able to cope with changing circumstances, variable demand, prepared to re-prioritise and ask for help.
- Able to collate evidence, summarise, recognise when objective has been gained
- Knows how and when to conclude, disengage.
- Has realistic expectations of own and of others' performance. Time-conscious, punctual.

Relevance of professional bodies

- Understand the relevance to practice of standards of care set down by recognised professional bodies – the Medical Council, Medical Colleges and their Faculties, and the additional support available from professional organisations *e.g. IMO, Medical Defence Organisations and from the various specialist and learned societies*.
- Actively engages with professional/representative/specialist bodies.
- Values the breadth and depth of experience that can be accessed by associating with professional colleagues.

SKILLS

- History taking and examination
- Appropriate use of investigations
- Treatment and management of disease
- Disease notification
- Health promotion
- Screening
- Study Day - Disease prevention & health education
- Personal and professional organisation and planning; goal setting, time management

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD
- Educational supervisor's reports on **observed** performance (in the workplace)
- Study Days
- Annual Audit

Patient Safety

Objective: To ensure patient safety is at the core of the health service provided by designing safe systems and processes of care and understanding the role of healthcare systems and human factors in adverse events and errors.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care.

KNOWLEDGE

Safe Systems, Competency and Safe practice

- Understands multiple factors involved in failures;
- Safe Healthcare Systems-a Safe working environment
- The relationship between 'Human factors' and patient safety
 - Safe working practice. Role of procedures and protocols in optimal practice
- Patient safety relevance in health care and its role in minimizing the incidence and impact of adverse events and maximize recovery from them.
- Knowledge and understanding of the Swiss cheese model.
- Health care errors and system failures; human and economic costs; blame culture

Communication

- Disclosure – know the principles of open disclosure
- Knowledge and understanding of valid consent
- Teamwork
- Continuity of care

Near Misses and adverse events

- Knowledge of preventing and managing near misses and adverse events. Incident reporting; root cause analysis. Understanding and learning from errors
- Understands and manages clinical risk
- Manages complaints
- Knows when and how to report a near miss or adverse event

Quality improvement

- Standardises common processes and procedures – checklists, vigilance
- Evidence based care
- Infection control; healthcare associated infections
- Patient safety and invasive procedures.
- Improvement medication safety; safe prescribing; common medication errors
- Ethical behaviour

SKILLS

- Effective Communication with patients, families and colleagues
- Co-operation and collaboration with colleagues to achieve safe and effective quality patient care
- Being an effective team player
- Understand how and why systems break down and why errors are made
- Be able to learn from errors and near misses to prevent future errors
- Know how to use relevant information from complaints, incident reports, litigation and quality improvement reports to control risks
- Minimise infection through improved infection control practice
- Minimise errors during invasive procedures by developing and adhering to best-practice guidelines for safe surgery.
- Minimise medication errors by practicing safe prescribing principles

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): prioritization of patient safety in practice
- RCPI Patient safety on-line course (recommended)
- Completion of infection control induction in the workplace

Therapeutics and Safe Prescribing

Objective: To progressively develop your ability to prescribe, review and monitor appropriate therapeutic interventions relevant to clinical practice in specific specialities including non-pharmacological therapies and preventative care

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care.

KNOWLEDGE

- Indications, contraindications, side effects, drug interaction, dosage and route of administration of commonly used drugs
- Knowledge of prescribing for common medical conditions
- Knows range of adverse drug reactions to commonly used drugs, including complementary medicines
- Identifies common prescribing hazards
- Identifies high risk medications
- Knows drugs requiring therapeutic drug monitoring and interprets results
- Knows the effects of age, body size, organ dysfunction and concurrent illness or physiological state e.g. pregnancy on drug distribution and metabolism relevant to the trainees practice
- Recognise the roles of regulatory agencies involved in drug use, monitoring and licensing (e.g. IMB , and hospital formulary committees)
- Knows procedure for monitoring, managing and reporting adverse drug reaction

SKILLS

- Knows how to write a prescription
- Prescribes appropriately in the elderly, childhood, pregnancy and breast feeding
- Make appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)
- Review the continuing need for long term medications relevant to the trainees clinical practice
- Anticipate and avoid defined drug interactions, including complementary medicines
- Advise patients (and carers) about important interactions and adverse drug effects
- Provide comprehensible explanations to the patient, and carers when relevant, for the use of medicines
- Open to advice and input from other health professionals on prescribing
- Participates in adverse drug event reporting

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD
- Educational supervisor's reports on **observed** performance (in the workplace): prioritization of patient safety in prescribing practice

Infection Control

Objective: To be able to manage and control infection in patients, including controlling the risk of cross –infection, appropriately managing infection in individual patients, and within the wider community to manage the risk posed by communicable diseases.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 5 Management (including Self Management).

KNOWLEDGE

Within a consultation

- Understand the principles of infection control as defined by the HIQA
- How to minimize the risk of cross-infection during a patient encounter by adhering to best practice guidelines available
- Treat and manage infection in the individual patient
- Understand the principles of preventing infection in high risk groups e.g managing antibiotic use to prevent Clostridium difficile) Knowledge and understanding the local antibiotic prescribing policy
- Aware of infections of concern, eg MRSA, C Difficile,
- Understands best practice in isolation precautions
- Knows when and how to notify relevant authorities in the case of infectious disease requiring disclosure

In surgery or during an invasive procedure

- Understands the increased risk of infection in these patients and adheres to guidelines for minimizing infection in such cases
- Knows the guidelines for needle stick injury prevention and management

During an outbreak

- Adheres to guidelines for minimizing infection in the wider community in cases of communicable diseases and seeks expert opinion or guidance from infection control specialists where necessary

SKILLS

- Practices aseptic techniques, hand hygiene
- Follows guidelines for infection control and management
- Prescribes antibiotics according to antibiotic guidelines Encourages all staff, patients and relatives to observe infection control principles
- Communicates effectively with patients regarding treatment and measures recommended to prevent re-infection or spread
- Collaborates with infection control colleagues to manage more complex or uncommon types of infection including those requiring isolation eg transplant cases, immunocompromised host
- In the case of infectious diseases requiring disclosure:
 - Has knowledge of the diseases requiring disclosure and undertakes notification promptly
 - Collaborates with external agencies regarding reporting, investigating and management of notifiable diseases .
 - Able to advise patients on lifestyle change to minimize the risk of re-infection or spread of infection,
 - Enlists / requires patients' involvement in solving their health problems, provides information, education.

- Avails of support provided by voluntary agencies and patient support groups, as well as expert services where appropriate
- Non-judgemental approach to patient's problem:
- Utilises and values contributions of health education and disease prevention and infection control to health in a community.

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD
- Educational supervisor's reports on **observed** performance (in the workplace): practicing aseptic techniques as appropriate to the case and setting, investigating and managing infection , prescribing antibiotics according to guidelines
- Completion of infection control induction in the workplace

Leadership

Objective: To have the knowledge, skills and attitudes to act in a leadership role and work with colleagues to plan, deliver and develop services for improved patient care and service delivery

Medical Council Domains of Good Professional Practice: No.1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 4 Collaboration and Teamwork; No. 5 Management (including Self Management); No 6 Scholarship.

KNOWLEDGE

Demonstrating Personal Qualities

- Develops self-awareness and understanding of personal style and its impact on others
- Efficiently and effectively manages one- self and one's time especially when faced with challenging situations
- Continues personal and professional development through scholarship and further training and education where appropriate
- Acts with integrity and honesty with all people at all times

Working with others

- Develops networks to expand knowledge and sphere of influence
- Builds and maintains key relationships. Adapts style to work with different people and different situations
- Encourages contributions from others including patients, carers, members of the multidisciplinary team and the wider community
- Aware of own personal style and other styles and their impact on team performance. Understands the importance of good communication in teams and the role of human factors on effectiveness and patient safety

Managing Services

- Knows and understands the structure and function of Irish Health Care System
- Aware of the challenges of managing in healthcare
 - Role of Governance
 - Clinical Directors
- Can contribute to the planning and design of services
- Knows and understands the financing of the health service
 - Preparing a budget
 - Defining value
 - Managing resources
- Knows and Understands the importance of human factors in service delivery.
 - Manages staff training, development and education
- Managing performance
 - Performs staff appraisal and deals effectively with poor staff performance
 - Rewards and incentivises staff for quality and efficiency

Improving Services

- Ensures patient safety by adopting and incorporating a patient safety culture
- Critically evaluates where services can be improved by measuring performance, and acting to raise standards where possible Encourages a culture of improvement and innovation
- Facilitating transformation by creating and living a vision

Setting Direction

- Identifies the external and internal drivers setting the context for change
- Applies knowledge and evidence of systems and resource management to guide service development
- Makes decisions using evidence based medicine and performance measures
- Evaluates the impact of change on health outcomes through ongoing service evaluation

SKILLS

- Effective Communication with patients, families and colleagues
- Co-operation and collaboration with others; patients, service users, carers colleagues within and across systems
- Being an effective team player Being able to managing resources and people
- Managing performance, performance indicators
- How to write and develop a service plan
- How to prepare and manage a budget

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Leadership course (Year 3 – 5)
- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): on management and leadership skills
- Involvement in hospital committees where possible e.g. division of Medicine, Drugs and Therapeutics, Infection Control etc.

Management Information Systems & Management Skills

Objective: To understand the organisation, regulation and structures of the health services, nationally and locally, and to be competent in the use and management of information on health and health services. To develop personal effectiveness and the skills applicable to the management of staff and activities within a healthcare team.

Medical Council Domains of Good Professional Practice: No. 5 Management.

KNOWLEDGE

Health service structure, management and organisation

- The administrative structure of the Health Service, services provided in Ireland and their funding. Department of Health, HSE and Hospital Management structures and systems. The National Regulatory Bodies, health agencies and patient representative groups.
- Can explore, direct, pursue a project, negotiating through the relevant department at an appropriate level. Able to “*operate the system*”. Understand the need for business plans, annual hospital budgets, the relationship between the hospital and PCCC.
- Recognises the advantage of understanding the administrative machinery of the Health Services.

The provision and use of information in order to regulate and improve service provision

- Methods of collecting, analysing and presenting information relevant to the health of a population and the apportionment of healthcare resources. The common ways in which data is presented. Know of the sources which can provide information relevant to national or to local services, publications available.
- Able to seek / locate information in order to define an issue needing attention e.g. to provide data relevant to a proposal for change, establishing a priority, obtaining resources.

Obtaining information of value in maintaining medical knowledge with a view to delivering effective clinical care

- Understands the contribution that current, accurate knowledge can make to establishing clinical effectiveness, best practice, treatment protocols. Know sources providing updates, literature reviews and digests.
- Able to make use of information, use IT, undertake searches and obtain aggregated data, to critically evaluate proposals for change e.g. *innovative treatments, new technologies*.
- Embraces principles of clinical governance.

Delegation skills, empowerment and conflict management

- How to assess, develop personal effectiveness, improve negotiating, influencing and leadership skills. How to manage time more efficiently, deal with pressure and stress. How to motivate and operate within a multidisciplinary team.
- Able to adjust to change, apply management/leadership, negotiating skills to manage change. Self-awareness, able to recognise strengths and weaknesses.
- Appropriately values and uses management techniques and seeks to improve these skills and personal effectiveness.

Leadership

- How to maintain, improve working relationships within a team; appropriately recognise roles, skills, status. Know when and what to delegate, provide support, appraise.
- Motivates and empowers others, knows when help is needed. Able to foresee, forestall, manage conflict.
- Sensitive to and aware of the needs of others.

SKILLS

- Risk Management
- Leadership skills
- Time management
- Delegation skills
- Conflict management
- Clinical governance
- Audit

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Audit course (Year 1)
- Leadership course (Year 3 – 5)
- Annual audit
- Consultant feedback at annual assessment on management and leadership skills
- Involvement in hospital committees

Teaching & Research

Objective: To recognise the opportunities for personal/professional development that exist for medical teachers, educational supervisors and from involvement with research.

Medical Council Domains of Good Professional Practice: No. 6 Scholarship.

KNOWLEDGE

Teaching, educational supervision and assessment

- Know principles of adult learning, teaching and learning methods available and strategies; educational principles directing assessment, methods, formative vs. summative. Value of regular appraisal / assessment in informing training process.
- Able to identify educational objective. Able to design and deliver an effective teaching event, both small and large group. Uses technology / materials effectively. Adequate preparation, timekeeping.
- Appreciates benefit to learner is key objective of teaching sessions, key resource is adequate knowledge of subject.

Research, methodology and critical evaluation

- How to design and resource a research project, how to obtain ethical approval. Research methodology, valid statistical analysis, writing and publishing papers. Ethical considerations, declaring an interest.
- Reviewing the literature, framing the question, designing a project capable of providing an answer. Able to derive results and conclusions, able to write or present a paper.
- Intellectually honest.
- Present data in a clear, honest and critical fashion.

SKILLS

- Bed-side undergraduate and post graduate teaching
- Lectures
- Ethics of research
- Presentation and writing skills

Ethics

Objectives: *Medicine is predominantly concerned with the diagnosis and treatment of illness. Besides the pathological processes involved and the physical impact of each condition, the requirements for practising medicine in a fair, competent and ethical manner must be understood before a doctor is ready for independent practice.*

*Upon satisfactory completion of specialist training, the doctor will be **competent** to undertake comprehensive medical practice in that specialty in a **professional** manner, unsupervised and independently and/or within a team, in keeping with the needs of the Irish healthcare system.*

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 6 Scholarship; No. 7 Professionalism.

KNOWLEDGE

- Knowledge of basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care.
- Interpersonal and communication skills that ensure effective informational exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Professionalism.

Ethics I: Professionalism

Objectives: *To explore the relationship between ethics of healthcare delivery and professionalism including the challenges and the impact of current developments*

KNOWLEDGE

- Knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (as a doctor).
 - The skills of lifelong learning and the maintenance of competence
 - Information literacy
 - Ethical behaviour
 - Integrity, honesty
 - Altruism
 - Service to, justice and respect for others
 - Adherence to professional code
- Leadership and Accountability
- Role of the Clinical Director
- Dignity & Respect
- Conflicts of interest
- Personal scope of practice & boundaries
- Adverse Events- open communication when adverse events occur
- Discussing errors

Ethics II: Ethics & Law

Objectives: To explore the relationship between ethics of healthcare and law including the challenges and the impact of current developments

KNOWLEDGE

- Ethical patient care and Irish Law including:
- Informed consent
- Consent and capacity
- Disclosure
- Medical Practitioner's Act
- Malpractice
- Misconduct
- Confidentiality
- Data protection
- Coroner's System
- Medical Council Ethical Guide

Ethics III: Research

Objectives: To explore the ethics of healthcare research including the challenges and the impact of current developments

KNOWLEDGE

- Principles of research
- Un-ethical conduct
- Genetics
- The Importance of Research in Health Care
- Dept of Health and Children Research Action Plan-implications for researchers
- Reasons for Research being Ethically Regulated
- Genetics
- Researching vulnerable groups
- Data Research/Protection and confidentiality
- Patient information bill
- Human Tissue Act
- Role of Research Ethics Committee
- Conflict of interest

Ethics IV: End of Life

Objectives: To explore the ethics of end of life challenges and the impact of current developments

KNOWLEDGE

- Euthanasia/Terminal Sedation
- Artificial nutrition/hydration
- Resuscitation issues
- Advanced Directives
- Organ donation
- Death Certification/Coronial System
- Prolongation
- Futility
- Decision making process

SKILLS

- Recognises the dying patient
- Communicates bad news sensitively
- Explores the options for managing the dying patient including DNR and advanced directives
- To incorporate the above ethical concepts in their everyday practice

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (Mandatory)
- Note of examples of ethical dilemmas encountered in training
- Consultant feedback at annual assessment
- Workplace based assessment e.g CBD
- Educational supervisor's reports on observed performance (in the workplace)

Dealing with and Management of Acutely ill Patients in Appropriate Specialties

Objective: To have the knowledge and skills to be able to assess and initiate management of patients presenting as emergencies with the problems outlined below. For each scenario, trainees should in particular gain knowledge and skills to recognise the critically ill and:

Immediately assess and resuscitate if necessary.

Formulate a differential diagnosis, treat and/or refer as appropriate.

Select relevant investigations and accurately interpret reports.

Communicate the diagnosis and prognosis – see Generic Skills.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care, No. 8 Clinical Skills

KNOWLEDGE

Management of acutely ill patients with medical problems

- Know how potentially life-threatening problems present; know the indications for urgent intervention, additional information necessary to support action (e.g. *results of investigations*) and treatment protocols (see *Addendum*).
- Know when to seek help, refer/transfer to another specialty. Know ACLS protocols. Know the ethical and legal principles relevant to resuscitation and DNR orders.
- Able to manage acute medical intake, to receive and refer patients appropriately, to interact efficiently and effectively with other members of the medical team, accept/undertake responsibility appropriately.
- Able to anticipate / recognise, assess and manage life-threatening emergencies, recognise significantly abnormal physiology e.g. *dysrhythmia* and provide the means to correct e.g. *defibrillation*.
- Able to convey essential information quickly to relevant personnel: maintains legible up-to-date records documenting results of investigations. Lists of problems dealt with or remaining, identifies areas of uncertainty; ensures safe handover.
- Remains calm, delegates appropriately, ensures good communication. Tries to meet patient's/ relatives' needs and concerns, respecting their views and right to be informed.

Discharge planning

- Distinguish between illness and disease, disability and dependency. Understand the potential impact of illness and impairment on activities of daily living, family relationships, status, independence. Be aware of quality of life issues.
- Know role and skills of other members of the healthcare team, how to devise and deliver a care package. Know the support available from other agencies e.g. *specialist nurses, social workers, community care*. Understand the principles of shared care with the general practitioner service.
- Show awareness of the pressures/dynamics within a family, the economic factors delaying discharge but recognise the limit to benefit derived from in-patient care. Establish liaison with family and community care, primary care, communicate / report to agencies involved.
- Demonstrates an awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home.

SKILLS

- ACLS
- Deal with common medical emergencies
- Interpretation of blood results, ECG/Rhythm strips, Chest X-Ray, CT Brain
- Give clear instructions to both medical and hospital staff
- Order relevant follow up investigations
- Discharge planning
- Knowledge of patient pathways
- Knowledge of HIPE
- Multidisciplinary team working
- Communication
- Early regular and on-going consultation with family members and primary care physicians

ASSESSMENT & LEARNING METHODS

- Certified ACLS
- Record of on call
- miniCEX (acute setting) - each year
- Case based discussions
- Consultant feedback at annual assessment

Specialty Section for General Internal Medicine

The ACP GIM In-Training Exam is listed as one of the assessment methods in the specialty section of this curriculum. The purpose of this exam is not as a certifying or qualifying examination but to be used as a self- assessment tool designed to gauge knowledge of general internal medicine.

Cross Specialty Problems

Objective: To provide the trainee with the knowledge and skills necessary to manage care and to meet certain essential needs in the acutely ill.

Managing Acute Admissions and Planning Discharges

Objective: To ensure competence in the stage handling of general medical “take” and discharge planning, particularly in difficult circumstances e.g. elderly people and those with social problems

KNOWLEDGE

“Take” management

- Medical indications for urgent investigation and therapy.
- Skills and capabilities of members of the “on-take” team.
- When to seek help.
- When to call an end to resuscitation.
- Ability to prioritise.
- Effectively interact with other health care professionals.
- Keep patients and relatives informed.
- Receive referrals appropriately.
- Cope with stress.
- Delegate effectively and safely.
- Keep an accurate patient list.
- Handover safely.
- Remains calm, prioritises/delegates appropriately.
- Recognises limitations of own experience/abilities and the contributions of others. Enlists help appropriately.
- Appreciates the importance of accurate records and good communication of information in ensuring continuity of care/handover.

Discharge planning

- Impact of physical problems on activities of daily living.
- Roles and skills of members of the multidisciplinary team including; Nurses, Occupational Therapists, Physiotherapists, Discharge Co-ordinators and Social Workers.
- Impact of unnecessary hospitalisation.
- Family dynamics and socio-economic factors influencing success of discharge.
- Support available in primary care.
- Recognise when inpatient care is not required.
- Participate in discharge planning meetings.
- Liaison and communication with patient, family and primary care.
- Write reports for appropriate bodies.
- Demonstrates an appreciation of the role of other specialists/health professionals/support agencies in assisting the smooth transition of patient care between hospital and home.
- Shows an appreciation of the impact of illness as it affects the whole family as well as the patient.

SKILLS

- Generic Skills
- Multidisciplinary team working
- Appropriate referral to specialist
- DNR policies

ASSESSMENT & LEARNING METHODS

- Case based discussions
- ACP GIM In-Training Exam

Resuscitation

Objective: To provide the trainee with the knowledge and skills to be to lead a resuscitation team and use the local protocol for deciding when not to resuscitate patients.

KNOWLEDGE

Advanced cardiac life support

- Advanced cardiac life support algorithms.
- Role and side effects of commonly used antiarrhythmic and cardiac support drugs.
- Keeps calm, prioritises.

Leading a cardiac arrest team

- Role and responsibilities of the team leader.
- Safe and effective communication.
- Keeps calm, delegates, co-ordinates effectively.
- Accepts responsibility for providing leadership during CPR.

Do not resuscitate orders (DNR)

- Local and national protocols for DNR orders.
- Legal and ethical considerations.
- Support patients and families.
- Knowledge of living wills and advance directives.
- Demonstrate professionalism and humanity in their approach to the care of patients and recognise the sensitivities within the family.
- Operate within the defined ethical and legal frameworks.

SKILLS

- ACLS
- DNR Policies
- Recognise and manage critically ill patients.
- Recognise cardiac arrhythmias.
- Perform emergency defibrillation.
- Initiate and perform CPR efficiently and in appropriate circumstances.
- Lead a cardiac arrest team

ASSESSMENT & LEARNING METHODS

- ACLS compliant
- Ethics I, II, III, IV
- Lead cardiac arrest team
- ACP GIM In-Training Exam

Nutrition

Objective: To provide the trainee with the knowledge and skills in the nutritional issues listed below.

KNOWLEDGE

Nutritional status

- Impact of:
 - *Disease on nutritional status*
 - *Malnutrition on clinical outcomes*
- Appreciates the benefits of optimum nutrition in preserving and restoring health.

Nutrition support

- Principles and routes of nutrition support.
- Role of nutrition support team.
- Identify those needing nutrition support or advice.
- Recognise: the skills of others *e.g. specialist nurses, pharmacist and dieticians*, when to consult nutrition support team.
- Role of screening tools – understanding of MUST

Obesity

- Recognition and management of obesity

SKILLS

- Management and recognition of complications of PEGs
- Assessment of nutritional status.
- Recognise cultural and religious issues.
- Shows awareness of the need to provide nutritional support when it is appropriate.

ASSESSMENT & LEARNING METHODS

- Ethics I, II, III, IV
- Nutrition Course
- Case based discussion
- ACP GIM In-Training Exam

Specialty Specific Problems

Objective: To provide the specialist with the competencies necessary to deal safely, effectively and efficiently with the broad range of medical disorders which commonly present at hospitals as acute problems.

Cardiology

Objective: To be competent to assess and manage safely, patients presenting with the cardiac problems outlined below, including those acutely ill. And in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Chest Pain Syndromes

- Cardiac ischaemia
- Pleural and Pericardial pain
- Chest Wall Pain
- Massive Pulmonary Embolus
- Dissecting Aneurysm
- Other e.g. Oesophagus

Acute Coronary Syndromes

- Immediate Management
- Reperfusion
- PCI
- Thrombolysis
- Surgery
- Analgesia

Stable Angina

- Anti Platelet Therapy
- Anti Anginal Therapy
- When to intervene

Primary and Secondary Prevention of Coronary Artery Disease

Arrhythmias, syncope and dizziness

- Causes of dizziness or syncope e.g. cardiac, neurological, ENT, endocrine.
- ECG patterns of narrow and broad complex tachycardias and bradycardias.
- Indications, contraindications and side effects of:
 - Anti-arrhythmic drugs.
 - Anti-coagulation.
- Indications for temporary pacing.
- Management of arrhythmias when causing acute haemodynamic compromise.

Heart failure, haemodynamic disturbances

- Causes of heart failure, precipitating factors, prognosis, complications.
- Drug indications, contraindications and side effects.
- Pathophysiology of haemodynamic disturbances.
- Indications for: emergency imaging including echocardiogram and CT: a fluid challenge.
- Indications, and complications of insertion of a central venous line.
- Indications, contraindications and side effects of inotropes.
- Appreciates the importance of knowledge and understanding of the mechanisms contributing to heart failure in guiding the therapeutic strategies chosen.
- Implantable defibrillators
- Recognises the importance of critical evaluation of new treatment modalities and advances.

Out patient problems e.g. hypertension, palpitations, valvular heart disease

- Hypertension: causes, complications, use/side effects of 1st line agents.
- Long-term treatment of HT.
- Reasons for palpitations.
- Valvular heart disease (VHD): pathophysiology, complications. Indications for anticoagulation; antibiotics.
- Recognises and is prepared to discuss with patients their fears/anxieties, and to assist with lifestyle changes.
- Appreciates and is prepared to explain the risks/benefit ratio of treatment e.g. *anticoagulants*.

SKILLS

- Diagnosis and management of Chest pain, Pulmonary Oedema, A. Fib, Congestive Heart failure
- Recognise risk factors, suspicious symptoms and remote manifestations and arrange appropriate investigations.
- ECG/ Echocardiography
- Risk Strategies
- Primary and secondary prevention of cardiac disease
- Indications for stress testing/coronary angiogram.
- Use of CCU protocols/guidelines.
- Recognise and correctly identify arrhythmias.
- Ability to perform carotid sinus massage, utilize the valsalva manoeuvre. Perform DC cardioversion.
- When to consider exercise stress test, coronary angiogram in angina.
- Initiate appropriate investigation and identify cause of palpitations, heart failure.
- Recognise need for urgent assessment and prompt treatment with thrombolysis when indicated.
- Aware of the need to act promptly and effectively in the context of life-threatening arrhythmias and the need to develop the practical skills necessary to manage.
- Recognise the need for rapid assessment and specialist nursing care/monitoring.

ASSESSMENT & LEARNING METHODS

- Case based presentations - Post take.
- ACP GIM In-Training Exam

Assessment at SpR Year 1 - 4

Clinical Pharmacology

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely patients presenting as medical emergencies due to drug overdose and the illicit use of drugs, poisoning, drug interactions and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Drug overdose, poisoning, and the illicit use of drugs

- Initial management of overdose with illicit drugs and alcohol
- Management of overdose with:
 - Aspirin
 - Opiates
 - B-blockers
 - Paracetamol
 - Benzodiazepines
 - Antidepressants
 - Digoxin
- Effects of poisons ingested accidentally or purposefully including:
 - Paraquat
 - Carbon monoxide
- Physical and psychological effect of:
 - Opiates
 - Cocaine
 - Amphetamines
 - Cannabis
 - MDMA
- Suspect illicit drug use.
- Non-judgemental approach to patients; recognises patient's right to confidentiality.
- Value the assistance of other specialist e.g. *intensive care, psychiatrists* during immediate and follow-up care.

Pharmacokinetics

- Volume of Distribution
- Effect of Heart Failure
- Need to adjust Loading dose
- Half Life
- Relation to Steady State
- Need for Loading Dose
- Clearance
- Effect of Renal Failure
- Effect of Liver Failure
- Effect of Heart Failure
- Drug Interactions

Pharmacodynamics

- Drug Interactions
- Heart Failure
- Liver Failure
- Renal Failure
- Age

Pharmacogenetics

- Activation of pro-drug e.g. Clopidogrel
- Metabolism of active drug e.g. Azathioprine

Therapeutics, drug interactions

- Anticoagulation
- Drug interactions including drugs which alter drug:-
 - *Absorption.*
 - *Binding/availability*
 - *Elimination*
 - *Metabolism including induction and inhibition of liver p450 isoenzymes, e.g. induction by Carbimazole and Clopidogrel / PPI interaction*
- Drugs which require therapeutic monitoring.
- Liaison with ward pharmacist, use of hospital pharmacy databases and WEB based resources.
- Report adverse effects.
- Educating/counselling patients
- Cautious in prescribing, alert to potential ill effects resulting.
- Prescribing in the Elderly
- Professional Interaction with the Pharmaceutical Industry

SKILLS

- Use of anticoagulation
- Pain Management
- Management, assessment and care of the unconscious patient
- Antibiotic drug use
- Initial management strategy for acutely ill drug overdose patients
- Assessment and emergency care of the unconscious patient.
- Use of poisons advice centre
- Know when to contact the poison centre
- Assessment of mental state (*see psychiatry section*).
- Acquire an accurate history of ingestion.

ASSESSMENT & LEARNING METHODS

- Course in Safe prescribing (include Economics of prescribing, electronic prescribing)- Optional
- Case Based discussion
- ACP GIM In-Training Exam

Assessment at SpR Year 1 - 4

Dermatology

Objective: To be competent to assess and manage safely acutely ill patients presenting as a result of dermatology problems such as those outlined below, and to deal with skin disease presenting in out-patients and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Skin failure

- Causes of e.g. toxic epidermal necrolysis, erythroderma emergency management and of complications.
- Precipitating circumstances associated and complications of these conditions.
- Assess mucosal involvement and systemic effects of skin failure including fluid requirements, start initial treatment rapidly.
- Assessment and management of upper airway obstruction.
- Alert to potentially severe systemic affects of skin and mucosal injury.

Pruritus;

- Causes of pruritus and associated conditions including: infections, primary skin disease, systemic disease. Management options.
- Initiate investigations to explore the differential diagnosis (*identify contacts and refer to infection team if scabies diagnosed*).
- Urticaria and Angioedema

Psoriasis and eczema

- Patterns and clinical variants.
- Indications, contraindications and side effects of first line therapies, topical steroids.
- Serious complications
- Describe and record patterns.
- Recognise the role of the dermatology nurse.
- Appreciate psychosocial effects.
- Assists and encourages patients to co-operate in self-management.
- Skin hair, nails in systemic disease
 - Cutaneous signs in: endocrine and metabolic disease; gastrointestinal disease; malignancy; connective tissue disease; immunosuppression; TB and sarcoid.
 - Appreciates the distress suffered by the patient and recognises the importance of treating symptoms.

Skin cancer

- Effects of UV exposure on skin, other risk factors.
- Appearance, features and initial management of: basal cell carcinoma, squamous cell carcinoma, melanoma.
- Differentiate malignant from common benign tumours.
- Advise on prevention *e.g. strategies for UV protection*.
- Appreciates the importance of preventive measures in addressing the problem.
- Appreciates the important contribution and role of other specialists *e.g. dermatologists, surgeons, radiotherapists*.

SKILLS

- Skin biopsy
- Recognise the underlying disease.
- Recognise when to consult dermatology, ophthalmology.

ASSESSMENT & LEARNING METHODS

- Case based discussions
- Skin features of systemic diseases
- Skin lesions on web
- ACP GIM In-Training Exam

Assessment at SpR Year 1 - 4

Diabetes & Endocrinology

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely:

Acutely ill patients presenting as emergencies with diabetic or endocrine problems as outlined below

and

Patients who present (e.g. as out-patients) or develop diabetic or endocrine problems outlined below and in each case to:

- *Assess symptoms and signs and formulate differential diagnosis*
- *Select appropriate investigations and accurately interpret investigation reports*
- *Communicate the diagnosis and prognosis – see generic skills*
- *Institute appropriate treatment recognising indications, contraindications and side effects*

KNOWLEDGE

ACUTE ILLNESSES

Diabetes

- Diabetic KetoAcidosis (DKA)
 - Precipitating circumstances
 - Management
- Severe hyperglycaemia
- HyperOsmolar NonKetotic Coma (HONK)
- Hypoglycaemia
- When to rapidly administer glucose/20% dextrose/glucagon if indicated.

Endocrinology

- Thyroid storm
- Myxoedema coma
- Addisonian crisis
- Hypertensive crisis (incl. acute management of pheochromocytoma)
- Acute severe hypo/hyponatraemia
- Acute severe hypo/hypercalcemia

CHRONIC DISEASES

Diabetes

- Prevention and treatment of complications.
- Effect of disease glycaemic control on disease process
- Appreciates the impact on the patient's quality of life.
- Recognises the importance of patient education, encouraging self-reliance and personal responsibility for glycaemic control.
- Diabetes in pregnancy
- Pathophysiological differences between Type I and Type II diabetes and recognition of insulin dependence.
- Monitoring glycaemic control and effects of diet and exercise.
- Strategies for primary and secondary prevention of complications.
- Long-term complications:
 - *Macrovascular – IHD/stroke/peripheral vascular disease.*
 - *Microvascular – eye/kidney/nerves*

- Relationship of complications to glycaemic control and other factors.
- Use and interpretation of glucose tolerance tests.
- Rational management of oral hypoglycaemics and insulin regimes.
- Appreciates contributions from other specialists and health professionals (*including specialist nurses*).
- Recognise and understand the implications of metabolic syndrome and its management.

Dyslipidaemias

- Classification of dyslipidaemias, genetics, complications and effects on natural history of other diseases.
- Role of diet, indications, contraindications and side effects of lipid lowering agents.
- Interpretation of lipid biochemistry results.

Thyroid Dysfunction

- Pathophysiological effects of thyroid dysfunction
- Causes of thyroid dysfunction
- Therapeutic options, benefits and risk including role of radioactive iodine.
- Timely referral to specialist endocrinologist, surgeon.
- Diagnosis and management of thyroid cancer.

Disorders of Calcium Metabolism

- Treatment of hypo- and hyper- calcaemia and investigation of same
- Management of life changes associated with hypercalcaemia
- Causes of Ca imbalance, effects, complications.
- Initiate investigations to establish the diagnosis and identify the cause.

Disorders of the Hypothalamic Pituitary Axis

- Hypothalamo-pituitary-adrenal axis – function and assessment
- Diagnosis and management of non functioning and functioning pituitary adenomas
- Diagnose and management of acute pituitary insufficiency.

Adrenal Disorders and Sodium Balance

- Diagnosis and management of adrenal hypo/hyperfunction (Addison's/Cushing's/Conn's)
- Causes of hyponatraemia,
- Differential diagnosis and management of hyponatraemia

Other

- Appreciates the complexity of treating all endocrine conditions and the role of the biochemical and endocrinology laboratory services and other specialists in the management of these conditions.

SKILLS

- Diagnostic criteria for diabetes mellitus.
- Ability to assess severity and initiate appropriate management.
- Management of the peri operative and peri procedure patient
- Complications and prevention of diabetes
- Management of infections in the diabetic foot
- Assessment and management of hypercalcaemia
- Interpretation of thyroid function tests.
- Measurement and interpretation of results of blood glucose, biochemistry.
- Uses evidence-based medicine to develop/justify strategies for preventing and dealing with abnormalities of lipid metabolism.

ASSESSMENT & LEARNING METHODS

- Case based discussions
- MinCEX - Management of the diabetic patients
- Attendance at diabetic day care centre
- Study day: Evidence based medicine
- ACP GIM In-Training Exam

Assessment at SpR Year 1 - 4

Gastroenterology

Objective: To provide the trainee with the knowledge and skills to manage safely ill patients with gastroenterology problems presenting either as emergencies or routinely e.g. as out patients and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

- Management of Gastro-oesophageal reflux
 - Dysphagia - referral for investigations
 - Proton Pump Inhibitors
 - Haematemesis, Melaena and Major Rectal Bleeding
 - Resuscitation
 - Investigation
 - Management
- Gastrointestinal Endoscopy
 - Indications
 - Risks to Patient, to Staff and to other Patients
 - Coeliac Disease
 - Iron deficiency Anaemia
 - Investigation of Weight Loss
 - Investigation of Acute and Chronic Diarrhoea
 - Abdominal Pain

Colorectal Cancer

- Epidemiology
- Screening Guidelines
- Neo-Adjuvant and Adjuvant Chemotherapy and Radiotherapy

Inflammatory Bowel Disease

- Ulcerative Colitis
- Crohn's Disease
- Clostridium difficile,

Pancreas

- Acute Pancreatitis
- Assessment of Severity
- Managing multi-organ Failure
- Chronic Pancreatitis

Liver

- Jaundice
 - Abnormal Liver Chemistries
 - Liver Imaging
 - Indications for liver biopsy
- Hepatic Encephalopathy
- Portal Hypertension
- Ascites
- Spontaneous peritonitis
- Hepatorenal Syndrome
- Hepatic Steatosis

Liver Transplantation

- When to refer

Specific Liver Diseases

- Alcoholic Liver Disease
- Non Alcoholic Fatty Liver Disease
- Viral Hepatitis
- Drug Induced Liver Disease
- Autoimmune Liver Disease
- Metabolic Liver Disease
- Haemochromatosis

SKILLS

- Diagnosis and management of GI bleeding, acute diarrhoea, and abdominal distension.
- Diagnosis and management of coeliac disease, chronic diarrhoea including irritable bowel disease
- Knowledge of infectious diseases
- Knowledge of medication and its link to liver disease
- Appropriate use of ultrasound, contrast and radiography endoscopy.
- Nutritional assessment.
- Large bowel Ca screening
- Genetic testing for haemochromatosis
- Management of acute/chronic ulcerative colitis

ASSESSMENT & LEARNING METHODS

- Nutritional Course
- Case based discussions
- ACP GIM In-Training Exam

Geriatric Medicine

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage appropriately the problems presented by elderly patients.

KNOWLEDGE

Acute confusion

- Causes, factors including the effects of drugs (*polypharmacy*) precipitating factors.
- Strategies for prevention, impact of the physical environment.
- Emergency management of agitation.
- Recognise underlying cognitive impairment or psychiatric disease.

Dementia

- Aetiology, natural history and prognosis.
- Indications and side effects of drugs in dementia.
- Use of mini-mental test score and geriatric depression score. Able to initiate investigations to identify an underlying cause.
- Recognise the social and psychological effects including associated depression. Involve the multi-disciplinary team, when to consult old-age psychiatry.

Awareness of:

- social breakdown,
- psychiatric problems,
- multidisciplinary team.
- Appropriately select/prioritise investigations.
- dignity of the patient
- impact on the family.
- delivery of care in the community including specialist nurses.

Falls

- Gait assessment including the “*Get-Up and Go*” test.

Incontinence

- Management of bowel and bladder problems

Polypharmacy

Stroke

- Stroke management and rehabilitation (*see neurology section*)

SKILLS

- Management of the agitated patient
- Management of dementia
- Prescribing for the elderly
- Communications with family members
- Knowledge of social services and allied health professions
- DNR policies
- Restraint policies - chemical and physical
- Community resources

ASSESSMENT & LEARNING METHODS

- Case based discussions
- Multidisciplinary working
- Nutrition course
- Prescribing Course
- Ethics
- ACP GIM In-Training Exam

Haematology

Objective: To provide the trainee with the knowledge and skills to assess and manage safely patients who are ill as a result of haematological problems as outlined below, including those presenting acutely and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Anemia

- Normochromic, Normocytic
- Normal Reticulocyte count
- Anemia of Chronic Disease
- Renal failure
- Aplasia
- Raised Reticulocyte Count
- Bleeding
- Haemolysis
- Hypochromic Microcytic
- Iron Deficiency
- Thalassemia
- Macrocytic
- Haemolytic Anaemias
- Sickle cell Anaemia and Sickle Cell Crisis

Quantitative and Qualitative Platelet Disorders

- Thrombocytopenia
- Decreased production
- Increased Consumption
- Thrombotic Microangiopathies
- Thrombotic Thrombocytopenic Purpura
- Haemolytic Uraemic Syndrome

Leucopaenia

- Granulocytopenia
- Infections
- Drugs
- Lymphopenia

Leukemias

- Acute
- Immediate referral to Haematology
- Acute Myeloid
- Commonest acute Leukemia in adults
- Frequency increases with age
- Chronic
- Role of Imatinib in Chronic Myelogenous Leukemia
- Clinical effects of disorders of B cell function in Chronic Lymphocytic Leukemia
- Monoclonal B-Cell Lymphocytosis (MBL)

Myeloproliferative Disorders

- *Jak2* Mutations
- Hyperproliferation of
 - Granulocytes Chronic Myelogenous Leukemia
 - Red cells Polycythaemia Rubra Vera
 - Platelets Thrombocythaemia
 - Stromal Cells Myelofibrosis with Myeloid Metaplasia

Myelodysplastic Disorders

- Diagnosis
- Progression to Leukemia

Coagulation Disorders

- Congenital
- Acquired
- Iatrogenic
- Disseminated Intravascular Coagulation
- Hepatic disease

Thrombophilia

- Criteria
- When to screen
- What tests to order
- Management

Plasma Cell Dyscrasias

- Multiple Myeloma
- Waldenstrom's Macroglobulinemia
- Monoclonal Gammopathy of Undetermined Significance (MGUS)
- AL Amyloid

Transfusion of blood products

- Indications for blood products
- Transfusion reactions
- Transmission of infection

SKILLS

- Need for urgent referral to haematology.
- Safe prescription of blood products
- Indications for: thrombolysis, heparins, oral anti-coagulants.
- Initiate appropriate investigations to identify underlying of bleeding/cause.
- Initiate emergency management, explain benefits/risks.
- Pre operative and perioperative procedures

ASSESSMENT & LEARNING METHODS

- Study day: Cross with oncology
- ACP GIM In-Training Exam

Infection

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely, patients who are ill as a result of infections, as outlined below including patients presenting as emergencies and in each case:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Principles of universal precautions, safe disposal of sharps

- Consultation with the Infectious Disease Team
- Liaise with microbiology.
- Vaccinations
- Needle stick Injuries

Respiratory infections

- Community or Hospital acquired
- Clinical Assessment
- Need for hospitalisation
- Microbiology
- Appropriate antibiotic therapy
- Bacterial Endocarditis
- Predisposing factors,
- Diagnosis.
- Indications and limitations of echocardiography.
- Consultation with Infectious Disease, Cardiology and Cardiac Surgery
- Correct use of antibiotics and anticoagulation.
- Complications.
- Strategies for prevention.

Gastroenterology

- Gastroenteritis
- Cholecystitis
- Cholangitis
- Liver Abscess
- Diverticulitis

Urinary tract infections

Skin infections

Joint infections

- Acute monoarthritis

Meningitis, Encephalitis, Brain abscess

- Microbial causes:
 - Antibiotic/antiviral rationale.
 - Indications and contraindications to lumbar puncture.
 - Complications.
 - Procedure for notification, contact tracing and primary prevention with antibiotics.
 - Recognise: co-morbidity e.g. HIV, urgency for treatment.

The Septic Patient

- Potential sites of origin,
- Likely microbial causes:
- Antibiotic rationale.
- Investigations to establish the infecting organism, its sensitivity and the sites of infection.

Toxic shock syndrome

- Recognise and initiate immediate antibiotic management
- Treat shock
- Correct Metabolic abnormalities
- Prevent Renal Failure

PUO, rigors,

- Microbial causes
 - Sites of occult infection
 - Antibiotic rationale.
 - Vasculitis
 - Occult Neoplasm
 - Drug induced
 - HIV

Overseas infection / Malaria,

- Geographical distribution of malarial parasites,
- Diagnosis
- Lifecycle of the malarial parasite and influence on therapy
- Sensitivity and resistance to anti-malarial drugs in different geographical areas.
- Side effects of anti malarial agents
- Other potential infectious agents including parasites.

Anti-Microbial agents

Antibiotics

- Spectrum of cover
- Common side effects
- When drug concentrations are necessary
- Clostridium Difficile
- Antiviral drugs
- Anti tuberculous drugs
- Anti-malaria drugs
- Assessment of "allergy".
- Use of local antibiotic policy.

Gonorrhoea Syphilis Lymphogranuloma and Human Papilloma Virus

HIV

- Natural history and common presentations of immunodeficiency and opportunistic infection.
- Markers of disease progression.
- Principles, side effects and drug interactions of anti-retroviral therapy.
- HIV pre-test counselling
- Recognise associated sexually or parenterally transmitted diseases
- Display tact, empathy, concern and respect for patients, is non judgemental

SKILLS

- Assessment of severity of infection.
- Appreciates the need to work closely with the laboratory service, radiology and other specialist including intensive care in securing a satisfactory outcome.
- Obtain accurate contact/travel/occupational/sexual/pet history/vaccination/prophylaxis status.
- Appreciates the need to consult specialists in infectious diseases, microbiologists, tropical medicine and the laboratory services.
- Obtains and delivers appropriate specimens to diagnostic services.
- Isolation and infection control procedures.
- Shows awareness of public health issues, own responsibilities in prescribing and the need for specialist advice.
- Adhere to antibiotics guidelines
- Use strategies to ensure patient's adherence to therapy.
- Take a sexual history
- Procedure for taking necessary examples for laboratory examination
- Management of HIV
- Treatment of common sexual disorders
- Multidisciplinary team working.

ASSESSMENT & LEARNING METHODS

- Prescribing course (optional)
- Infection control course
- Case based discussion
- MinCEX
- ACP GIM In-Training Exam

Medical Oncology

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely acutely ill patients presenting with problems due to malignancy, recognising the stage of the disease, the patient's needs and attitudes, and achieving an appropriate balance between treatments of the emergency and providing palliative care.

KNOWLEDGE

Management of common visceral cancers, lung, breast, G-I, prostate and where primary is undetermined. Metastatic disease.

- Understand the principles, indications and complications of:
 - *Surgical treatment*
 - *Endocrine therapy*
 - *Chemotherapy*
 - *Radiotherapy*
- Routes of dissemination of common cancers.
- Management of strategies for patients with bony, liver, pleural and cranial metastases.
- Recognise the importance of symptom control – *see palliative care*.
- Appropriately consults and enlists other experts in cancer care in line with the stage of the patient's cancer journey.
- Facilitate patient's access to the full range of professional skills and resources available for support.
- Specific complications of therapy:
 - *Toxicity*
- Neutropenic sepsis
- Patients at risk of neutropenia
 - *Features of tumour lysis syndrome*
 - *Drug Interactions*
 - *Renal impairment and failure*
- Hypercalcaemia, therapeutic options and long-term management (*see endocrinology section*)
- Specific complications of disease:
 - *Local invasion*
 - *Distant Metastases*
 - *SVC obstruction*
 - *Spinal cord compression*
- *Paraneoplastic manifestations*
- Discuss appropriateness of resuscitation with patient.
- recognise the importance of quality of life issues
- Balance risk with benefit in arriving at decisions regarding treatment.
- Prepared to initiate symptom management and.

SKILLS

- Dealing with Medical emergencies in malignancy

ASSESSMENT & LEARNING METHODS

- DOPS - Central line placement, care and removal
- Case Based discussion - Complications of cancer therapy
- ACP GIM In-Training Exam

Neurology

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely patients presenting with neurological problems, as outlined below, including those who are acutely ill and in each case to:

Assess symptoms and signs and formulate differential diagnosis

Select appropriate investigations and accurately interpret investigation reports

Communicate the diagnosis and prognosis – see generic skills

Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Headache, subarachnoid haemorrhage

- Having a high index of suspicion of subarachnoid haemorrhage
- Initiate investigations to explore the differential diagnosis.
- Recognise atypical presentations of subarachnoid bleed.
- Liaison with neurologist/neurosurgeon and radiologist

Stroke and transient ischaemic attack

- Acute stroke management
- Indications and complications of antithrombotic and thrombolytic therapy including appropriate timing of interventions.
- Causes and risk factors.
- Preventative strategies (*primary and secondary*).
- Recognise need for investigation following TIA.

Coma

- Glasgow coma scale.
- Causes, differential diagnosis.
- Indications for intubation and ventilation.
- Emergency management including urgent treatment of remedial causes.
- Initiate investigations to explore the differential diagnosis.

Raised intracranial pressure (ICP)

- Causes, signs and effects, complications and presentation.
- Initiate investigation to explore the differential diagnosis.
- Liaison with neurologist/neurosurgeon.

Epilepsy and status epilepticus

- Emergency management of status
- Complications of status, indications for intubation and ventilation.
- Indications for and side effects of anti-epileptic drugs.
- Appropriate patient referral to the neurologist

Acute-onset neuropathy e.g. *Guillain Barré*

- Acute onset of neuropathy - methods of diagnosing and monitoring
- Measurement of vital capacity.
- Recognising unusual presentations

Polymyositis

Myasthenia Gravis

- Management of acute crisis

Multiple sclerosis

- Diagnostic criteria, presentations, principles of treatment, management options.
- Role of neurologist especially when initiation modern treatments

SKILLS

- Knowledge and appropriate use of CT Scanning
- Recognising gross abnormality on CT scanning in the acute situation including when to seek expert opinion
- Acute management of stroke
- Investigation of TIA's
- Awareness of min-mental test score and geriatric depression

ASSESSMENT & LEARNING METHODS

- DOPS : Lumbar puncture
- Case based discussions
- Ethics I, II, III, IV
- Multidisciplinary team working
- Certified in NIHSS Stroke score
- ACP GIM In-Training Exam

Palliative Care

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage the palliative care problems outlined, and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Treatment and complications of pain management

- Ability to take a pain history
- Causes of pain in advanced cancer.
- Analgesia – e.g. WHO classification:
- Use protocols and liaise with pain control.
- Indications for adjunctive therapies *e.g. radiotherapy, sedatives.*
- Recognise co-morbid psychological and social problems.
- Causes of breathlessness, empirical therapies.
- Recognises the need for accurate diagnosis of pathophysiology of a symptom (*e.g. due to concurrent disorder or treatment-related as well as cancer-related aetiology*).
- Willingness to refer other agencies when needed.

SKILLS

- Pain management
- Skill to deal with dying patient and their families

ASSESSMENT & LEARNING METHODS

- Study Day
- ACP GIM In-Training Exam

Psychiatry

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage appropriately patients presenting with psychiatric problems as outlined below, some of which may be acutely ill and in each case:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Acute psychosis

- Causes, associated circumstances, precipitating factors.
- Initial management options including drug indications, contraindications and side effects.
- Initiate investigations to identify any organic cause.
- Recognises the legal framework which governs action.

Depression, suicide, parasuicide

- Presentation, risk factors for depression.
- Management options including side effects and interactions of anti-depressants.
- Risk factors for suicide.
- Initiate investigations to exclude organic cause.
- Recognise depression in patients presenting with physical symptoms.
- Evaluation of suicide risk.
- Identify co-morbid psychiatric problems.
- Liaises appropriately with psychiatric services.
- Alcoholism.

Opiate dependence

- Opiate withdrawal syndrome including prevention/management.
- Complications of intravenous injecting.
- Identify co-morbid psychiatric problems.

SKILLS

- Assessment and management of abnormal mental state.
- Management of the aggressive patient.
- Local protocols for liaison with psychiatric services.
- Recognises the patient's right to accept or refuse treatment/advice.
- Actively encourages engagement with the full range of professional skills and resources available for support and rehabilitation.

ASSESSMENT & LEARNING METHODS

- Case Based discussions
- ACP GIM In-Training Exam

Rehabilitation

Objective: To provide the trainee with the knowledge and skills to be able to assess the needs of ill patients presenting with acute medical problems requiring rehabilitation, and to initiate appropriate management at an early stage, especially in the case of: neurological, musculo-skeletal, cardiopulmonary disorders, arthritic patients and amputees.

KNOWLEDGE

- Define:
 - *Impairment*
 - *Disability*
 - *Handicap*
- Factors predicting rehabilitation potential.
- Strategies to prevent/treat:
 - *Pain*
 - *Incontinence*
 - *Aggressive behaviour*
 - *Spasticity, contractures, deformity*
- Realistic goal setting.
- Recognise impact of:
 - *Cognitive function*
 - *Nutrition*
 - *Family/support*
 - *Psychosocial factors*
- Able to work with a multidisciplinary team.
- Understands and values the benefit to the patient of multidisciplinary team working in providing support towards regaining independence and restoring function.

SKILLS

- Assessment of patient's skills
- Knowledge of when to refer for assessment
- Knowledge of services available

ASSESSMENT & LEARNING METHODS

- Study Day
- ACP GIM In-Training Exam

Renal Medicine

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely, ill patients presenting with renal problems as outlined below, including those who present acutely: and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Acute renal failure

- Features distinguishing acute from acute – on - chronic renal failure: causes.
- Assess severity and initiate investigations to identify immediately-reversible causes of acute renal failure, identification of complications.
- Indications for haemofiltration and peritoneal or haemodialysis.
- Indications for and complications of renal biopsy.

Chronic renal failure, renal replacement therapy (RRT), patients with renal transplants

- Causes, natural history complications.
 - Anaemia
 - Bone disease
 - Nutritional deficiency
 - When to start RRT
- Modalities and factors influencing choice of RRT.
- Natural history, prognosis, short-term and long-term complications of RRT.
- Use appropriate sites for venous access.
- Renal Transplant
- Rejection
- Rationale for the use and side effects of commonly used immunosuppressants.
- Assessment of infection in immunosuppressed patients.
- Liaises effectively with renal physician and renal unit.

Drugs and the kidney

- Recognise drug induced renal disease.
- Carefully searches for drug exposure, both prescribed and non-prescribed.
- Effects of common drugs on renal function, effect of renal impairment on commonly prescribed drugs
- Appreciates the importance of knowledge of renal failure in guiding therapeutic strategy.
- Consult when necessary; exercise care if prescribing for patients with renal disease.
- The nephrotic syndrome
- Causes of proteinuria, nephrotic syndrome.
- Initiate investigations to identify the cause of proteinuria.

Fluid and electrolyte imbalance

- Constitution of and indications for common IV fluid solutions.
- Recognition of under- and over-hydration.
- Treatment of hypo- and hyper-natremia
- Causes of precipitating circumstances, investigation and initial management of:
 - *Metabolic acidosis*
 - *Metabolic alkalosis*
- Assessment of severity of acid-base disturbance.
- Indications for urgent treatment monitoring.
 - Immediate (*emergency*) management of hyper-or hypokalaemia.

SKILLS

- Management and early assessment of patient with renal failure
- Indications for and modes of dialysis.

ASSESSMENT & LEARNING METHODS

- Prescribing course - drugs and the kidney (optional)
- Case Based discussion
- ACP GIM In-Training Exam

Respiratory Medicine

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage safely:

Acutely ill patients presenting as emergencies

and

Patients who present (e.g. as out patients) or develop the respiratory problems outlined below. And in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Acutely ill patients

Respiratory failure

- Diagnosis, guidelines for management (BTS) of asthma, COPD, including discharge policy.
- Safe oxygen therapy.
- Management of specific complications including:
 - *Respiratory failure*
 - *polycythaemia*
 - *Right ventricular failure*
- Reasons for respiratory failure.
- Recognition of acute severe asthma, COPD: interpret pulmonary function tests.
- Assessment for long-term oxygen therapy.

Severe haemoptysis - Pulmonary embolism (DVT)

- Causes of haemoptysis: respiratory, cardiac.
- Causes, risk factors and preventative measures for DVT, pulmonary embolus.
- Current guidelines for management (BTS).

Continuing care (*out-patient management*)

COPD

- Current guidelines (BTS).
- Indications for domiciliary nebulisers and oxygen therapy.

Interstitial lung disease, pulmonary fibrosis

- Causes, idiopathic, industrial, inflammatory.
- Specific complications and their management:
 - *Respiratory failure*
 - *Pulmonary Hypertension*
 - *Right ventricular failure*
- Treatment options including indication for lung transplant

Lung Cancer

- Risk factors for cancer.
- Diagnostic algorithm in lung cancer.
- Recognise importance of history e.g. *occupational*.
- Palliative care.
- Breaking bad news – see *generic skills*.

Plural Disease

- Recognition and emergency treatment of pneumothorax
- Insertion of test tubes (see generic skills)
- Differential diagnosis of pleural effusion
- Treatment of complicated plural effusions including emphysema

Cystic Fibrosis

- Management of complications of cystic fibrosis in adults
- Acute treatment of acute exacerbation in adult cystic fibrosis.

Tuberculosis

- Recognition and diagnosis of TB including use of mantoux and quantiferon tests
- Recognition of resistant TB and atypical mycobacterium
- Recognition of responsibility of certain patients to TB e.g. Anti TNF Therapy, HIV

SKILLS

- Recognise patients requiring nasal ventilation, intubation and assisted ventilation.
- Non invasive assisted ventilation
- Diagnose and referral for lung cancer

ASSESSMENT & LEARNING METHODS

- DOPS – Pleural aspiration
- Case based discussions
- ACP GIM In-Training Exam

Rheumatology

Objective: To provide the trainee with the knowledge and skills to be able to assess and manage acutely ill patients presenting with the rheumatological problems outlined below, and in each case to:

- Assess symptoms and signs and formulate differential diagnosis
- Select appropriate investigations and accurately interpret investigation reports
- Communicate the diagnosis and prognosis – see generic skills
- Institute appropriate treatment recognising indications, contraindications and side effects

KNOWLEDGE

Polyarthritis

- Symmetrical/Asymmetrical
- Oligoarthropathy
- Monoarthropathy
 - Infectious, Crystalline, Cold TB
- Flitting Arthropathy
- Spondyloarthropathy

Vasculitis

- Large vessel
- Medium vessel
- Small vessel
- Polymyalgia rheumatica

Polymyalgia

- SLE
- Scleroderma
- Dermatomyositis
- Polymyositis
- Cross over Syndromes

- Degenerative Joint Disease
- Back Pain Syndromes
- Cauda Equina syndrome
- Investigations
- Therapeutics- especially complications of drugs used for rheumatic disease

SKILLS

- Complications of patients who are on long term Rheumatology therapy

ASSESSMENT & LEARNING METHODS

- Case based discussions
- ACP GIM In-Training Exam

Selection and Interpretation of Investigations

Objective: To provide the trainee with the knowledge and skills to be able to select, request and interpret reports, of the following commonly-used investigations as may be required for the diagnosis and safe management of patients with medical problems. In all instances the trainee should be aware of normal ranges, recognise circumstances where results are required urgently and recognise abnormalities requiring immediate action. Serial recording and tabulation of results may be important.

KNOWLEDGE

The following investigations are commonly reported for acutely ill medical patients admitted as emergencies:

- Blood tests including:
 - Full blood count
 - Urea and electrolytes
 - Blood glucose
 - Cardiac markers
 - Arterial blood gases
 - Calcium and phosphate
 - Amylase
 - Coagulation studies
 - D-Dimers
- Know circumstances requiring urgent tests.
- Know normal ranges.
- Interpret results.
- Recognise abnormalities that require immediate action.

ECG

- Normal ECG.
- Normal variants.
- Patterns for common abnormalities.
- Abnormally connected leads.

Chest x-ray, abdominal x-ray,

- Normal findings.
- X-ray appearances of common abnormalities.

Specialised Imaging such as CT and MRI

- Display judgement in selecting/prioritising investigations
- Ensures provision of adequate clinical information with request.
- Recognise the need for radiology advice.
- Display sound knowledge in interpreting the significance of results
- Appreciates that the procedure and results need to be explained to the patient.

Microbiological samples

- Types of samples submitted in emergency situations
- Collection methods required.
- Interpret results.
- Displays judgement and sound knowledge in interpreting the significance of results.
- Ensures adequate, clinical and therapeutic information is provided with the specimen.

SKILLS

- Appropriate selection and interpretation of investigations

ASSESSMENT & LEARNING METHODS

- Case based discussions
- ACP GIM In-Training Exam

Practical Procedures

Objective: To produce physicians who are competent and confident to perform common practical procedures required for diagnosis and management of patients with general medical problems:

KNOWLEDGE

Elective DC cardioversion

- Necessity of Synchronised Shock.
- Starting voltage.
- Number of shocks.
- Safe use of Defibrillator.

Central venous lines

- Ultrasound guided central venous line placement
- Anatomical markers for central veins.
- Strategies to ensure measurements are accurate.
- Safe cannulation of vein.
- Seldinger technique.
- Secure line in place/review position on X-ray.
- Connect manometer & measure CVP..

Lumbar puncture

- Anatomical markers.
- Appropriate timing of procedure.
- Safe puncture.
- Measurement of CSF pressure.
- Removal of samples and interpretation of results.

Tracheostomy management

- Tube care.
- Infection risk.
- Safe tube change.

Pleural and ascetic fluid aspiration under ultrasound

- Safe approach.
- Puncture pleural / peritoneal space.
- Withdrawal of fluid.

Nasal support ventilation

- Principles of BIPAP and CPAP.
- Monitoring and limitations.
- Mask fitting.
- Understanding of pressures.

Intercostal drain

- Anatomical markings.
- How an underwater seal functions.
- Safe blunt dissection to pleural space and insertion of intercostal tube.
- Connection to underwater seal and secure in place.
- Assessment and management of drain.
- Safe removal of the tube.

Knee joint aspiration

- Anatomical markers of joint space.
- Safe puncture of joint.
- Removal of samples.

Skin Biopsy

Hickman line

- Indications and complications.
- Care of lines including taking samples.
- Line removal.
- Critical evaluation of own skills.

Peg Tube

- Management

Non Mandatory:

Use of temporary cardiac pacing box and wire

- Use of flotation device/safe use of fluoroscopy (*radiation protection course*).
- Anatomical markings / fluoroscopic appearances of a good right ventricular position.
- Manipulation of wire to right ventricle.
- Secure line in place.
- Use of pacing box and external pacer including connection and settings

SKILLS

- Elective DC Cardioversion
- Central venous lines
- Cardiac pacing
- Lumbar puncture
- Tracheostomy management
- Pleural and ascitic fluid aspiration
- Nasal support ventilation
- Intercostal drain
- Knee joint aspiration
- Skin biopsy
- Ultrasound examination neck veins, thorax, abdomen

ASSESSMENT & LEARNING METHODS

- DOPS
- ACP GIM In-Training Exam

Minimum Requirements for Training

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Form 052
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Post	Form 045
On Call Rota (2 nights on call every month Low Intensity, 4 nights on call every month High Intensity)				
High Intensity	Required	40	Training Post	Form 064
Low intensity	Required	20	Training Post	Form 064
Section 2 - Training Activities				
Outpatient Clinics (High Intensity 1 clinic per week, Low Intensity 1 clinic per week)	Required	40	Year of Training	Form 001
General Internal Medicine				
Cardiology				
Geriatric				
Rheumatology				
Infectious Diseases				
GUM				
Gastroenterology				
Endocrinology				
Nephrology				
Respiratory				
Ward Rounds/Consultations (Minimum of 3 per week consultant and independently led)				
Consultant Led	Required	120	Year of Training	Form 002
SpR Led	Required	120	Year of Training	Form 002
Consultations	Required	1	Year of Training	Form 002

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
ICU/CCU Experience				
ICU	Required	1	Training Programme	Form 090
CCU	Required	1	Training Programme	Form 090
Emergencies/Complicated Cases (Minimum of 1 per week) This requires at a minimum a personal 'post take' ward round and ongoing responsibility for a proportion of the patients seen on emergency take	Desirable	40	Year of Training	Form 003
Procedures/Practical Skills/Surgical Skills				
ECG interpretation	Required	1	Training Programme	Form 004
Central venous line placement	Required	1	Training Programme	Form 004
Temporary cardiac pacing	Required	1	Training Programme	Form 004
DC cardioversion	Required	1	Training Programme	Form 004
Pleural aspiration	Required	1	Training Programme	Form 004
Abdominal paracentesis	Required	1	Training Programme	Form 004
Intercostal drain Insertion	Required	1	Training Programme	Form 004
Lumbar puncture	Required	1	Training Programme	Form 004
Joint aspiration	Required	1	Training Programme	Form 004
BIPAP	Required	1	Training Programme	Form 004
Advanced cardiac life support	Required	1	Training Programme	Form 004
Bone marrow/aspiration/biopsy	Required	1	Training Programme	Form 004
Additional/Special Experience Gained	Desirable	1	Training Programme	Form 005
Relatively Unusual Cases	Desirable	1	Training Programme	Form 019
Chronic Cases/Long term care	Desirable	1	Training Programme	Form 066
Management Experience	Required	1	Training Programme	Form 110
Section 3 - Educational Activities				
Mandatory Courses				
Audit (1 st year)	Required	1	Training Programme	Form 006
Mastering Communications (1st year)	Required	1	Training Programme	Form 006
Leadership Skills (3 rd year upwards)	Required	1	Training Programme	Form 006

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Ethics I Professionalism	Required	1	Training Programme	Form 006
Ethics II Ethics & Law	Required	1	Training Programme	Form 006
Ethics III Research	Required	1	Training Programme	Form 006
Ethics IV End of Life	Required	1	Training Programme	Form 006
NIHSS Stroke Scale	Required	1	Training Programme	Form 006
ACLS Certified	Required	1	Training Programme	Form 006
Non – Mandatory Courses	Desirable	1	Training Programme	Form 007
Study days (Minimum of 6 study days per year of High Intensity Training; 3 per year Low intensity) See examples below : Safe Prescribing, Oncology, Infection control, Evidence based medicine				
High Intensity	Required	6	Year of Training	Form 008
Low intensity	Required	3	Year of Training	Form 008
In-house Activities Minimum of 1 per month from the categories below:				
Grand Rounds	Required	3	Year of Training	Form 011
Journal Club	Required	2	Year of Training	Form 011
Radiology Conference	Required	1	Year of Training	Form 011
Pathology conference	Required	1	Year of Training	Form 011
MDT Meetings	Required	1	Year of Training	Form 011
Seminar	Required	1	Year of Training	Form 011
Lecture	Required	1	Year of Training	Form 011
Examinations				
ACP GIM In-training exam	Required	1	Training Programme	Form 012
Formal Teaching Activity (At least one formal teaching session per month)				
This should include the following categories:				
Lecture	Required	3	Year of Training	Form 013
Tutorial	Required	4	Year of Training	Form 013
Bed side teaching	Required	3	Year of Training	Form 013

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Research	Desirable	1	Training Programme	Form 014
Audit activities (1 audit a year either new or complete)	Required	1	Year of Training	Form 015
Publications	Desirable	1	Year of Training	Form 016
Presentations	Desirable	1	Year of Training	Form 017
National/International meetings (Minimum 1 per year)	Required	1	Year of Training	Form 010
Additional Qualifications	Desirable	1	Training Programme	Form 065
Committee Attendance (Serve on at least one committee during training)	Required	1	Training Programme	Form 063
Section 4 - Work Place Based Assessments				
DOPS				
ECG interpretation	Required	1	Training Programme	Form 021
Central venous line placement	Required	1	Training Programme	Form 021
Temporary cardiac pacing	Required	1	Training Programme	Form 021
DC cardioversion	Required	1	Training Programme	Form 021
Pleural aspiration	Required	1	Training Programme	Form 021
Abdominal paracentesis	Required	1	Training Programme	Form 021
Intercostal drain Insertion	Required	1	Training Programme	Form 021
Lumbar puncture	Required	1	Training Programme	Form 021
Joint aspiration	Required	1	Training Programme	Form 021
BIPAP	Required	1	Training Programme	Form 021
Advanced cardiac life support	Required	1	Training Programme	Form 021
Bone marrow/aspiration/biopsy	Required	1	Training Programme	Form 021
e.g. Liver biopsy, Echocardiography, Gastrosocopy, Colonoscopy, Bronchoscopy, Pericardial aspiration, CPAP, Pleural Biopsy ultrasound guided, Sigmoidoscopy				
CBD	Required	2	Year of Training	Form 020
Mini-CEX (At least two Mini-Cex assessments a year, one in-patient & one out-patient)	Required	2	Year of Training	Form 023
Section 4b - Quarterly End of Year Assessments				
Confidential Trainee Assessment of Post	Required	N/A	Year of Training	Form 050

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Quarterly EYA	Required	N/A	Year of Training	Form 092
Assessment Outcome recommendations	Required	N/A	Year of Training	Form 060
Research Reports	Desirable	1	Training Programme	Form 099
Section 5 - Additional Forms				
OPE	Required	N/A	Training Programme	Form 047
Leave of Absence	Required	N/A	Training Programme	Form 048