



ROYAL COLLEGE OF  
PHYSICIANS OF IRELAND

# CURRICULUM OF HIGHER SPECIALIST TRAINING IN ENDOCRINOLOGY & DIABETES MELLITUS



**This curriculum of training in Endocrinology & Diabetes Mellitus was developed in 2010 and undergoes an annual review by Dr. James Gibney and Dr. Sean Dinneen, National Specialty Directors, Dr. Ann O'Shaughnessy, Head of Education and Professional Development and by the Endocrinology & Diabetes Mellitus Specialty Training Committee. The curriculum was approved by ICHMT.**

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## Introduction

Endocrinology and Diabetes Mellitus is a predominantly clinical specialty dealing with diseases of the endocrine glands as they affect people of all ages. Besides the pathophysiological processes involved and the physical impact of each condition, psycho-social effects must also be understood. The potential benefits and risks of specific treatments must be learned and experience gained in the multi-disciplinary approach to management of patients with diabetes mellitus. The physician may later wish to subspecialise in Endocrinology or Diabetes Mellitus develop to a greater extent, so it is important that an interest in such topics can be facilitated during training.

Besides these specialty specific elements, trainees in Endocrinology and Diabetes Mellitus 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 specialist training in Endocrinology and Diabetes Mellitus, 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, Endocrinology and Diabetes Mellitus 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 Gastroenterology.
- 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 Endocrinology and Diabetes Mellitus must have completed a **minimum** of two years Basic Specialty Training (BST) or equivalent in approved posts and obtained the MRCPI or (UK).

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

### **BST in General Internal Medicine (GIM) 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 MRCPI or MRCPUK must provide evidence of equivalent qualification.

## Duration & Organisation of Training

The duration of HST in Endocrinology & Diabetes Mellitus is 4 years, one year of which **may** be gained from a period of full-time research. Those who wish to obtain dual certification in Endocrinology & Diabetes Mellitus and in General Internal Medicine will require at least a fifth year of training.

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 Endocrinology & Diabetes Mellitus 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 Endocrinology & Diabetes Mellitus (*e.g. pituitary endocrinology, thyroidology etc.*), 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 of 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 any of 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 Programmes

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Endocrinology & Diabetes Mellitus. Programmes will include 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 Endocrinology & Diabetes Mellitus or, in the case of GIM, 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.

The experience gained through rotation around different departments is recognised as an essential part of HST. No trainee should remain in the same unit for longer than 2 years of clinical training.

Where an essential element of the curriculum is missing from a programme, access to it will 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.

A period of supervised research relevant to Endocrinology & Diabetes Mellitus is considered highly desirable and will contribute up to 12 months towards the completion of training. Some trainees may wish to spend two or three years in research leading to a 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 logbook 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 Endocrinology & Diabetes Mellitus Curriculum. They will remain the property of the trainee and must be produced at the 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 Endocrinology & Diabetes Mellitus 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.

## 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 portfolio 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 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 C<sub>1</sub>**

repeat training year – **PeTRA Form C<sub>2</sub>**

The penultimate year 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 ICHMT. 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 Endocrinology & Diabetes Mellitus 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 Endocrinology & Diabetes Mellitus 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. The Training Committee will set down the schedule of appropriate educational activities for Endocrinology & Diabetes Mellitus and the minimum acceptable attendance stated. 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, and Case 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, 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.
- 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.

### Directly Observed Procedural Skills (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 speciality to speciality.

**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:**

Compliant in appropriate specialties

## **Specialty Study Days**

The topics of specialty specific study days to be completed during training are listed in appendix 1.

## **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  
Endocrinology & Diabetes Mellitus**

# Hormones: The Pathophysiology of the Endocrine System

**Objective:** To understand and be able to explain the normal and abnormal production of hormones, their regulation and effects and the means of assessing the structures and functions of the endocrine system. To be capable of applying this information correctly and efficiently in the diagnosis and management of endocrine disease.

## The Endocrine Glands, their Hormones, Effects and Mechanism of Actions, Pathology in Disease

**Objective:** To understand and be able to explain the production and actions of hormones and the pathogenesis of diseases of the endocrine system.

### KNOWLEDGE

#### Anatomy, physiology and pathology

- The development, anatomy, histology, functions and inter-relationships of the endocrine glands and tissues.
- Synthesis, secretion, transport, regulation of hormones and the mechanisms by which they produce their effects in health and disease.
- Pathogenesis of endocrine diseases: infection, inflammation, auto-immunity, benign and malignant, functioning and non-functioning tumours, hyperplasia, atrophy.

### SKILLS

- To be able to apply knowledge to the diagnosis and effective management of endocrine disease
- Fully utilises opportunities and resources for self-directed learning, eager to learn, inquisitive, industrious.

### ASSESSMENT AND LEARNING METHODS

No Assessment required

# Clinical and Laboratory Assessment of Endocrine Function

**Objective:** To have the knowledge and skills to make a clinical assessment of endocrine function. To select, arrange, explain and interpret investigations and tests appropriate to the patient's needs.

## KNOWLEDGE

### Assessment of endocrine function

- To know and to be able to recognise the symptoms, signs, biochemical and other manifestations of abnormal endocrine function
- To understand and directly observe the principles of and techniques employed in hormonal assays and the laboratory assessment of endocrine function.
- To have knowledge of the tests available, the "normal" ranges, variability and possible artefacts relevant to interpretation.
- To be capable of explaining and advising on the selection of tests appropriate to the patient's needs; the collection, timing and storage of specimens, on stimulation and suppression techniques. To be able to interpret the results correctly.
- To properly obtain fully informed consent.
- To recognise the potential for misinterpretation of results due to collection, methodological errors, extraneous substances.
- To be able to elicit from patients relevant symptoms and physical signs and interpret correctly positive and negative clinical findings in order to reach a working diagnosis and/or arrange appropriate investigations.
- To appreciate the patients' and their relatives' fears and uncertainties and be prepared to discuss and deal with these sensitively, encouraging their contributions to the decision-making process and respecting the right of the individual to consider, accept or to refuse medical advice.

## SKILLS

- Interpretation of investigations

## ASSESSMENT & LEARNING METHODS

- 5 days attendance in laboratory with full range of endocrinology testing

### Assessment at SpR level Year 1- 2

# Imaging Techniques in Endocrinology

**Objective:** To have the knowledge and skills necessary to select, explain, arrange and interpret the imaging technique(s) most appropriate to each patient's needs.

## KNOWLEDGE

### Imaging in endocrine disease

- Know the potential contribution and the limitations of radiological techniques to the diagnosis and assessment of endocrine diseases from radiography, CT, MRI, nuclear medicine scanning and ultrasonography.
- To know and understand the principles of the imaging techniques available for demonstrating endocrine tissues and their function.
- To make appropriate referrals, complete documentation accurately to assist in the interpretation of CT and MRI scans of the pituitary region, adrenals, orbits etc; ultrasonography of the thyroid, ovaries; and radio-isotope scanning of the thyroid, adrenal glands.
- To participate in joint endocrine/radiology meetings and be able to interpret MRI scans of the pituitary region and thyroid and adrenal imaging.
- Recognises the importance of explaining the purpose and the results of investigations using appropriate language.

## SKILLS

- Appropriate diagnostic testing

## ASSESSMENT & LEARNING METHODS

- Attendance at Radiology meetings 6 times per year

**Assessment each year**

# Diabetes Mellitus

**Objective:** To acquire the knowledge and skills necessary to correctly diagnose and manage patients with diabetes mellitus and its complications.

## Diagnosis and General Management of Diabetes

**Objective:** To be competent to diagnose and manage Type 1 (insulin dependent) and Type 2 (adult-onset) diabetes.

### KNOWLEDGE

#### Classification and diagnosis

- The classification, different types and sub-types of diabetes, their aetiology, genetics; the natural history and pathology of those diseases and their complications.
- Glucose homeostasis, the principles, design and interpretation of glucose tolerance testing.
- To understand the differences in presentation of diabetes in different ethnic groupings.
- To be able to perform a full clinical examination on a person suspected as having diabetes, discover and accurately report on any evidence of the disease and its complications: interpret and explain the findings.
- To be able to perform and interpret correctly the results of tests for glucose tolerance.
- To be aware and sensitive to the impact a diagnosis of diabetes will have on the patient and their family

#### General management, treatment

- Principles, objectives of management of both Type 1 and Type 2 diabetes.
- Medical nutrition therapy. Exercise. Actions, use of anti-diabetic agents, other drugs. Insulins, their delivery, dose adjustment; monitoring glycaemic control.
- Involvement in structured education programmes for the delivery of diabetes care to patients with type 1 and type 2 diabetes.
- Appreciates contributions from other specialists and health professionals (*including specialist nurses*) to general management of diabetes.
- Aware of potential contributions from patient support groups, family members.

### SKILLS

- Diagnose and manage Type 1 and Type 2 diabetes
- Devising individualised treatment plans, advising on choice of treatments, drugs and insulin adjustments based on monitoring glucose etc.
- Screening for and detecting early signs of complications; avoiding, recognising, correcting hypoglycaemia.

## **ASSESSMENT & LEARNING METHODS**

- Study Day
- Attend 100 diabetic clinics throughout programme

### **Assessment throughout programme**

## Social and Practical Aspects

**Objective:** To have knowledge and skills to be able to advise and arrange to support patients and their relatives in dealing with the social and practical issues faced by diabetic patients.

### KNOWLEDGE

#### Social and practical aspects

- Home blood and urine testing (*through attendance at Diabetes Day Centre*): insulin administration devices.
- Support services available, including foot care, visual impairment.
- Implications for employment, driving.
- Patient education regarding above, advising about hypo/hyperglycaemia, diet, exercise and weight control; smoking; care of the feet; family planning.
- Prepared to listen; recognises patient's concerns; encourages patient to participate in and share responsibility for management.

### SKILLS

- Patient education

### ASSESSMENT & LEARNING METHODS

- Spend time in Diabetic Day Centre

**Assessment at all SpR levels**

## Diabetic Emergencies

**Objective:** *To be able to diagnose correctly, manage effectively and efficiently and prevent future recurrences of severe hypoglycaemia, hyperglycaemic emergencies and related metabolic decompensations.*

### KNOWLEDGE

#### Hypoglycaemia, hyperglycaemia

- Precipitating factors, evolution, clinical features, metabolic consequences of hyperglycaemia; keto-acidosis and other metabolic decompensations.
- Causes of hypoglycaemia, presentation, hypoglycaemic unawareness, sequelae.
- Identifying hypoglycaemic unawareness, “risk-taking” behaviour, “brittle” diabetes
- Attentive to patient’s needs, listens, is prepared to adjust, re-adjust, individualise treatment plan.

### SKILLS

- To distinguish, effectively manage severe hypoglycaemia, hyperglycaemia and associated metabolic disturbances presenting as emergencies and to advise on the means of preventing recurrences.

### ASSESSMENT & LEARNING METHODS

- Case based discussions

**Assessment at SpR Year 1**

## Intercurrent Events Complicating Management

**Objective:** *To be competent to advise on the appropriate management and continuing care of the diabetic patient in the presence of intercurrent infection, other disease; in the young, old and during pregnancy.*

### KNOWLEDGE

#### The management of diabetes in the presence of various intercurrent events

- Awareness of the appropriate adjustments to the management of the diabetic patient in the presence of infection, other diseases and in relation to an operative procedure.
- Able to maintain control of the diabetic state pre- and post- operatively and during intercurrent illness.
- Appreciation of the importance of good glycaemic control during intercurrent illness and ability to communicate this to patient and health care professionals. Ability to alleviate patient's concerns re deterioration of glycaemic control at times of stress/intercurrent illness.

#### Conception and pregnancy

- Know the potential of diabetes to affect conception and pregnancy and of the risks of pregnancy for a diabetic patient.
- Recognise the particular importance of good glycaemic and blood pressure control during pregnancy.
- Able to manage and advise on the care of the patient with diabetes prior to conception and throughout pregnancy.
- Supervise/deliver ante-natal care (at joint diabetes/obstetric clinic); manage glycaemia during labour.
- Appropriate follow-up of patients with gestational diabetes mellitus.
- Be sensitive to the patient's needs during pregnancy and be aware of the impact of a diagnosis of gestational diabetes mellitus on the patient.

#### Diabetes and the young and old

- Understand how diabetes affects children, adolescents and of the physiological, psychological and social problems experienced.
- Special care needs of young people with diabetes and for transition to a service for adults.
- Impairments and handicaps in older people complicating management and self-care. Agencies providing support.
- Involvement in adolescent diabetes camps is desirable.
- Recognise and identify as risk – taking the behaviour of young people with diabetes, recognise their special need for understanding and support.
- Encourage enlist patient's, relative's involvement in management.
- Assisting in meeting the additional social and medical needs of elderly people with diabetes, in the community and in residential care. Obtaining access to agencies in available for assistance.
- Non-judgemental response to the difficulties/needs of young and old.
- Understanding of the impact of psychosocial factors on adolescents with diabetes and the control of their disease.

## **SKILLS**

- Ability to maintain control of diabetes in patients who are unable to eat, are on enteral or parenteral feeding as well as in the post myocardial infarction period and in the intensive care setting.
- Diagnose and manage gestational diabetes.
- Management of diabetes in the young and old

## **ASSESSMENT & LEARNING METHODS**

- Case based discussion
- Attendance at 10 diabetes obstetric clinics
- Attendance at 10 pediatrics diabetes clinics
- Study Day

### **Assessment at SpR :**

- Year 1: Management of Diabetes in presence of various intercurrent events
- Year 1- 5: Management of diabetes in conception and pregnancy
- Year 1- 5: Management of diabetes in the young and old.

# Microvascular Complications of Diabetes (Including the Diabetic Foot)

**Objective:** To have the knowledge and skills necessary to understand the pathogenesis of the micro vascular complications of diabetes mellitus, the principles and practice of screening for and management of ophthalmic, renal, neuropathic and other effects.

## KNOWLEDGE

### Eye disease in diabetes

- How diabetes may affect the eyes, cataracts, retinopathy (mild moderate and severe non-proliferative retinopathy), ophthalmoplegia.
- Understand and be able to explain strategies for prevention, treatment of diabetic eye disease.
- Range of services provided for visually handicapped (partially sighted); implications for driving and employment.
- Inform and advise on treatment options, make appropriate referrals for ophthalmic opinion.
- Understand the difficulties for patients and their families in adjusting to visual handicap. Offer appropriate support particularly re insulin administration and blood glucose monitoring.

### Renal disease in diabetes

- Pathology/pathogenesis of renal disease in diabetes, effects, natural history and prognosis.
- Significance of micro-albuminuria, hypertension, overt nephropathy, increased risk of infection, renal papillary necrosis.
- Principles of management to preserve renal function.
- Diagnosing micro-albuminuria, diabetic nephropathy, optimal management of BP, glycaemia, renin-angiotensin system to preserve kidney function.
- Informing and advising patients on the implications of renal involvement, on treatment options available, the use, benefits and effects of therapeutic interventions.
- Refer appropriately for nephrology opinion, dialysis, transplant.
- Understand potential impact of immunosuppressants on diabetes control.

### Neuropathy

- Know and understand the effects of peripheral sensory, proximal motor and autonomic neuropathies, mononeuritis including cranial nerve palsies occurring in diabetes.
- To understand the impact of neuropathy including foot complications and fear of foot complications on patients suffering from diabetes and their families.
- To be able to discuss the benefits of good glycaemic control on reducing the risk of neuropathy.

### Foot problems

- Multifactorial basis of foot problems in diabetes, - neuropathic, micro and macro vascular, infectious and mechanical contributions.
- Principles and means of management, prevention; necessary precautions.
- Understanding the benefit of a multidisciplinary approach to the prevention and management of foot complications in patients with diabetes mellitus.
- Appropriate referral for specialist e.g. surgical opinion, rehabilitation following amputation.
- Understanding the fears patients have regarding the potential risk of amputation.

## SKILLS

- Use ophthalmoscope to diagnose and assess cataract, retinopathy. Perform visual acuity test, correctly interpret result. Interpret retinal photographs.
- Management of diabetes in dialysis patients and pre and post-transplant.
- Able to recognise, correctly diagnose, assess and manage appropriately the varied clinical neurological manifestations, including sensory impairments, dyesthesiae, loss of muscle power, postural hypotension, impotence, erectile dysfunction, diarrhoea.
- Advise on prevention, care of established foot problems in a multidisciplinary setting (*attendance at foot care clinics*).

## ASSESSMENT & LEARNING METHODS

- Attendance at 10 eye clinics
- Attendance at 10 renal clinics
- Attendance at 10 foot clinics
- Study day

**Assessment at SpR year 1- 5**

# Macrovascular Complications of Diabetes Mellitus

**Objective:** *To have the knowledge and skills necessary to understand the pathogenesis of macrovascular disease as it occurs in diabetes and to be able to provide appropriate advice on its prevention and management.*

## KNOWLEDGE

### Clinical macro vascular disease

- Contributions from arteriosclerotic disease, hyperlipidaemia, coagulative abnormalities, hypertension to premature, severe arterial disease in diabetes.
- Particular risk from smoking.
- Able to recognise and assess effects of pathology in coronary, cerebral (*neck*), aortic, renal, pelvic, leg etc. vessels and advise on investigations appropriate to patient's needs.
- Arrange effective interventions (anticoagulation, angioplasty, surgery).
- Recognise and manage other vascular risk factors including hyperlipidaemia and hypertension
- Refer appropriately.
- Advise/assist patient to stop smoking.
- Be aware of issues regarding compliance with medication and be able to explain clearly to the patients the rationale and importance of compliance

## SKILLS

- Recognise and manage vascular risk factors
- Manage vascular complications

## ASSESSMENT & LEARNING METHODS

- Case based discussion

**Assessment at SpR Year 1- 3**

## Other Metabolic Disorders

**Objective:** To have the knowledge and skills necessary and be competent to advise on the appropriate management of disorders of nutrition and metabolism including disorders of appetite and weight.

## Disorders of Appetite and Weight

**Objective:** To understand and be able to explain the physiology of appetite regulation, energy requirements and balance; the causes, pathophysiology, psychology of obesity, and of eating disorders and their endocrine effects.

### KNOWLEDGE

#### Obesity

- Obesity as a health problem, causes, risk to health, treatment options, principles of management including role of bariatric surgery.
- The metabolic syndrome.
- Measuring obesity, estimating energy intake/expenditure, appropriate dietary prescription.
- Appropriate referral to other health professionals, slimming agencies.
- Non judgemental, supportive approach, prepared to share responsibility with patient to achieve agreed, attainable goals.

#### Eating disorders

- Patho-physiology, psychopathology of anorexia nervosa, bulimia.
- Clinical features, mental state, physical, biochemical, endocrine and metabolic complications.
- Recognition, investigation and appropriate management of these conditions and complications.
- Non-judgemental, supportive approach, prepared to share responsibility with patient to achieve agreed, attainable goals.

### SKILLS

- Recognition, investigation and appropriate management of eating disorders including obesity

### ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study Day

Assessment at SpR Year 1- 3

# Dyslipidaemia

**Objective:** To acquire the knowledge and skills necessary to differentiate and manage primary and secondary dyslipidaemic states.

## KNOWLEDGE

### Hyperlipidaemia

- Plasma lipids and lipid transport, lipoproteins, “normal” ranges; dyslipidaemic states (*primary and secondary*) and risks associated.
- Genetic and environmental influences.
- Treatment of lipid disorders; lifestyle measures, drugs and their effects.
- Screening for dyslipidaemia, interpretation of results; assessing cardiovascular risk.

## SKILLS

- Correctly diagnosing and managing patients with primary and secondary lipid disorders (*attendance at specialised lipid clinics optional*).
- Use evidence-based medicine to develop/justify strategies for prevention.

## ASSESSMENT & LEARNING METHODS

- Case based discussion

**Assessment at SpR year 1**

# Spontaneous Hypoglycaemia

**Objective:** To diagnose the cause and correctly manage hypoglycaemia in order to prevent recurrences.

## KNOWLEDGE

### Hypoglycaemia

- Physiology of glucose control.
- Symptoms, signs and consequences of hypoglycaemia.
- Causes e.g. insulinoma, other endocrine, hepatic, factitious.
- Recognise, correctly diagnose pathological hypoglycaemia, investigate appropriately and interpret results to identify cause of fasting and reactive types.
- To understand the impact of hypoglycaemia on patients' quality of life and alleviate patients' concerns regarding symptoms and potential complications.
- To recognise potential settings in which factitious hypoglycaemia may be a possibility and ability to handle these situations sensitively.

## SKILLS

- Diagnose, investigate and manage hypoglycaemia

## ASSESSMENT & LEARNING METHODS

- Case based discussion

**Assessment at SpR year 3 - 5**

## Hyper and Hypo-natraemia

**Objective:** To understand and be able to explain water and sodium homeostasis and to be competent to recognise and advise in the management of hyponatraemic and hypernatraemic states.

### KNOWLEDGE

#### Hyper and hypo -natraemia

- Water and sodium homeostasis, renal regulation of sodium homeostasis and their abnormalities.
- Classification and causes of hypo and hypernatraemia, polyuria and polydipsia.
- Inappropriate ADH secretion syndrome.
- Recognise circumstances potentially leading to hypo/hyper natraemia, able to detect clinical features, interpret correctly plasma/urinary chemistry.
- Diagnose cause, institute appropriate treatment for acute and chronic hypo- and hypernatraemia.
- Appreciate the complex nature of treating severe degrees of hyper and hypo natraemia.
- Close liaison with other health care professionals involved in managing patients with disorders of sodium balance to help prevent recurrences.

### SKILLS

- Recognise, diagnose and manage hyponatraemic and hypernatraemic states

### ASSESSMENT & LEARNING METHODS

- Number of consultations to be recorded
- Case based discussion
- Study day

**Assessment at SpR Year 1 -2**

# Disorders of Carbohydrate Metabolism, Haemochromatosis and Porphyria

*Objective: To understand the inborn and acquired errors of metabolism which underlie diseases seen in humans and the principles upon which the effective management of the manifestations of these diseases is based.*

## KNOWLEDGE

### Haemochromatosis

- Iron absorption, storage and transport; measurement of Fe status.
- Idiopathic haemochromatosis clinical presentation.
- Screening and means of early diagnosis; able to recognise range of clinical manifestations including endocrine.
- Differentiate other causes of iron overload.
- Understand the importance of and rationale for family screening for haemochromatosis.
- Ability to communicate with patients and families to alleviate concerns regarding the impact of a (possible) diagnosis of haemochromatosis.

### Disorders of carbohydrate metabolism

- Carbohydrate digestion, absorption and storage and the effects of inborn and acquired abnormalities. Biochemical aspects, enzymology, glycogen storage diseases.
- Able to recognise clinical presentations, investigate appropriately, arrange management.
- To understand the genetic basis of inborn errors of metabolism and develop an ability to sensitively interact with patients and families with these conditions.
- Appreciation of the need for involvement of medical genetics specialists.

### The porphyrias

- Biochemical basis and varieties of porphyria: their acute and non-acute presentations, investigations necessary to determine diagnosis.
- Inheritance patterns.
- Recognise GI and neuropsychiatric features of acute intermittent porphyria, aggravating factors.
- Able to identify cutaneous manifestations.
- Manage acute presentation, advise on prophylaxis.
- To understand and communicate the genetic basis of the porphyrias to patients and families.
- To refer to medical genetics specialists for assessment.
- To advise patients and families regarding prevention of acute episodes.

## SKILLS

- Screening
- Diagnosis, investigation and management of:
  - Haemochromatosis
  - Disorders of carbohydrate metabolism
  - The porphyrias

## ASSESSMENT & LEARNING METHODS

- Case Based discussion
- Study day (With Chemical pathology)

### **Assessment at SpR Year:**

- Year 1 - 2: Haemochromatosis
- Year 1 - 5: Carbohydrate metabolism , porphyria

# The Endocrine Glands and Their Diseases

**Objective:** To be able to identify the clinical presentations of diseases of the endocrine glands and to be able to investigate appropriately, correctly diagnose and manage patients suspected as suffering from such diseases.

## Hypothalamic and Pituitary Diseases

**Objective:** To have the knowledge and skills necessary to be able to diagnose deficiencies or excessive production of pituitary hormones and to recognise the local and systemic effects of the lesions responsible for anterior and posterior pituitary and hypothalamic disorders: to identify and manage the pathology responsible and the endocrine disease caused.

### KNOWLEDGE

#### Hypothalamic syndromes

- The regulatory and integrative functions of the hypothalamus, its hormones and releasing factors.
- Congenital and acquired hypothalamic diseases and injuries.
- Recognising distortions of appetite, sleep, thirst etc as potential features of hypothalamic syndromes.
- Correctly diagnosing and managing the pathology responsible and endocrine/metabolic effects.
- Understanding and managing the psychological impact of hypothalamic disease on patients.

#### Pituitary diseases

- Pituitary structure and functions, hormones and their actions, hormone deficiencies.
- Strategies for the assessment of anterior and posterior pituitary function, assessment of visual fields.
- Hyperplasia and increased activity, non-functioning and functioning pituitary tumours; prolactinomas, acromegaly, gigantism, Cushing's Disease, Craniopharyngioma, mass effects.
- Treatment options, including irradiation, surgery, medical treatment.
- Genetic and acquired hypopituitarism, causes, effects, replacement of adrenal, thyroid, gonadal axes.
- Growth hormone deficiency.
- Be able to select, arrange and interpret basal and dynamic tests of pituitary function, imaging and other investigations appropriate to patients' needs.
- Competence to diagnose and manage diabetes insipidus, to diagnose and provide the initial and long-term medical management of anterior and other posterior pituitary diseases.
- Able to recognise and manage appropriately patients with SIADH, thirst dysregulation and other disorders of fluid balance.
- Make appropriate referrals for pituitary surgery, radiotherapy: supervise perioperative management of patients.
- Advise patients on appropriate doses of replacement hormones including stress doses of steroids.

### SKILLS

- Investigation and management of hypothalamic and pituitary diseases
- Dynamic testing

## ASSESSMENT & LEARNING METHODS

- Study Days

### **Assessment at SpR Year**

- Years 1- 3: Dynamic testing
- Years 2 - 3 : Hypothalamic

# The Thyroid Gland

**Objective:** To have the knowledge and skills necessary to be able to diagnose deficiencies or excessive production of thyroid hormones and to recognise the local and systemic effects of the lesions responsible: to identify and manage the pathology responsible and the endocrine disease caused.

## KNOWLEDGE

### Thyroid disease

- To understand thyroid disease in terms of the physiology and biochemistry of thyroid hormones, iodine metabolism, auto-immunity and the pathogenesis of malignant disease.
- Tests of thyroid function, their interpretation, and value, assay interference: imaging and the use of radio-isotopes in the investigation of thyroid disease.
- Causes of hyper and hypothyroidism.
- Causes and types of goitre.
- Competent to diagnose, assess and appropriately manage hyperthyroidism and its systemic effects; use appropriately anti-thyroid and other drugs; refer for radioactive iodine and surgery as necessary.
- Able to provide emergency treatment (*for thyroid "Storm" and Myxedema Coma*).
- Recognition, assessment, medical management and appropriate referral of patients with significant ocular involvement (*Grave's eye disease*).
- Able to assess and advise on the management of non-toxic goitre, multi-nodular goitre and solitary thyroid nodules.
- Perform and refer for fine-needle biopsy as appropriate.
- Diagnose thyroid carcinoma, recognise the place for TSH suppression, radioactive iodine and/or surgery; refer appropriately.
- Able to differentiate primary and secondary causes of hypothyroidism including inherited enzyme defects, peripheral resistance to thyroid hormones and to manage appropriately hypothyroidism in the newborn, in childhood and older people, treat severe cases including myxoedema coma.
- Supervision of perioperative care of patients undergoing thyroid surgery (*especially hyperthyroid patients*).
- Managing thyroid disorders during and after pregnancy.
- Recognise and treat acute, subacute and chronic thyroiditis.
- Differentiate non-thyroidal illness simulating thyroid disease.
- To understand and recognise potential psychological/psychiatric manifestations of thyroid diseases e.g. anxiety in hyperthyroidism, and their impact on patients and their perceptions of their conditions.

## SKILLS

- Fine needle aspiration of thyroid nodule
- Diagnosis, investigation and management of thyroid disease

## **ASSESSMENT & LEARNING METHODS**

- DOPS (Optional): fine needle aspiration
- Study Day
- Case based discussion

**Assessment at SpR year 1- 5**

## The Adrenal Glands

**Objective:** *To have the knowledge and skills necessary to be able to recognise the manifestations of excessive production or deficiencies of the hormones produced by the adrenal glands: to understand and identify the pathogenesis and to be competent to differentiate and manage appropriately the endocrine syndromes resulting.*

### KNOWLEDGE

#### Adrenocortical diseases

- The biochemistry, production, regulation and actions of the hormones produced by the adrenal cortex. Abnormal production and effects e.g. *in Cushing's syndrome, congenital adrenal hyperplasia (CAH), hyperaldosteronism and Addison's disease.*
- Imaging techniques available to assist management.
- Aetiology of varieties of Cushing's, tests and investigations of value in diagnosis and differential diagnosis, differentiation from pseudo-Cushing's.
- Adrenal androgen excess. Androgen secreting tumours. Genetic, biochemical and enzymic abnormalities of CAH; clinical features in babies, children and adults.
- Causes of primary hyperaldosteronism, appropriate treatment. Other causes of hyperaldosteronism.
- Pathogenesis, laboratory investigation and diagnosis of primary hypoadrenalism (*Addison's disease*) other causes of adrenal insufficiency.
- Screening, the appropriate selection and performance of basal and dynamic tests of adrenal function and the pituitary-adrenal axis, correct interpretation of results and biochemical findings.
- Appropriate use of imaging.
- Diagnosis and management of patients with Cushing's syndrome, CAH, hyperaldosteronism.
- Investigation and management of suspected primary and secondary adrenal failure, perioperative care, treatment of acute adrenal insufficiency.
- Understanding the impact of adrenal diseases on patient's quality of life.
- Education of patients regarding the nature of adrenal disease, the impact on their health and the complex nature of the investigation and treatment of adrenal conditions.

#### Phaeochromocytoma, paraganglioma

- Neuroectodermal origin of tumours.
- Familial cases and associated diseases, principles of investigation, suppression tests, localisation.
- Competent to investigate fully and carefully, and correctly interpret results in a suspected case.
- Refer appropriately for surgery, perioperative care with emphasis on preoperative blood pressure control.
- Be able to discuss risks associated with surgery with patients, families, surgeons and anaesthetic staff.

### SKILLS

- Diagnosis, investigation and management of deficiencies of the adrenal glands
- Dynamic testing of adrenal glands

## **ASSESSMENT & LEARNING METHODS**

- Case based discussion
- Study Day

**Assessment at SpR year 1 - 5**

# The Endocrinology of Reproduction

**Objective:** To understand the physiology and endocrinology of reproduction: to have the knowledge and skills necessary to investigate, identify and advise on the management of gonadal and other endocrine disorders affecting the reproductive system in females and in males.

## KNOWLEDGE

### Development and differentiation of sexual characteristics

- Understand the process of sexual differentiation and development, the genetic and hormonal influences relevant; abnormalities encountered, intersex states.
- Normal, delayed and precocious puberty.
- Gonadotrophins, sex hormones from testicular and ovarian, adrenal and other tissues, actions and interactions.
- Investigate and manage common chromosomal disorders such as Turner's and Klinefelter's (*attend a minimum of 10 Paediatric endocrinology clinics*).
- Adopt a non-discriminatory, non-judgemental attitude to all patients, recognising and respecting their rights as individuals equally so in the case of children, people with physical, mental, learning disabilities.

### Primary and secondary gonadal dysfunction in females and males

- Causes of menstrual irregularly, amenorrhoea, ovarian dysfunction, primary and secondary ovarian failure, infertility: hirsutism and the causes of virilism in female
- Know of and understand the polycystic ovary syndrome, its metabolic and reproductive aspects, clinical features of ovarian tumours.
- Causes of hypogonadism in males, androgen deficiencies both congenital and acquired; characteristic hormonal profiles.
- Cryptorchidism, cause of male infertility, erectile dysfunction, gynaecomastia.
- Types, effects, presentation of testicular tumours.
- Assess, investigate appropriately women presenting with hirsutism, virilization, polycystic ovarian syndrome.
- Providing the first line assessment of the infertile couple, advising on management and referring appropriately.
- Deals appropriately with patient's concerns, sensitivities in a professional manner, explains using appropriate language, checks understanding.

## SKILLS

- Perform complete physical examination relevant to reproductive system, perform and interpret functional tests of the hypothalamic – pituitary – gonadal axis, obtain samples for and interpret results of cytogenetic analyses, arrange for imaging and/or biopsy as appropriate for patient's need.
- Able to assess, investigate and manage appropriately women with a menstrual disturbance.
- Able to investigate fully, identify the cause and manage appropriately male and female patients presenting as a result of primary or secondary gonadal failure.
- Competent to assess, investigate and advise on the management of erectile dysfunction, gynaecomastia.

## **ASSESSMENT & LEARNING METHODS**

- Attendance at 10 reproduction clinics
- Study Day

**Assessment at SpR year 1- 5**

# Growth and Development

*Objective: To have the knowledge and skills necessary to assess growth and development and to be competent to diagnose correctly and manage disorders of growth and maturation.*

## KNOWLEDGE

### Development and growth

- Sexual determination and differentiation, endocrine influences on growth and development through childhood and puberty.
- Differential diagnosis of short stature and growth retardation, delayed puberty and premature sexual maturation.
- Able to differentiate genetic, endocrine, metabolic causes, diagnose and manage disorders of growth and maturation responsible for abnormally short or tall stature.
- Appropriate use of growth hormone, growth-promoting agents in children.
- Understanding the psychological impact of disorders of growth and development on children and their families.
- Education and reassuring patients with disorders of growth and development and their families as appropriate.

## SKILLS

- Measurement of height and weight, use of growth charts, radiology, endocrinology in the assessment of growth, age, maturity.

## ASSESSMENT & LEARNING METHODS

- Attend 10 pediatric endocrinology clinics
- Study Day

**Assessment at SpR year 1 - 5**

# Calcium Metabolism and Bone, The Parathyroid Glands

**Objective:** To understand calcium homeostasis and bone metabolism and have the knowledge and skills to diagnose and manage hyper and hypocalcaemic states, parathyroid disorders and metabolic bone disease.

## KNOWLEDGE

### Parathyroid hormone (PTH), calcitonin and vitamin D

- The origin, production regulation and actions on the gut, kidney and bones of PTH and calcitonin.
- Understand calcium and phosphate homeostatic mechanisms, the biological effects and metabolism of the D vitamins: the biology of bone formation, mineralization and resorption.
- Hyperplasia, adenomas and carcinoma of the parathyroids, medullary carcinoma of thyroid and associations with M.E.N.
- Understanding of the genetic basis of rare genetic disorders such as MEN and ability to educate patients regarding risk of transmission/referral of patients to appropriate specialists.

### Disordered parathyroid function

- To be aware of the symptomatic and asymptomatic presentation of hyperparathyroidism.
- The causes of primary and secondary hyperparathyroidism and of hypoparathyroidism, also their biochemical profiles and radiological features.
- To assist and advise in the localisation of the pathology, select and refer for surgery.
- Able to supervise/provide immediate and long-term postoperative care.
- Able to differentiate and manage hypoparathyroidism and pseudohypoparathyroidism.
- Understanding of the importance of careful patient selection for surgical interventions of hyperparathyroidism and communication of information to patients to assist them in decision-making.
- To understand and communicate the importance of compliance in management of hypoparathyroidism and pseudo-hypoparathyroidism.

### Vitamin D and metabolic disease of bone

- Hypervitaminosis D, vitamin D deficiency states and resistance: causes and clinical presentations, rickets and osteomalacia.
- Radiology of metabolic diseases of bone, measuring bone density, turnover, mineralisation.
- Able to recognise, correctly diagnose cause and manage, vitamin D deficient states, rickets/osteomalacia.
- Ability to identify and advise patients at risk of vitamin D deficiency.

## **SKILLS**

- Able to appropriately investigate and interpret findings in disorders of calcium and bone metabolism, including those due to disorders of the parathyroids, Vitamin D deficiency and renal disease.
- To correctly diagnose the causes of hyper/hypocalcaemia and provide the appropriate management including for acute emergency presentations.
- Able to diagnose and differentiate primary and secondary causes of hyperparathyroidism and provide management appropriate to patients' needs.
- Appropriate screening for osteoporosis, diagnosis, causes, risks: advise on prophylaxis, assess and manage established osteoporosis.

## **ASSESSMENT & LEARNING METHODS**

- Study Day
- Attend bone clinic (optional)
- Case based discussion

**Assessment at SpR year 4 – 5**

## The Diffuse Endocrine System

**Objective:** To have the knowledge and skills necessary to recognise the effects and identify the cause and origin of excessive production of the hormones of the diffuse endocrine system (neuro endocrine tumours).

## Neuro-Endocrine Tumours and their Effects

**Objective:** To have the knowledge and skills necessary to recognise the effects and identify the cause and origin of excessive production of the hormones of the diffuse endocrine system (neuro endocrine tumours).

### KNOWLEDGE

#### Neuro-endocrine tumours and their effects

- Concept of a diffuse neuro-endocrine system, pancreatic, gastro-intestinal and neural location of tissue, physiology of hormones.
- The clinical and biochemical effects of the tumours and the hormones they produce e.g. *gastrinomas*, *insulinomas*, *glucagonomas*, *vipomas*, *somatostatinomas*.
- Type I and Type II multiple endocrine neoplasia (M.E.N.).
- Origins, chemistry and chemical effects of carcinoid tumours and the carcinoid syndrome.
- Recognition of the distinguishing metabolic and clinical consequences of the products of individual neuro-endocrine tumours.
- Collection of appropriate material for estimation of relevant peptides (*by radio-immunoassay*).
- Use of appropriate supportive and anti-tumour drugs.
- Assist in the localisation of tumour sites, co-operative management with surgeon.
- Correctly recognises the likelihood of M.E.N., value of genetic testing and programmed long-term management.
- Sensitivity regarding the need for screening for MEN and associated inherited conditions

### SKILLS

- Identify the cause and origin of excessive production of the hormones of the diffuse endocrine system (neuro endocrine tumours).

### ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study Day

Assessment at SpR year 1 - 5

## Miscellaneous Endocrine Disorders

**Objective:** To understand and contribute to the diagnosis and appropriate management of the endocrinological aspects of systemic disease, malignancy and the aging process.

## Endocrinology and Malignancy

**Objective:** To have the knowledge and skills to assess and provide appropriate management in relation to the effects of hormones on tumour growth, the endocrine effects of malignant tumours and their treatment.

### KNOWLEDGE

#### Endocrinology and malignant disease

- Endocrine responsive tumours e.g. of breast, reproductive system, prostate, thyroid.
- The potential for production of hormones at ectopic sites by certain cancers and their metastases.
- The endocrine effects of anti-tumour drugs and irradiation.
- Recognise and advise on diagnosis and management of endocrinological problems arising in patients with and/or undergoing treatment for malignant disease.
- Effects of metastases to endocrine glands.
- To contribute to the multidisciplinary team involved in the management of patients with endocrine tumours/ endocrine responsive tumours.

### SKILLS

- Assess and manage effects of hormones on tumour growth
- Investigation and management of syndromes of hormone excess associated with malignancy

### ASSESSMENT & LEARNING METHODS

- Case based discussion

**Assessment at SpR year 1- 5**

## Hormonal Changes with Ageing and in Systemic Disease

**Objective:** To be familiar with endocrine and metabolic changes that accompany the ageing process and occur in systemic diseases and to be able to provide appropriate management.

### KNOWLEDGE

#### Hormonal changes that occur with increasing age

- Physiology, changes in growth hormone, gonadotrophins, testicular and ovarian hormones at puberty, during the menopause and with advancing age.
- Hyperglycaemia, hyperlipidaemia, osteoporosis, risk of hypothermia in older people.
- Recognise and offer intervention appropriate to the patient's need when endocrine or metabolic disorders give rise to health problems in older people.
- Appreciate that chronological age does not necessarily equate with physical/metabolic failure.

#### Endocrine disorders occurring in systemic diseases

- Know and understand the endocrine and metabolic disturbances that occur as a consequence of liver disease (*in cirrhosis, haemochromatosis*) chronic renal failure (*renin/angiotensin, calcium homeostasis, haematologic*). Androgen abuse.
- Autoimmune endocrinopathy syndromes.
- Able to recognise and assist in the management of the endocrine and metabolic consequences of systemic illness.
- Responds promptly to inter-departmental request: accepts the role of an advisor to consultant in-charge

### SKILLS

- Manage endocrine and metabolic changes that accompany the ageing process

### ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study day

Assessment at SpR year 1 - 5

## Required Experience in Diabetes Mellitus and in Endocrinology

### **Required Experience in Diabetes Mellitus and in Endocrinology**

*In addition to the competencies listed on the previous pages of this curriculum, trainees are required to demonstrate their clinical and laboratory experiences by confirming attendances at general and specialist diabetic and endocrinology clinics, appropriate responsibilities for the care of in-patients (including emergencies), and some experience of working in a recognised endocrinology laboratory. The records of attendance and details of the experience gained, countersigned as necessary by the supervising consultant, should be filed in a portfolio of achievements.*

**Objectives:** *To embed theoretical knowledge of endocrinology and diabetes and practical skills in day to day clinical practice, through contact with patients and appropriately supervised management of their illnesses in an out-patient setting, on the wards and in the endocrine laboratory.*

## Required Experience in Diabetes Mellitus

**Objective:** *Attendance at general and specialist diabetic clinics, responsibility for in-patients including diabetic emergencies, participation in multidisciplinary diabetic care.*

- 100 General adult diabetic out-patient clinics, new and review patients
- 10 Paediatric, adolescent and young adult diabetic clinics
- Provision of supervised in-patient diabetic care, including management of diabetic emergencies and in-house consultation services
- 10 Specialist diabetes/ophthalmology clinics
- 10 Specialist nephrology clinics
- 10 Multidisciplinary diabetes care, foot clinics
- 10 Joint obstetric clinics
- 10 Nurse/dietitian/patient education and day care

## Required Experience in Endocrinology

**Objective:** *Attendance at general endocrine and specialist endocrinology and metabolic clinics, appropriately supervised responsibility for in-patients including emergencies and peri-operative care, ensure participation in multidisciplinary care and experience of working in an endocrine laboratory.*

- 100 General adult endocrinology OP clinics, new and review patient
- 10 Paediatric endocrinology, including growth clinics
- 10 Joint reproductive medicine (*obstetrics and gynaecology*)/endocrinology clinics including infertility
- Optional Metabolic bone clinic
- Optional Lipid clinics
- N/A Provision of supervised in-patient care for endocrine diseases including management of emergencies and in-house consultation services
- N/A Multidisciplinary contact with specialist surgical (*thyroid, pituitary/neurosurgical, gynaecological*) paediatric, radiological and laboratory colleagues including joint working

## Minimum Requirements for Training

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
<b>Section 1 - Training Plan</b>				
<b>Personal Goals Plan</b> (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Form 052
<b>Summary of Posts Held</b>	Required	1	Year of Training	Form 062
<b>Weekly Timetable</b> (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Year of Training	Form 045
<b>On Call Rota</b>	Required	1	Year of Training	Form 064
<b>Section 2 - Training Activities</b>				
<b>Outpatient Clinics</b>				Form 001
General Endocrine (Include Thyroid & Pituitary Clinics)	Required	100	Training Programme	Form 001
Paediatric Endocrine	Required	10	Training Programme	Form 001
Reproductive Endocrine	Required	10	Training Programme	Form 001
<b>Other endocrine related</b>	Required	1	Training Programme	Form 001
General Diabetic	Required	100	Training Programme	Form 001
Diabetic Obstetric	Required	10	Training Programme	Form 001
Diabetic paediatric/adolescent	Required	10	Training Programme	Form 001
Ophthalmic	Required	10	Training Programme	Form 001
Renal	Required	10	Training Programme	Form 001
Foot	Required	10	Training Programme	Form 001
<b>Other Diabetes-related</b>				
Lipidology or Dyslipidaemia	Desirable	0		Form 001
Nurse/Dietitian/Patient education and day care	Required	10	Training Programme	Form 001
Metabolic Bone Clinic	Desirable	0		Form 001
<b>Ward Rounds/Consultations</b>				Form 002
Consultant Led	Required	40	Year of Training	Form 002
SpR Led	Required	40	Year of Training	Form 002

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Consultations	Required	40	Year of Training	Form 002
<b>Emergencies/Complicated Cases</b>	Desirable	0	Training Programme	Form 003
<b>Procedures/Practical Skills/Surgical Skills</b>				Form 004
Fine Needle Aspiration of throid nodules - Ultrasound guided (observed)	Required	1	Training Programme	Form 004
Imaging Techniques (Interpretatin) - Be familiar with	Required	1	Training Programme	Form 004
<b>Additional/Special Experience Gained</b>	Desirable	0	Training Programme	Form 005
<b>Lab Experience</b>				Form 018
Endocrine Laboratory (5 days attendance in Laboratory with full range of endocrinology testing)	Required	1	Training Programme	Form 018
<b>Relatively Unusual Cases</b>	Desirable	0	Training Programme	Form 019
<b>Chronic Cases/Long term care</b>	Desirable	0	Training Programme	Form 066
<b>Section 3 - Educational Activities</b>				
<b>Mandatory Courses</b>				Form 006
Audit	Required	1	Training Programme	Form 006
Communication	Required	1	Training Programme	Form 006
1. Ethics I Professionalism	Required	1	Training Programme	Form 006
2. Ethics II Ethics & Law	Required	1	Training Programme	Form 006
3. Ethics III Research	Required	1	Training Programme	Form 006
4. Eithics IV End of Life	Required	1	Training Programme	Form 006
Leadership skills	Required	1	Training Programme	Form 006
ACLS				Form 006
<b>Non – Mandatory Courses</b>	Desirable	0	Training Programme	Form 007
<b>Study Days (Minmum 6 attended)</b>	Required	6	Year of Training	Form 008
See below examples:				
Diabetes Mellitus	Desirable	0	Training Programme	
Complications	Desirable	0	Training Programme	
Management of Type I & Type II DM	Desirable	0	Training Programme	
Pathophysiology	Desirable	0	Training Programme	

<b>Curriculum Requirement</b>	<b>Required/Desirable</b>	<b>Minimum Requirement</b>	<b>Reporting Period</b>	<b>Form Name</b>
Diabetes in Pregnancy	Desirable	0	Training Programme	
Technology: Insulin pumps, glucose sensors	Desirable	0	Training Programme	
Non pharmacology treatment	Desirable	0	Training Programme	
Microvascular complications	Desirable	0	Training Programme	
Disorders of appetite and weight	Desirable	0	Training Programme	
Hyper and Hypoatraemia	Desirable	0	Training Programme	
Disorders of carbohydrate metabolism	Desirable	0	Training Programme	
Hypothalamic disease	Desirable	0	Training Programme	
Thyroid gland	Desirable	0	Training Programme	
Adrenal gland	Desirable	0	Training Programme	
Endocrinology of reproduction	Desirable	0	Training Programme	
Growth & Development	Desirable	0	Training Programme	
Parathyroid glands	Desirable	0	Training Programme	
Neuro-encocrine tumors	Desirable	0	Training Programme	
Hormonal changes with ageing	Desirable	0	Training Programme	
<b>In-house activities</b>				Form 011
Grand Rounds	Required	10	Year of Training	Form 011
Radiology Conference	Required	10	Year of Training	Form 011
Journal Club	Required	10	Year of Training	Form 011
MDT Meetings	Required	10	Year of Training	Form 011
Other	Required	10	Year of Training	Form 011
Imaging Techniques (Attendance at Radiology meetings)	Required	6	Year of Training	Form 011
<b>Examinations</b>	Desirable	0	Training Programme	Form 012
<b>Formal Teaching Activity</b>	Required	10	Training Programme	Form 013
<b>Research</b>	Desirable	0	Training Programme	Form 014
<b>Audit activities</b>	Required	1	Year of Training	Form 015
<b>Publications</b>	Desirable	0	Training Programme	Form 016
<b>Presentations</b>	Desirable	0	Training Programme	Form 017
<b>National/International meetings</b>	Desirable	0	Training Programme	Form 010

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
<b>Additional Qualifications</b>	Desirable	0	Training Programme	Form 065
<b>Committee Attendance</b>	Desirable	0	Training Programme	Form 063
<b>Section 4 - Assessments</b>				
<b>DOPS</b>				Form 021
Fine Needle Aspiration of throid nodules	Desirable	0	Training Programme	Form 021
<b>CBD</b>	Required	1	Year of Training	Form 020
See below examples:				
Diabetic Emergencies	Desirable	0	Training Programme	
Management of diabetes	Desirable	0	Training Programme	
Dislipidaemia	Desirable	0	Training Programme	
Hyper- and Hyponatraemia	Desirable	0	Training Programme	
Macrovascular complications of DM	Desirable	0	Training Programme	
Disorders of appetite and weight	Desirable	0	Training Programme	
Carbohydrate metabolism	Desirable	0	Training Programme	
Thyroid gland	Desirable	0	Training Programme	
Adrenal gland	Desirable	0	Training Programme	
Parathyroid Glands	Desirable	0	Training Programme	
Neuro-endocrine tumors	Desirable	0	Training Programme	
Endocrinology & malignancy	Desirable	0	Training Programme	
Hormonal Changes with ageing and systemic disease	Desirable	0	Training Programme	
Spontaneous hypoglycaemia	Desirable	0	Training Programme	
<b>Mini-CEX (At least two Mini-CEX assessments)</b>	Required	2	Year of Training	Form 023