ROYAL COLLEGE OF PHYSICIANS OF IRELAND

CURRICULUM OF HIGHER SPECIALIST TRAINING IN NEPHROLOGY

This curriculum of training in Nephrology was developed in 2010 and undergoes an annual review by Dr. Catherine Wall, National Specialty Director, Dr. Ann O'Shaughnessy, Head of Education and Professional Development and by the Nephrology Specialty Training Committee. The curriculum was approved by ICHMT.

INDEX:

Introduction

Nephrology is a predominantly clinical specialty dealing with diseases of the kidneys 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 kidney disease. The physician may later wish to may develop subspecialty expertise in areas such as transplantation, obstetric medicine, vasculitis, etc so it is important that an interest in such topics can be facilitated during training.

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

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

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 emergencies are "unselected".
- "unselected take" describes the admission of acute medical patients whose problems encompass the broad generality of medicine i.e. not restricted to a single or small group of specialties. If any major component of acute medicine e.g. cerebro-vascular accidents, myocardial infarctions is excluded from the take, this experience must be gained from other posts.
- 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 Nephrology 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 Nephrology and General Internal Medicine will require at least a fifth year of training.

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

Minimum Procedures:
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 Nephrology 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 Nephrology 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 these important objectives **at an early stage** would cause concern about a SpR's suitability and ability to become independently capable as a specialist.

Flexible Training

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

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

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

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

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

Training Programme

The training programme offered will provide opportunities to fulfil all of the requirements of the curriculum of training for Nephrology programmes and will offer 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 Nephrology 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. A Specialist Registrar may **not** remain in the same unit for longer than 2 years of clinical training; or with the same trainer for more than 1 year.

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

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

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

Logbook

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

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

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

Each year trainees undergo a formal review by a panel including the Dean, 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_1**

repeat training year – **PeTRA Form C_2**

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 medical training department. Each must provide an intellectual environment and a range of clinical and practical facilities sufficient to enable the knowledge, skills, clinical judgement and attitudes essential to the practice of Nephrology 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 Nephrology should have access to an educational programme of e.g. lectures, demonstrations, literature reviews, multidisciplinary case conferences, seminars, study days etc, capable of covering the theoretical and scientific background to the specialty. Trainees should be notified in advance of dates so that they can arrange for their release. For each post, at inspection, the availability of an additional limited amount of study leave for any legitimate educational purpose has been confirmed. Applications, supported if necessary by a statement from the consultant trainer, will be processed by the relevant employer.

Teaching, Learning & Assessment Methods

Teaching, Learning & Assessment Methods

This section relates to the clinical competencies that are required for your training. During your training you will be assessed by methods such as miniCEx, DOPS, Case 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.
- Collective opinions – as used to ascertain a range of generic skills e.g. professionalism, maintaining trust.
- Result (diploma, certificate from recognised body) of completed knowledge–based test and/or practical examination.

Assessment of Competencies

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

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

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

A report from the educational supervisor will be included. This will be prepared following appraisal, based on his/her assessment of observed performances by the trainee of practical procedures and other duties. The standard of case notes, summaries, correspondence and other material, of presentational ability can also be the subjects of such report, as could the trainee's enthusiasm, judgement, team working or professionalism.

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

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

Learning Methods

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

Experiential:

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

Self-directed learning:

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

Group learning:

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

Performance based:

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

Learning through teaching and research:

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

External Courses:

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

Reflection:

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

Assessment Methods

Mini-CEx

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

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

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

Competencies assessed:

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

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

DOPS

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

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

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

Competencies assessed:

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

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

Case Based Discussion (CBD)

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

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

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

Competencies assessed:

- **Problem Definition:**
    - All relevant facts established, from current/previous history, investigations, interventions; reports, correspondence reviewed.
- **Record Keeping**:

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

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

Mandatory Training Courses

(Note: this list only includes 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
Audit:
Mandatory 1/2 day on audit to be completed in Year 1.
Audit reports are submitted on a yearly basis

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

Leadership Skills:
Mandatory 3 day course to be taken in year 3 - 5

ACLS:
ACLS compliant in appropriate specialties

Specialty Study Days

The 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 calls for help
- Ensures satisfactory handover to ensure continuity of caret
- 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 organsation 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
- Applys 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
- Prolongataion
- 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 can 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 Nephrology

Manifestations of Renal Disease

Objective: *To be able to recognise manifestations of underlying renal disease, assess and investigate them appropriately and to undertake and advise on management of patients*

Proteinuria, Haematuria

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with asymptomatic proteinuria and macroscopic/microscopic haematuria.*

KNOWLEDGE

Asymptomatic proteinuria

- Define the pathophysiology of proteinuria and correlate with the causes of asymptomatic proteinuria.
- Differentiate between physiological and pathological causes of asymptomatic proteinuria.
- Describe the methods of investigation of the patient with asymptomatic proteinuria.

Macroscopic/microscopic haematuria

- Define the pathophysiology of haematuria both macroscopic and microscopic.
- Describe the methods of investigation of the patient with microscopic and microscopic haematuria.
  Initiate appropriate investigations to differentiate between pathological and physiological causes of haematuria.

SKILLS

- Explain the indications for renal biopsy.
- Demonstrate the likely outcome of the condition, its lo*n*g term prognosis and requirement for long term review.
- Demonstrate the cause of microscopic haematuria by laboratory means including use of phase contrast microscopy where available.
- Appropriate use of radiologic imaging
- Appropriate referral for urological assessment
- Appreciate the role of primary care in the initial screening for proteinuria and their involvement in future management.

ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study Day

Assessment at SpR year 1 onwards

Disordered Fluid, Electrolyte and Acid Base Regulation

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with disordered fluid, electrolyte and acid base regulation*

KNOWLEDGE:

Disorders of fluids and electrolytes

- Define the pathophysiology of sodium, potassium and hydrogen ion imbalance, calcium, phosphate and bone mineral metabolism; and the pathophysiology of water imbalance.
- Describe the methods used to investigate fluid, electrolyte and acid base regulation; and bone mineral metabolism in renal patients.
- Describe the management of fluid, electrolyte and acid base disorders and abnormalities of bone mineral metabolism.

SKILLS

- Assessment of fluid balance.
- Interpret relevant biochemical investigations
- Interpret radiological and histological investigation of bone mineral disorders.
- Manage these disorders effectively.
- Explain the implications of familial disorders.
- Recognise the role of nurses and dieticians in long-term management.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 1 onwards

Disorders of the Urinary Tract

Objective: *To recognise stasis and obstructions in the urinary tract including renal stone disease, and to be competent to recommend treatment*

Urinary Tract Infection

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with urinary tract infection.*

KNOWLEDGE

Infection

- The acute presentation and long-term consequences of urinary tract infection.
- Bacteriological causes of urinary tract infection.
- Knowledge of underlying anatomical causes of urinary tract infection and the familial nature of such abnormalities.
- Understand the management of recurrent urinary tract infection including methods of investigation.
- Mechanisms of action of antimicrobials and their limitations and adverse effects.
- The type of reconstructive procedures undertaken in children and the relevance to future management including transplantation.

SKILLS

- Appreciate the significance of past history of urinary tract infection and its relevance to the development of chronic kidney disease.
- Appropriate prescribing of antibiotics
- Discuss familial disorders.
- Recognise the role of microbiologists, urologists and specialist nurses.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 1 onwards

Urinary Tract Obstruction and Neurogenic Bladder

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with urinary tract obstruction.*
To provide the trainee with the necessary skill to work closely with urologists, radiologists and paediatricians in the medical management of urinary tract obstruction and neurogenic bladder.

KNOWLEDGE

Obstruction and dysfunction in the urinary tract and bladder

- Describe the anatomy of the urinary tract and the sites and causes of urinary obstruction.
- Describe the acute presentation and long-term consequences of urinary tract obstruction, its investigation and management.
- Define the fluid and electrolyte disturbances occurring after the relief of obstruction and their management.
- Describe the type of reconstructive procedures undertaken in children and adults and the relevance to future management including transplantation.

SKILLS

- Explain the measures to be taken in patients with urinary tract obstruction and bladder dysfunction (*including neurogenic bladder*) to avoid infection and prevent progressive kidney damage.
- Recognise the need for long-term review.
- Recognise the role of urologists and specialist nurses

ASSESSMENT & LEARNING MEHODS

- Case Based discussion

Assessment at:

- Year 1: Screen for recognised obstruction
- Year 2: Describe reconstructive procedures

Renal Stone Disease

Objective: *To provide the trainee with the skills to assess and investigate the patient with renal stone disease (with cross reference to urinary tract infection).*

KNOWLEDGE

- Define the causes of renal stones and the circumstances under which they may be manifest with particular reference to their effect on renal function.
- Describe the biochemical investigation and imaging techniques available.
- Define the underlying tubular abnormalities and their genetic basis which predispose to renal stone disease.
- Describe the indications for treatment to prevent the development of renal stones.

SKILLS

- Initiate appropriate investigation (*biochemical and radiological*) and treatment of the patient with a renal stone(s).
- Encourage the use of simple methods to reduce the risk of stone development.
- Recognise the limitations of medical treatment to prevent stones.
- Explain the significance of family history of stone formation.
- Timely involvement of urologists and radiologist when indicated.
- Recognise the role of the radiologist, biochemist and urologist.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 2

Adult Polysystic Kidney Disease

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with adult polycystic disease and to provide the trainee with the skills and knowledge to assess family members of patients with adult polycystic disease.*

KNOWLEDGE

- Define the pathophysiology of adult polycystic kidney disease including its extra-renal manifestations.
- Describe the mode of inheritance and genetic defects and methods of screening.
- Describe the long-term management including preservation of renal function and use of renal replacement therapy.

SKILLS

- Take an accurate clinical history, including family history, in the assessment of adult polycystic kidney disease.
- Interpret screening tests and appreciate their limitations.
- Plan the long-term management of a patient with polycystic kidney disease.
- Appreciate the stress and concerns of patients and relatives in the assessment of a family member with adult polycystic kidney disease and the importance of genetic counselling.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 1 onwards

Glomerular Disease

Nephrotic Syndrome

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with the nephrotic syndrome.*

KNOWLEDGE

- Define the pathophysiology of nephrotic syndrome and its causes and relationship to systemic diseases.
- Describe management of the nephrotic syndrome, including the indications for ACE inhibitors, lipid lowering agents and anticoagulants

SKILLS

- Appropriate investigation of the patient with nephrotic syndrome including renal biopsy where appropriate.
- Initiate appropriate management, including immunosuppressive agents where appropriates.
- Provide long term follow-up
- Discuss familial disorders.
- Recognise the role of nurses and dieticians in the long-term management.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 1 and all subsequent years

Chronic Glomerulonephritis

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with chronic glomerulonephritis*

KNOWLEDGE

- Describe the primary/secondary causes of chronic glomerulonephritis.
- Knowledge of the natural history and prognosis of chronic glomerulonephritis of different causes.

SKILLS

- Take an accurate clinical history in the assessment of chronic glomerulonephritis including drug history, family, social and environmental history.
- Initiate and interpret relevant investigation including renal biopsy
- Plan the long-term management of the patient with chronic glomerulonephritis

ASSESSMENT & LEARNING METHODS

- Case based Discussion

Assessment at SpR year 2 onwards

Renal Disorders associated with other Medical Conditions

Objective: *To understand the pathophysiology of renal diseases found in association with other medical conditions: to be competent to carry out specialist assessment and to undertake and/or advise on management which is appropriate for each patient's conditions.*

Renal Disorders in Pregnancy

Objective: *To provide the trainee with the skills and knowledge to be able to carry our specialist assessment and treatment of:*

patients with renal disorders who become pregnant.
patients with renal transplants who become pregnant.
patients who develop renal disorders during pregnancy.

KNOWLEDGE

Pregnancy and the kidney

- Knowledge of how pregnancy affects renal function in normal individuals and in those with pre-existing renal disease including those on renal replacement therapy.
- Knowledge of adverse effects of drug treatment on both patient and fetus.
- Knowledge of heritable renal disorders.

SKILLS

- Management of acute kidney injury in pregnancy and the puerperium.
- Management of hypertension in pregnancy
    - preexisting HTN
    - pregnancy induced HTN
    - pre eclampsia
    - Safe prescribing of anti- hypertensive drugs in pregnancy
- Appropriate involvement of multidisciplinary team including obstetricians and midwives
- Recognise the need for genetic counselling in inherited kidney disorders.

ASSESSMENT & LEARNNG METHODS

- Case Based Discussion

Assessment at SpR year 3 - 4

Diabetic Nephropathy

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with diabetic nephropathy and to provide the trainee with skills and knowledge to prevent the development of diabetic nephropathy and delay progressive renal impairment.*

KNOWLEDGE

Diabetes

- Knowledge of the importance of the following in slowing the progression of renal diabetic disease:
    - Control of blood pressure
    - Glycaemic control
    - Use of ACE inhibitors
    - Use of ARBs

SKILLS

- Appropriate history and examination to diagnose and assess the patient who may have diabetic nephropathy.
- Diagnose non-diabetic renal disease in the diabetic patient.
- Implement and monitor treatment of hypertension, with specific reference to ACE inhibitors and ARB
- Management of other metabolic consequences of diabetes including hyperlipidaemia
- Involve patients and carers together with dieticians and specialist nurses in the long-term care.
- Discuss the role of smoking in the development of vascular disease in the diabetic patient.
- Work closely with diab***et***ologists to draw up protocols for referral and management of diabetics with renal disease.
- Demonstrate the role of pancreatic and combined renal pancreatic transplantation.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- miniCEx

Assessment at SpR year 2 onwards

Vasculitis

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with vasculitis.*

KNOWLEDGE

- Knowledge of the pathophysiology of vasculitis including renal limited and systemic vasculitis
- Knowledge of the adverse effects of immunosuppressive therapy
- Knowledge of the natural history including the potential for relapse.

SKILLS

- Take a relevant history and perform an appropriate examination both to diagnose and categorise the patient.
- Initiate the appropriate investigation, including renal biopsy and treatment.
- Describe the clinical and laboratory methods to investigate and monitor the patient.
- Initiate appropriate treatment including immunosuppression and plasmapheresis
- Appropriate long term follow-up including:
    - Monitoring for adverse effects of long term immunosuppressive therapy
- Appropriate involvement of other services including rheumatology, dermatology and immunology.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 2 - 3

Interstitial Nephritis

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with interstitial nephritis and tubulo-interstitial disease.*

KNOWLEDGE

- Knowledge of the pathophysiology of interstitial nephritis and tubulointerstitial disease, its causes and relations to other systemic conditions.
- Knowledge of the treatment of interstitial nephritis including use of corticosteroids.

SKILLS

- Take an accurate history relevant to interstitial nephritis focusing on drug, social, environmental and family history
- Initiate appropriate investigations, including renal biopsy.
- Initiate appropriate management
- Provide long term follow-up

ASSESSMENT & LEARNING METHODS

- Case based discussion

Assessment at SpR year 2- 3

Systemic Lupus Erythematosus

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with systemic lupus erythematosus.*

KNOWLEDGE

- Knowledge of the pathology and underlying immunological mechanisms of SLE
- Knowledge of the histological classification of renal SLE and its clinical consequences.
- Knowledge of the adverse effects of immunosuppressive therapy including the impact on reproductive potential
- Knowledge of natural history including relapse during pregnancy
- Knowledge of the different treatment options for SLE.
- Knowledge of the indications for immunosuppressive therapy in SLE including plasmapheresis

SKILLS

- Take a relevant history and perform an appropriate examination to diagnose and assess the patient who may have systemic lupus erythematosus.
- Initiate and interpret appropriate investigations
    - renal histological findings
    - immunological markers
- Long term management of SLE including adverse effects of prolonged immune suppression
- Multidisciplinary management including rheumatology, dermatology and immunology
- Discuss treatment options and outcomes in the context of clinical studies.

ASSESSMENT & LEARNING METHODS

- Case based discussion

Assessment at SpR year 2- 3

Vascular Disease

Hypertension

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with hypertension with particular respect to renal disease*

KNOWLEDGE

Essential and secondary hypertension

- Define what is understood by hypertension.
- Describe the possible mechanisms underlying primary (*essential*) hypertension.
- Describe causes of secondary hypertension, the methods of investigation and treatment and their limitations.
- Knowledge of the guidelines for the treatment of hypertension and understand their particular relevance to renal disease and diabetes mellitus with particular emphasis on the treatment of hypertension in patients with renal disease and diabetes mellitus.

SKILLS

- Describe the mechanisms of action and potential side effects of anti-hypertensive agents with particular reference to renal disease.
- Assess the likelihood of a secondary cause of hypertension and manage the investigation of such a patient.
- Demonstrate which patient, with secondary hypertension, is suitable for definitive treatment and to recognise its limitations.
- Manage anti-hypertensive drug therapy.
- Recognise the role of primary care in the management of hypertension.

ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study Day

Assessment Year 1 onwards

Renovascular Disease

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with hypertension and /or renal impairment secondary to renovascular disease.*

KNOWLEDGE

- Knowledge of the pathophysiology of renovascular disease
- Knowledge of the methods to investigate renovascular disease.
- Knowledge of the indications for and methods of intervention.
- Knowledge of the general management of the vascular problems of patients with atherosclerotic renovascular disease.
- Knowledge of the likely outcome of the condition and its long-term prognosis.

SKILLS

- Initiate appropriate diagnosis, investigation and management of the patient who may have renovascular disease
- Initiate appropriate management either medical or interventional based on clinical assessment and investigations
- Discuss relevant treatment options and their outcomes in the context of clinical studies.
- Appropriate referral and use of interventional radiology

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 2 - 3

Uncommon Renal Conditions

Objective: *To have knowledge of diseases which can cause damage to the kidneys or impair their function and be able to carry out the necessary specialist assessment and give advice on management of less common renal disorders including multi-system diseases*

Amyloidosis, Scleroderma, Cryoglobulinaemia

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with less common renal disease.*
To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with multi-system disease which effects the kidney.

KNOWLEDGE

Less common diseases affecting the kidney

- Knowledge of the pathogenesis of renal disease in amyloidosis, scleroderma, mixed essential cryoglobulinaemia, fabry's disease (*as examples*).

SKILLS

- Take a relevant history and perform an appropriate examination to diagnose and assess the patient who may have multi-system disease affecting the kidney.
- Initiate and interpret the relevant investigations of such a patient.
- Work closely with other specialists involved in the care of such patients.
- Involvement of the multidisciplinary team in the care of such patients

ASSESSMENT & LEARNING METHODS

- Case based discussion

Assessment at SpR year 3- 4

Hereditary Nephritis

Objective: *To provide the trainee with skills and knowledge to be able to carry out specialist assessment and treatment of patients with hereditary nephritis.*

KNOWLEDGE

- Knowledge of the pathological features of hereditary nephritis and its clinical manifestations.
- Knowledge of the spectrum of disease including thin basement membrane disease and Alport's syndrome.
- Knowledge of the molecular and genetic abnormalities in Alport's syndrome.
- Knowledge of clinical manifestations of Alport's syndrome
- Knowledge of the various modes of inheritance of hereditary nephritis.
- Knowledge of genetic screening techniques

SKILLS

- Initiate and interpret appropriate investigations including renal biopsy.
- Manage progression of renal disease in Alport's syndrome.
- Appropriate involvement of multidisciplinary team including clinical genetics and genetic counsellor.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 3 - 4

Acute Kidney Injury (AKI)

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with acute kidney injury.*

KNOWLEDGE

- Describe the possible causes of acute kidney injury
- Describe relevant investigations.
- Describe treatment of fluid and biochemical abnormalities associated with acute kidney injury
- Describe acute kidney injury scoring systems (i.e. RIFLE)

SKILLS

- Take an accurate history relevant to kidney injury focusing on drug, social and environmental factors.
- Perform a reliable and accurate clinical examination of the patient.
- Initiate and interpret appropriate investigations
- Where appropriate initiate renal replacement therapy
- Recognise the role of renal unit staff, ward and critical care nurses.
- Recognise the role of microbiologist/ radiologist/ urologist/ surgeon/ histopathologist/ clinical pharmacist.

ASSESSMENT & LEARNING METHODS

- Case Based discussion

Assessment at SpR year 1 onwards

Chronic Kidney Disease (CKD)

Objective: *To provide the trainee with the skills and knowledge to be able to carry out specialist assessment and treatment of patients with chronic kidney disease.*

KNOWLEDGE

- Prevalence and aetiology of CKD
- Describe investigations to determine cause of CKD
- Describe methods to assess degree of renal impairment
- Knowledge of management of patient according to stage of CKD
- Knowledge of the natural history and prognosis of CKD

SKILLS

- Initiate and interpret appropriate investigations
- Management of CKD including:
    - Identification and treatment of reversible causes
    - Initiate treatment to slow /prevent progression
- Manage secondary complications of CKD
    - Timely preparation for renal replacement therapy (RRT) including transplant
- Engage with multidisciplinary professional team.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 1 onwards

Complications of Chronic Kidney Disease

Objective: *To recognise the systemic effects of chronic kidney disease, and to have the skills and knowledge to be able to supervise and manage these effects in patients.*

Anaemia

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients with chronic kidney disease who develop anaemia.*

KNOWLEDGE

Renal anaemia

- Knowledge of the pathophysiology of renal anaemia and the haematological and biochemical methods to diagnose, assess and monitor treatment of renal anaemia.
- Knowledge of the indications for and the use of erthropoiesis stimulating agents (ESAs) and their complications.
- Knowledge of indications for and use of oral and parenteral iron therapy and its complications.

SKILLS

- Initiate and interpret haematolgy and biochemical tests to diagnose, assess and monitor treatment in renal anaemia
- Prescribe and monitor iron replacement therapy.
- Audit the use of ESAs and iron therapy with reference to nationally recognised standards.
- Ensure all CKD patients who will benefit from ESAs receive therapy.
- Appreciate role of clinical nurse specialist in the initial counselling of patients, initiation and the long-term management of renal anaemia.
- Involve management and purchasers in the development of protocols for the use of ESAs

ASSESSMENT & LEARNING METHODS

- Study Day

Assessment at SpR year 1

Bone Disease

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients with chronic kidney disease at risk of developing mineral bone disorders*

KNOWLEDGE

- Knowledge of the pathophysiology of chronic kidney disease – mineral bone disorder (CKD-MBD) including hyperparathyroid bone disease and osteomalacia
- Indications for prescribing the following including monitoring response to treatment and adverse effect:
    - phosphate binders
    - vitamin D preparations
    - calcimimetics
- Knowledge of parathyroidectomy
    - Surgical techniques - total *vs.* sub total
    - Management of patient following surgery

SKILLS

- Diagnose and manage CKD-MBD in the following settings:
    - Patients in CKD Stages III and IV
    - Stage V CKD including patients on peritoneal dialysis and haemodialysis
    - Renal transplant patients
- Initiate and interpret biochemical tests, imaging techniques and histological methods in the diagnosis and management of CKD-MBD
- Monitor response to treatment
- Multidisciplinary team management of CKD-MBD to include dieticians, specialist nurses and surgeons.

ASSESSMENT & LEARNING METHODS

- Case based discussion
- Study day

Assessment at SpR year 2 onwards

Nutrition

Objective: *To provide the trainee with the skills and knowledge to be able to identify the nutritional needs of renal patients.*

KNOWLEDGE

- Knowledge of the causes of malnutrition in patients with acute and chronic kidney disease
- Knowledge of the relationship between nutritional needs and adequacy of renal replacement therapy.
- Knowledge of the rationale for the use of protein restriction in the conservative management of chronic kidney disease

SKILLS

- Investigations, treatment and management of hyperlipidaemias.
- Clinical assessment of nutritional status
- Appropriate involvement of dieticians.
- Provide appropriate dietary advice to patients
- Nutritional support including enteral and parenteral regimens
- Appropriate role of nurses and other health care professional in the management of nutritional needs.

ASSESSMENT & LEARNING METHODS

- Study Day

Assessment at SpR year 1

Infection in Renal Patients

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients with renal disease who develop infection.*
To provide the trainee with skills and knowledge to manage the particular problems of infection in immunocompromised patients.
To provide the skills and knowledge necessary to prevent and manage viral infection in patients on renal replacement therapy.

KNOWLEDGE

- See individual sections on peritoneal dialysis/ haemodialysis/ transplantation
- Knowledge of strategies and guidelines to prevent blood borne viral infections in patients on renal replacement therapy.
- Knowledge of the mode of action, potential interaction and adverse reaction of antimicrobial agents in patients with renal disease.

SKILLS

- Manage preventative measures to minimise risk of blood borne viral infection.
- Counsel patients about blood borne infection including HIV infection and the screening for blood borne viruses with relatives and carers where appropriate.
- Diagnose, investigate and treat infection in renal patients including immunocompromised patients.
- Develop protocols for the diagnosis, investigation and management of infection in renal patient.
- Multidisciplinary team including nurse specialist, clinical microbiologist and clinical pharmacists

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment from SpR year 1 onwards

Cardiovascular Disease in Renal Patients

Objective: *To provide the trainee with skills and knowledge to be able to carry out assessment and treatment of patients with cardiovascular disease.*

KNOWLEDGE

- Knowledge of the impact of cardiovascular disease on morbidity and mortality of patients with kidney disease including those on renal replacement therapy.
- Knowledge of cardiovascular risk factors and means to modify them.

SKILLS

- Take a relevant history and perform an appropriate examination to diagnose and assess the patient who may have cardiovascular disease.
- Management of acute coronary syndromes and associated problems in the renal patient.
- Assessment of the risk factors for cardiovascular disease.
- Appropriate referral for a cardiology opinion or specialist investigations.
- To work closely with other health care professionals including cardiologists to develop protocols for care.
- Educate patients and carers in management of cardiac risk factors.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- Study Day

Assessment at SpR year 1 onwards

Hyperlipidaemia

Objective: *To provide the trainee with skills and knowledge to be able to carry out assessment and treatment of patients with hyperlipidaemia with particular respect to kidney disease.*

KNOWLEDGE

- Knowledge of hyperlipidaemia and dyslipidaemia including their relevance as risk factors in patients with kidney disease.
- Knowledge of the dietary and drug treatment of hyperlipidaemia including statin use.
- Knowledge of the guidelines for the treatment of hyperlipidaemia in the settting of cardiovascular disease and hypertension

SKILLS

- Appropriate history, examination and investigations to diagnose and assess the patient with hyperlipidaemia.
- Appropriate initiation and monitoring of drug therapy for hyperlipidaemia
- Appropriate involvement of dieticians in the management of hyperlipidaemia

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- Study Day: Cardiovascular Health

Assessment at SpR year 2 onwards

Drug Prescribing in Kidney Disease

Objective: *To provide the trainee with the knowledge to prescribe for patients with acute and chronic kidney impairment including those on renal replacement therapy.*
To provide the trainee with the knowledge to prescribe for patients with renal transplants.

KNOWLEDGE

- Knowledge of pharmacokinetics and the handling of drugs in the presence of kidney disease.
- Knowledge of the effect of haemodialysis, haemofiltration, haemodiafilitration and peritoneal dialysis upon drug prescribing.
- Knowledge of the principles of drug interactions with particular reference to immunosuppressive drugs.
- Knowledge of how drugs may affect renal function.

SKILLS

- Safe and efficient prescribing for patients with kidney disease.
- Education of patients with kidney disease on the importance of compliance and reporting of problems.
- Educate other health care professionals of the importance of safe prescribing in patients with kidney disease
- Promote safe prescribing in conjunction with clinical pharmacist

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- miniCEx – Review of inpatient/outpatient prescribing

Assessment from SpR year 1 onwards

Renal Replacement Therapy Including End of Life Care

Acute Renal Replacement Therapy

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients requiring acute renal replacement therapy.*

KNOWLEDGE

- Knowledge of the principles of haemodialysis, haemofiltration and haemodiafiltration and indications for their use.
- Knowledge of the methods of creating vascular access for acute renal replacement therapy.

SKILLS

- Assess the suitability of a patient for available modalities of renal replacement therapy
- Obtain suitable vascular access
- Initiate and adjust the prescription according to the chosen dialysis and modality
- Modify drug prescribing according to the dialysis modality
- Manage the patient with multiorgan failure or systemic disease requiring acute renal replacement therapy
- Appropriate involvement of anaesthetists and intensivists in the management of patients with multi system disease or multi-organ failure requiring acute renal replacement therapy.

ASSESSMENT & LEARNING METHOD

- Case Based Discussion
- Study Day
- miniCEX

Assessment at SpR year 1 onwards

Plasmapheresis

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients requiring plasmapheresis.*

KNOWLEDGE

- Knowledge of the principles of plasmapheresis, including indications and complications.
- Knowledge of the use of plasmapheresis for non renal conditions

SKILLS

- Assess and confirm the need for plasmapheresis
- Initiate plasmapheresis including appropriate vascular access.
- Initiate appropriate plasmapheresis exchange in conjunction with plasma exchange nurse, haemodialysis nurse, blood transfusion board.
- Monitor response to treatment to include clinical and immunologic markers of response

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 2 – 3 onwards

Peritoneal Dialysis

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients on chronic peritoneal dialysis, and to recognise and deal with any complications which occur.*

KNOWLEDGE

- Knowledge of the principles of peritoneal dialysis including chronic ambulatory peritoneal dialysis and automated peritoneal dialysis.
- Knowledge of the different methods of insertion of peritoneal dialysis catheters including advantages and disadvantages of same.
- Knowledge of the methods to assess adequacy of peritoneal dialysis.

SKILLS

- Educate the patient regarding treatment options for end stage kidney disease to enable them to make an informed choice
- Arrange timely peritoneal dialysis catheter insertion
- Initiate and adjust the peritoneal dialysis prescription in conjunction with specialist nurse
- Manage the nutrition of peritoneal dialysis in conjunction with renal dietician
- Discuss implications of failure of peritoneal dialysis and the potential need to transfer to haemodialysis
- Discuss, where appropriate, the withdrawal of dialysis with patients, carers and other health care professionals
- Appropriate involvement of specialist nurses in the initial counseling of patients and the long-term management of peritoneal dialysis.
- Appropriate management of resources to ensure cost effective peritoneal dialysis treatment

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 2 -3 onwards

Peritoneal Dialysis Complications

Objective: *To provide the trainee with skills and knowledge to be able to identify and manage the complications of chronic peritoneal dialysis.*

KNOWLEDGE

- Knowledge of the diagnosis and management of peritoneal dialysis peritonitis including non-bacterial infections.
- Knowledge of the diagnosis and management of catheter and exit site associated infection.
- Knowledge of the diagnosis of mechanical problems associated with peritoneal dialysis (*including herniae, leaks, catheter malfunction*).
- Knowledge of the methods to assess failure to ultrafiltrate and adequacy of dialysis.
- Knowledge of local protocols for management of peritonitis and exit site infections

SKILLS

- Appropriate diagnosis and management of catheter associated infection
- Appropriate management of mechanical problems associated with peritoneal dialysis
- Appropriate management of peritoneal dialysis failure
- Adjustment of peritoneal dialysis prescription following complications
- Educate patient about potential complications and the need to change dialysis modality
- Involve the multidisciplinary team in the management of complications of peritoneal dialysis

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

Assessment at SpR year 2 -3 onwards

Haemodialysis

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients on chronic haemodialysis to undertake the planning, prescription and measurement of its adequacy, and to manage the complications.*

KNOWLEDGE

General principles

- Knowledge of the principles of haemodialysis and compare and contrast haemodialysis with other treatment modalities.
- Knowledge of methods of creating vascular access for haemodialysis.
- Knowledge of the methods to assess adequacy of haemodialysis.

Planning and management, monitoring performance

- Knowledge of the means to deliver purified water, the necessary standards and methods of assessing these.
- Knowledge of different dialysis membranes and dialysate fluids.
- Knowledge of the theory of sodium profiling and ultrafiltration.
- Knowledge of the methods to assess adequacy of haemodialysis.

Complications

- Knowledge of the complications of arteriovenous fistulae and artificial grafts including thrombosis, haemorrhage, infection, stenosis and poor flow.
- Knowledge of the methods of dealing with dialysis line sepsis, poor flow and line blockage.
- Knowledge of the management of hard water syndrome, air embolism and ethylene oxide reactions.
- Knowledge of the causes and management of intradialytic hypotension.
- Knowledge of the pathophysiology and management of dialysis associated amyloid.
- Develop a framework to discuss problems with haemodialysis patients and their carers including the withdrawal of dialysis

SKILLS

General Principles:

- Assess the suitability of a patient for haemodialysis and to plan (*when possible*) the initiation of haemodialysis.
- Prepare the patient both physically and psychologically for haemodialysis.
- Establish appropriate vascular access in a timely fashion
- Adjust the prescription of haemodialysis and monitor response to change.
- Appropriate involvement of nurses and the multidisciplinary team in the management of haemodialysis.

Planning and management, monitoring performance

- Adjust the prescription of haemodialysis and monitor response to change.
- Advise on ultrafiltration, sodium profiling and use of different dialysate solutions.
- Monitor vascular access.
- Work closely with nurses and other health care professionals in the day-to-day management of haemodialysis patients

Complications

- Identify and manage the complications of vascular access with appropriate involvement of surgeons and radiologists.
- Manage dialysis related sepsis and develop protocols with microbiologists.
- Assist in the development of protocols to deal with acute dialysis emergencies.
- Liaise with nurses and other health care professionals in the day-to-day management of haemodialysis and its complications.
- Appropriate multidisciplinary team management of patients failing haemodialysis including withdrawal of dialysis

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- miniCEX
- Study Day
- Audit

Assessment at:

- Year 1 onwards: General principles
- Year 2 onwards: Management and complications

Renal Transplantation

Objective: *To provide the trainee with skills and knowledge to be able to supervise and manage patients who are suitable for renal transplantation, and in the early and later post-transplantation period.*

KNOWLEDGE

Pre-transplant

- Knowledge of the principles of renal transplantation, its medical and surgical, social and ethical contraindications.
- Knowledge of the recommendations for live unrelated renal transplantation.
- Knowledge of the advantages and disadvantages of pre-emptative transplantation.
- Knowledge of the theoretical and practical application of blood grouping, HLA matching and donor-recipient cross matching.
- Knowledge of the mode of action of immunosuppressive agents and their adverse effects.
- Knowledge of the ethical and legal framework for renal transplantation

Acute stage following transplantation

- Knowledge of the medical and surgical problems which occur in the first three months following renal transplantation.
- Knowledge of the indications for ultrasound scanning, isotope scanning and radiological investigations in the acute stage following renal transplantation.
- Knowledge of methods used to diagnose acute rejection including renal biopsy
- Knowledge of the mode of action of immunosuppressive agents and their adverse effects
- Knowledge of methods used to treat and overcome acute rejection.
- Knowledge of strategies in the acute stage of renal transplantation which will influence long-term graft function.

The later post-transplant period (3 months or more post transplant)

- Describe the medical and surgical problems which may occur.
- Define the mode of action of immunosuppressive agents and their adverse effects.
- Describe strategies in the chronic phase of renal transplantation which will influence long-term graft function.
- Describe the strategies

SKILLS

Pre-transplant

- Assess suitability of a patient for a renal transplant.
- Discuss the advantages and disadvantages of renal transplantation.
- Discuss the issues of live related, live unrelated and preemptive transplantation
- Counsel patients and relatives in all aspects of renal transplantation.
- Plan and initiate pre transplant assessment.
- Appropriate involvement of the multidisciplinary team in the education of patients regarding renal transplantation

Acute stage following transplantation

- Assess renal transplant function.
- Diagnose and manage acute rejection
- Diagnose and manage surgical complications and medical complications of renal transplantation.
- Plan, initiate and modify immunosuppressive therapy.
- On-going education of patients regarding all aspects of renal transplant
- Appropriate involvement of the multidisciplinary team

The later post-transplant period (3 months or more post transplant)

- Assess renal transplant function including deteriorating renal function and adjust immunosuppressive therapy accordingly.
- Interpret investigations to identify non-immunological causes of deteriorating renal function.
- Manage cardiovascular disease in renal transplant patients.
- Encourage patients, relatives and carers to participate the in joint care.
- Recognoise and appreciate involvement of clinical nurse specialist in the care of patients with a renal transplant.
- To appreciate the multidisciplinary nature of management of renal transplantation.
- Counsel patients and relatives in all aspects of renal transplantation and in particular those with failing grafts and discuss future management including renal replacement therapy.
- Manage the medical complications of a failing renal transplant.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- miniCEx
- Study Day

Assessment at SpR year 2 – 3 onwards

End of Life Care

Objective: *To identify patients with chronic kidney disease who require end of life palliative care and to supervise and manage their care as part of a multi-disciplinary team.*

KNOWLEDGE

- Knowledge of the symptoms of chronic kidney disease
- Knowledge of the principles of pain relief and use of analgesia in end stage kidney disease
- Knowledge of factors affecting survival in patients with end stage kidney disease
- Knowledge of the principles of bereavement management
- Knowledge of ethical and legal issues relating to end of life care
- Knowledge of integrated care pathways for dying patients
- Knowledge of the complex needs of patients and families when facing death

SKILLS

- Assess patients who require end of life management and palliative care
- Provide appropriate counselling to patients and carers concerning conservative (Non-dialysis, non-transplant) management of end stage kidney disease
- Manage the symptoms of end stage kidney disease
- Discuss the withdrawal of dialysis with patients, carers and other health care professionals
- Appropriate and timely referral to palliative care services

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- Mandatory course in End of Life Care

Assessment at SpR year 2 – 3 onwards

Procedures

Renal Biopsy

Objective: *To ensure that the trainee is familiar with the skills necessary to perform native and transplant renal biopsy.*

KNOWLEDGE

- Knowledge of the anatomy of native and transplant kidneys.
- Knowledge of the indications for renal biopsy of native and transplant kidneys.
- Knowledge of the complications and methods to minimize these.

SKILLS

- Appropriate selection of patients for biopsy
- Discuss the indications, benefits and potential adverse effects of the procedure with patients, relatives and carers in a manner that will allow informed consent.
- Perform ultrasound guided renal biopsies.
- Manage complications of renal biopsy
- Interpret renal biopsy
- Acknowledge role of renal histopathologist

ASSESSMENT & LEARNING METHODS

- DOPS

Assessment at SpR year 1 onwards

Ultrasound Scanning (Native and Transplant Kidneys)

Objective: *The trainee will be proficient at carrying out and interpreting ultrasound scanning of renal and transplant kidneys to facilitate renal biopsy and identify anatomy and patency of central veins to facilitate central venous catheter placement.*

KNOWLEDGE

Use of ultrasound in renal medicine

- Knowledge of the anatomy of both native and transplant kidneys.
- Knowledge of the anatomy of the central veins.

SKILLS

- Use ultrasound to localise native and transplant kidneys for the purpose of renal biopsy.
- Localise central veins and assess their suitability for percutaneous venous access.

ASSESSMENT & LEARNING METHODS

- DOPS
- Study Day
- Recommended: Ultrasound course to include the following:
    - neck and groin veins
    - native kidney
    - transplant kidney

Assessment at SpR year 1 onwards

Insertion of Temporary Haemodialysis Catheters

Objective: *The trainee will be proficient at carrying out the insertion of temporary haemodialysis catheters.*

KNOWLEDGE

- Knowledge of the anatomy of the central venous system in the upper thorax and neck and of the femoral veins.
- Knowledge of the indications for insertion of temporary haemodialysis catheters, the complications and means to minimize these.
- Knowledge of the treatment of catheter sepsis and blocked catheters.

SKILLS

- Discuss the indications, benefits and adverse effects of the procedure with patients, relatives and carers in a manner that will allow informed consent
- Use ultrasound guidance (*where appropriate*) for localisation and cannulation of jugular and femoral veins.
- Perform insertion of temporary haemodialysis catheters into both internal jugular and femoral veins using the Seldinger technique
- Manage complications of catheter insertion
- Involve specialist nurse in the care of the catheter following insertion

ASSESSMENT & LEARNING METHODS

- DOPS

Assessment at SpR year 1 onwards

Insertion of Peritoneal Dialysis Catheters (Optional)

Objective: *The trainee will understand the different methods of inserting peritoneal dialysis catheters.*
The trainee will be proficient at carrying out the insertion of peritoneal dialysis catheters by the percutaneous method.

KNOWLEDGE

This technique is not an essential requirement.

- Knowledge of the indications for insertion of peritoneal dialysis catheters.
- Knowledge of the different medical and surgical techniques for insertion of peritoneal dialysis catheters including their complications and means to minimize these.

SKILLS

- Assess a patient's suitability for insertion of a peritoneal dialysis catheter by different techniques.
- Describe the anatomy of the anterior abdominal wall, abdominal cavity and peritoneum, the different types of catheters and their use.
- Discuss the indications, benefits and adverse events of the pro***c***edure to patients, relatives and carers in a manner that will allow informed consent.
- Perform insertion of peritoneal dialysis catheters using the percutaneous approach.
- Manage acute complications following catheter insertion – catheter malposition, catheter related sepsis and occluded catheter
- To appreciate the role of nurses in the management of a catheter after its insertion

ASSESSMENT & LEARNING METHODS

- DOPS

Minimum Requirements for Training

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Form 052
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Post	Form 045
On Call Rota	Required	1	Training Post	Form 064
Section 2 - Training Activities				
Outpatient Clinics				
Nephrology OPD (1 per week)	Required	40	Year of Training	Form 001
Chronic Haemodalysis (10 patients per year)	Required	10	Year of Training	Form 001
CAPD (10 Patients per year)	Required	10	Year of Training	Form 001
Chronic Transplant (10 cases)	Required	10	Training Programme	Form 001
Ward Rounds/Consultations				
Inpatients (min 1 week)	Required	40	Year of Training	Form 002
This should include the following category of patients:				
Obstetric nephrology	Required	1	Year of Training	Form 002
Acute kidney injury	Required	1	Year of Training	Form 002
Acute transplant care (1 year only)	Required	1	Year of Training	Form 002
Chronic haemodialysis	Required	1	Year of Training	Form 002
Chronic peritoneal dialysis	Required	1	Year of Training	Form 002
Chronic transplant	Required	1	Year of Training	Form 002
Acute haemodialysis (15 patients per year)	Required	15	Year of Training	Form 002
Continuous renal therapies (10 patients per year)	Required	10	Year of Training	Form 002
Emergencies/Complicated Cases				
(Diagnosis of nature of problem and its presentation, emergency case for investigation)	Desirable	0	Year of Training	Form 003

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Procedures/Practical Skills/Surgical Skills				
Renal biopsy	Required	1	Training Programme	Form 004
Temporary vascular access	Required	1	Training Programme	Form 004
Ultrasound scanning of Kidney (recommended)	Desirable	1	Training Programme	Form 004
Peritoneal dialysis catheter insertion (optional)	Desirable	1	Training Programme	Form 004
Additional/Special Experience Gained	Desirable	0	Training Programme	Form 005
Relatively Unusual Cases	Desirable	0	Training Programme	Form 019
Chronic Cases/Long term care	Desirable	0	Training Programme	Form 066
Section 3 - Educational Activities				
Mandatory Courses				Form 006
Audit	Required	1	Training Programme	Form 006
Communication	Required	1	Training Programme	Form 006
Research Skills	Required	1	Training Programme	Form 006
Leadership skills (≥ Year 3)	Required	1	Training Programme	Form 006
ACLS	Required	1	Training Programme	Form 006
Ethics:				Form 006
Ethics I:Professionalism	Required	1	Training Programme	Form 006
Ethics II: Ethics & Law	Required	1	Training Programme	Form 006
Ethics III: Research	Required	1	Training Programme	Form 006
Ethics IV: Issues for Occupational Medicine	Required	1	Training Programme	Form 006
Study days				
Non – Mandatory Courses	Desirable	0	Training Programme	Form 007
In-house activities				Form 011
Grand Rounds (minimum of 2 per month)	Required	20	Year of Training	Form 011
Other (minimum of 2 per month from the categories below:)	Required	20	Year of Training	Form 011
Journal Club, Radiology Conference, Pathology conference, MDT Meetings, Seminar, Lecture				
Examinations	Desirable	0	Training Programme	Form 012

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Formal Teaching Activity (min 6 formal teaching sessions)	Required	6	Year of Training	Form 013
Audit activities	Required	1	Year of Training	Form 015
Publications	Desirable	0	Year of Training	Form 016
Presentations	Required	1	Year of Training	Form 017
National/International meetings	Required	1	Year of Training	Form 010
Additional Qualifications	Desirable	0	Year of Training	Form 065
Committee Attendance	Desirable	0	Year of Training	Form 063
Section 4 - Assessments				
DOPS				
Insertion of temporary haemodialysis catheter	Required	1	Training Programme	Form 021
Other	Desirable	0	Training Programme	Form 021
CBD (2 per year)	Required	2	Year of Training	
For example: Proteinuria, haematuria, Hypertension, Urinary tract obstruction & Neurogenic bladder, Haemodialysis , Hyperlipidaemia, Nephrotic Syndrome, Disordered fluid, electrolyte and acid-base regulation, Urinary tract infection, Infection in renal patients, Adult polycystic kidney disease, Acute kidney injury, Chronic Kidney disease, Drug prescribing in renal disease, Cardiovascular disease in renal patients , Acute renal replacement therapy)				
Mini-CEX (At least two Mini-CEX assessments)	Required	2	Year of Training	Form 023