

**SPECIALTY TRAINING CURRICULUM  
FOR  
SUB-SPECIALTY OF  
STROKE MEDICINE**

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## INTRODUCTION

Stroke is the commonest cause of death and disability in the UK, and accounts for over 5% of NHS resources. Given the ageing population, stroke incidence is likely to increase. Both the NSF on Stroke (included within the Framework for Older People), NHS Quality Improvement Scotland, Stroke Services and the RCP and SIGN Stroke Guidelines have set clear and explicit standards of care for all people suffering from the effects of stroke illness. Although stroke is included in the NSF for older people, up to a quarter of strokes occur in younger patients who may have different needs. Stroke encompasses elements of neurology, cardiovascular disease, ageing and rehabilitation. All patients with stroke should receive specialist care in acute and rehabilitation stroke units or a neurovascular clinic. Consultants with specialist training in stroke are required to lead and provide specialist stroke services throughout the UK. The RCP National Sentinel Audit for Stroke demonstrated that expert stroke care is currently absent in many health districts. This programme has been developed to provide physicians training in the relevant medical specialties with additional expertise in stroke medicine. After satisfactory completion of Sub-Specialty training in Stroke Medicine, trainees will be eligible to have the Sub-Specialty of Stroke Medicine included in their entry in the GMC's Specialist Register, after the award of a CCT in their parent specialty.

The primary purpose of a stroke physician is to provide skilled acute and rehabilitation care to patients with stroke as part of a multidisciplinary stroke service. Early specialist management, comprising both general and specific therapy, can influence morbidity and mortality with better recovery and survival after care in a specialist unit compared to a general ward. Skills in stroke prevention are required. Stroke physicians may also take a key role in the development of hospital and community stroke services. The detailed role of a stroke physician will vary depending on the type of service within which they are practising. The training programme recognises this, but expects all stroke specialists to have core knowledge and skills in all areas of diagnosis, investigation and treatment relevant to the care of stroke patients. Furthermore, stroke physicians will require skills in service development, team working, teaching, critical appraisal and service evaluation. They should be familiar with stroke research methods and keep up to date with relevant research findings.

## 1. RATIONALE

### *The purpose of the curriculum*

The primary purpose of specialist training in stroke medicine is to promote the development of physicians with the knowledge, skills and attitudes to function as an expert consultant resource within specialist stroke services. The background specialty of such clinicians is considered to be less important than the possession of those competencies needed to contribute to a specialist stroke service. This programme does not seek to replace or compete with a parent specialty training programme, but will ensure that individuals seeking to specialise in stroke medicine acquire the requisite training to meet the above aims. At the completion of specialist stroke training, physicians should have acquired:

- The ability to apply knowledge and skills in diagnosis and management to ensure safe and independent expert practice as a consultant specialist in Stroke Medicine;
- The ability to establish a differential diagnosis in the context of stroke presentations to ensure safe and appropriate management of acute stroke and non-stroke illness;
- The competencies to develop management plans for people living with stroke illness including treatment, rehabilitation, health promotion, secondary prevention and long-term support;
- The attitudes and communication skills to contribute to a comprehensive multidisciplinary stroke service in hospital and/or the community and to work closely with other relevant agencies;

- The ability to work effectively within a multidisciplinary stroke service;
- The abilities to advise, develop and evaluate district stroke services in partnership with local health and social care communities.

#### *The development of the curriculum*

The curriculum was originally proposed by the British Association of Stroke Physicians after consultation with its membership, which included trainees. The final content of the curriculum and the teaching/learning methods described were then chosen by the Sub-specialist Advisory Committee (SSAC) in Stroke Medicine. Regular meetings were held by the SSAC involving all relevant stakeholders (guidance was given by the Joint Committee on Higher Medical Training and officials from PMETB). The curriculum was drawn up by the SSAC and submitted for approval by the JCHMT (now Royal College of Physicians Training Board – JRCPTB). The membership of the SSAC includes teachers, trainers and trainees in the sub-specialty and representatives from the parent specialties from which Stroke Medicine trainees can be recruited.

#### *Linkage to previous and subsequent training*

This programme is open to all trainees in the relevant specialties of medicine. The curriculum assumes that Stroke Medicine trainees have received or will receive training in some aspects of Stroke Medicine in their parent specialty in addition to the period of sub-specialty training covered by this document. Trainees may come from specialty training posts in Geriatric Medicine, Neurology, Rehabilitation Medicine, Cardiology, Clinical Pharmacology and Therapeutics, or General Internal Medicine (Acute). This curriculum should therefore be read in conjunction with that of the parent specialty. The programme is designed to ensure that practitioners possess the core competencies in the practice of Stroke Medicine necessary to function as a consultant in their parent specialty with an interest in stroke.

Training in Stroke Medicine will take place after satisfactory completion of the core specialty training curriculum (core medical training – CMT or acute care common stem (ACCS), which follows on from the Foundation curriculum, and after entry to the parent specialty training, which follows on from the core training curriculum. Stroke Medicine sub-specialty training will take place in stand alone programmes at any stage after appointment to the parent specialty training post, either on a full time basis or a part time modular basis. However, the SSAC recommends completion of at least one year of specialty training before taking up a sub-specialty training post in Stroke Medicine. The Stroke Medicine curriculum will build on competencies already gained in the parent specialty training. The training will be tailored on an individual basis to fill in gaps in the trainee's prior training. The JRCPTB generic curriculum complements both the specialty and core medical training curricula, and runs through from F2 to CCT.

## **2. MODEL OF LEARNING**

#### *Duration of training*

The duration of sub-specialty training in Stroke Medicine is determined by the time needed to complete the competencies specified in the contents section of this curriculum. However, the SSAC advise that the time needed to complete the experiential and learning aspects of the curriculum is a minimum of one year for trainees who have already experienced some training in Stroke Medicine in their parent specialty where there is already a substantial component of training relevant to stroke. Trainees from medical specialties who have not had exposure to training in Stroke Medicine and/or rehabilitation may require a minimum of 2 years in stroke sub-specialty training. The programme is not intended to be unduly prescriptive, but it must satisfy the requirement that trainees have acquired the required competencies to function as a specialist with an interest in Stroke Medicine.

### *Essential components of training*

Trainees will be required to demonstrate their acquisition of the knowledge, skills and attitudes appropriate to the practice of Stroke Medicine in the fields of acute stroke management (including thrombolysis), stroke rehabilitation and stroke prevention.

### *The training programme*

The curriculum is divided into three basic modules: acute stroke, stroke rehabilitation, and stroke prevention. Training programmes in Stroke Medicine will be required to demonstrate their ability to provide appropriate training opportunities in all three modules, but it is envisaged that the training related to each module may need to take place on different sites or within different Trusts. Approximately one third of the training programme will be devoted to each module, but the balance of individual trainees' training experience will need to be tailored to their needs by their programme director, according to their prior training in Stroke Medicine in their parent specialty. Trainees will only be eligible for certification when the training is undertaken within a programme which has received prior educational approval from PMETB after a recommendation from the SSAC. Training may be possible from within a single comprehensive stroke service, so long as all components are covered. However, most training programmes will require attachments to more than one unit or hospital to achieve the curriculum requirements.

The programme does not specify how each trainee should occupy their time, but core attachments for work-based experiential learning in specialised acute stroke units, neurovascular clinics and stroke rehabilitation units are required. Attachments to other relevant specialist services, e.g. neurosurgery, and self-directed learning should be used to fulfill some of the learning objectives, but these will need to be tailored to the trainee's requirements, their previous training and the stroke curriculum. There should be flexibility for the pursuit of specialist interests within Stroke Medicine.

### *Generic Skills, Research and Audit*

Throughout training in their parent specialty, trainees will be expected to acquire skills in communication, evidence-based practice, audit, outcome measurements, quality improvement, cost effectiveness, service organisation, management, teaching and research. These aspects of the generic medical curriculum have therefore not been re-stated within this programme. However, trainees will be expected to demonstrate the ability to apply such skills to the care of stroke patients and stroke service provision. Experience in conducting a stroke audit project is recommended. Exposure to stroke-related research is encouraged, but should not occupy more than one half day a week, unless training in Stroke Medicine is undertaken part-time (see below). Trainees who wish to acquire extensive research competencies, in addition to those specified in the generic element of the curriculum, may undertake a research project as an ideal way of obtaining those competencies, all options can be considered including taking time out of programme to complete a specified project or research degree. Time out of programme needs prospective approval from the SAC and the support of the Postgraduate Dean. Funding will need to be identified for the duration of the research period. A maximum period of 3 years out of programme is allowed.

### *Appraisals*

Appraisals are the formative discussions about a trainee's progress in the specialty that are held between each trainee and his/her educational supervisor, or programme director. An initial appraisal meeting should take place with the programme director shortly after the start of a Stroke Medicine training placement to establish learning goals and to identify which placements are necessary for the trainee to complete the curriculum requirements. Interim appraisal meetings, at a minimum of three monthly intervals, should take place with

educational supervisors to discuss progress towards the learning goals. The educational supervisor should review the overall educational needs of the trainee in light of his/her parent specialty, liaise with local stroke training units and ensure that the trainee receives and meets the requirement of the stroke curriculum. A sub-specialty appraisal meeting will be organised by the Deanery office, with external representation from the Stroke Medicine Sub-Specialty Advisory Committee, three months before the anticipated end of the training period to agree which learning goals have been achieved and set goals for the final period of training. This meeting may recommend extension of training or other measures, if required to meet the curriculum goals.

The trainee has the ultimate responsibility for ensuring satisfactory completion of their training. The trainee needs to provide the programme director and their educational supervisors with a clear outline of the training programme already undertaken in the parent specialty by way of the written training records, and should agree their future Stroke Medicine training needs with these trainers in light of this curriculum. If extended Stroke Medicine training of more than a year is necessary to achieve the curriculum requirements, this should be established at the outset. The strengths and weaknesses in the parent specialty training with respect to stroke should be discussed openly with the educational supervisor and the trainee's individual training experiences developed jointly to address these issues. The trainee must keep a written record of their training and provide this for regular review.

#### *Assessment*

Assessment of the trainee's progress in this specialty will be placed on the standard format of work-based assessment and the annual review prior to the RITA and PYA processes, informed by the outcome of the appraisal meeting towards the end of Stroke Medicine training. Assessment systems will include a range of assessment methods across the domains of the curriculum, including knowledge-based assessments, direct observation of performance, multi-source feedback (including surveys of nursing staff, managerial, clerical and secretarial staff and medical staff from relevant directories, e.g. radiology), and feedback from patients obtained from patient surveys and similar documents. The results of such feedback should be discussed with the trainee's educational supervisor during appraisals.

#### *Less than full-time training*

Trainees who are unable to work full-time are entitled to opt for less than full-time training programmes according to EC directives, but the period required for training and achievement of competencies will need to be extended pro rata. As a minimum, part-time training should not limit participation in relevant medical activities to a period less than half of that provided for full-time trainees. Similar considerations would apply to an academic trainee who wished to combine Stroke Medicine training with research.

#### *Training record*

A training record will be maintained by the trainee. It will be counter-signed as appropriate by the educational supervisor to confirm the satisfactory fulfilment of the required training experience in the acquisition of the competencies that are enumerated in the sub-specialty curriculum. The evidence of all assessments undertaken and progress should be kept within the record. It will remain the property of the trainee, but must be produced at appraisal meetings and other relevant assessments.

### 3. CONTENT OF LEARNING

#### *Aims and objectives*

The learning objectives of the Stroke Medicine curriculum are divided into the three main topics of acute stroke, stroke rehabilitation and stroke prevention. Further details are to be found in Appendix 1.

### 4. LEARNING EXPERIENCES

#### *Learning from practice*

The trainee will spend a large proportion of his/her training in work-based experiential learning involved in supervised clinical practice in a hospital environment. Learning will involve observation followed by closely supervised clinical practice until competence is achieved. This will take place in outpatient departments, stroke unit wards and other hospital-based learning situations, e.g. radiology departments and operating theatres. Opportunities will be available for experiential learning in community rehabilitation settings.

#### *Learning in formal situations*

Opportunities should be available for the trainee to undertake formal presentations of topics, case presentations and literature reviews, either in small group format with peers and trainers, or at multidisciplinary meetings, e.g. grand rounds and postgraduate teaching sessions. There are many external learning opportunities, including attendance at regional, national and international medical meetings and conferences.

#### *Learning with peers*

There will be several opportunities for trainees to learn with their peers on formal and informal ward rounds, in outpatient clinics and at the training sessions organised by the British Association of Stroke Physicians and the Stroke Forum.

#### *Personal study*

There should be opportunities within each training programme to access textbooks, journals, electronic databases and internet sources. Trainees are expected to follow developments in Stroke Medicine by accessing the relevant journals and reading widely. Trainees are encouraged to publish case reports and research studies or audits at national and international meetings. A reading list is available on the Stroke Medicine pages of the JRCPTB website ([www.JRCPTB.org.uk](http://www.JRCPTB.org.uk)).

At all times, the trainee will be expected to assume appropriate responsibility for their own assessment, continued self-directed learning and maintenance of competence.

#### *Specific teacher inputs*

There will be opportunities for specific teacher and clinician inputs into the learning experiences described, particularly in ward and outpatient settings. This will involve sub-specialty teaching in the clinical environment from recognised specialists in Stroke Medicine and from other specialists, e.g. training in neuroradiology from a consultant radiologist, training in rehabilitation skills from a consultant in rehabilitation, and training in neurological assessment from a consultant neurologist.

## **5. SUPERVISION AND FEEDBACK**

Good educational supervision ensures that the formative system of appraisal is carried out. Similarly clear assessment using appropriate methods and tools ensure the supervision and identification of competencies gained. Educational supervisors are prepared and trained for the role including appraisal, the use of assessment methods, giving feedback and equality and diversity issues.

Trainees also require appropriate clinical supervision during specialty training to ensure patient safety as well as progress with learning and performance. Clinical supervision in Stroke Medicine involves pre clinic discussion about referrals including review of the medical notes, additional information required including confirmation of diagnosis, discussion about appropriate management and investigation. There are opportunities for clinical observation during clinic appointments as well as discussion following the appointment. Letters to the family following clinic contact as well as plans for ongoing management are reviewed. Clinical supervision can be provided by all members of the multi-disciplinary team and the opportunity to discuss clinical problems in a multi-disciplinary setting should be provided on a regular basis. The trainee must be aware of his/her own limitations and be able to seek advice and receive help e.g. with queries or ward referrals at all times.

The educational supervisor will ensure that appropriate clinical supervision of the trainee occurs by discussing with the trainee issues of clinical governance, risk management and the report of any untoward clinical incidents involving the trainee. The educational supervisor is part of the clinical team and can address any identified concerns about the performance of the trainee or identified issues concerning patient or doctor safety. The feedback from analysis of the PMETB trainee questionnaire and local Deanery quality assurance of training should also identify any concerns about appropriate educational and clinical supervision.

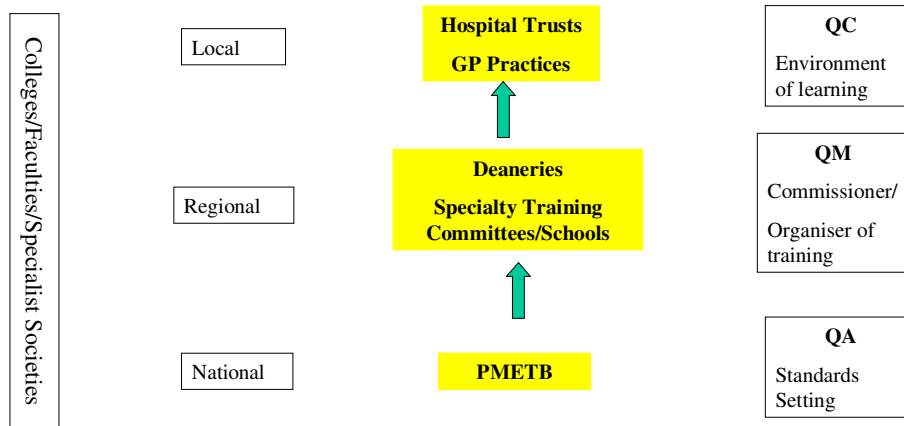
### *Ensuring feedback*

The educational supervisor meets with the trainee at regular intervals to undertake appraisal, set educational objectives, review progress against the curriculum, give both formative and summative feedback from work based assessments as well as countersigning the training portfolio and preparing the evidence for the annual supra regional RITA process. These regular opportunities to feedback on performance ensure that the trainee identifies progress and future development needs. Areas of concern will be identified and discussed. Identified weaknesses will be suitably addressed. Stroke Medicine is a multi disciplinary specialty and there will be opportunities for constructive feedback in both formal and informal settings from supervising consultant specialists and members of the multidisciplinary team, as well as from patients and carers.

## **6: MANAGING CURRICULUM IMPLEMENTATION**

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

## The Organisation and Quality Assurance of PG Training



## 7: CURRICULUM REVIEW AND UPDATING

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

## 8. EQUALITY AND DIVERSITY

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

- Race Relations (Amendment) Act 2000
- Disability Discrimination Act 1995 (Amendment) 2004 and Special Educational Needs and Disabilities Act 2001
- The Disability Discrimination Act 1995 (amendment) (further and higher education) Regulations 2006
- Data Protection Acts 1984 and 1998
- Age Discrimination Act October 2006

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

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

Compliance with anti-discriminatory practice will be assured through:

- Monitoring of recruitment processes
- Ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- Ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature
- Monitoring of College examinations

Ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees because of gender, ethnicity, sexual orientation or disability (other than that which would make it impossible to practise safely as a physician). All efforts shall be made to ensure the participation of people with a disability in training.

#### Statutory responsibilities

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

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

## APPENDIX 1 - CURRICULUM GRIDS

### 1 ACUTE STROKE

OBJECTIVE - To provide the trainee with the knowledge and skills to contribute to a comprehensive specialist service for patients with acute stroke  
To ensure that all trainees are competent in the assessment and management of acute stroke

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE TO BE INCLUDED IN RECORD
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>▪ Anatomy and pathophysiology of various types of stroke</li> <li>▪ Classification schemes for acute stroke (eg TOAST, OCSP)</li> <li>▪ Scales for describing severity of acute stroke (eg NIHSS, SSS)</li> <li>▪ Interpretation of CT and MRI brain scans including hyperacute imaging (eg CT, MRI, Doppler ultrasound, echocardiography) echocardiography (including TOE) and indications for angiography.</li> <li>▪ The differential diagnosis of acute stroke, and initial management of conditions that mimic stroke</li> <li>▪ The place of acute intervention, including thrombolysis and neurosurgery</li> <li>▪ Complications of acute stroke and their multidisciplinary management</li> <li>▪ Rare causes of stroke and stroke in younger age groups</li> <li>▪ Concomitant conditions and their influence on management</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>▪ Experience of working within a specialist acute stroke unit, including experience of on-call for acute admission of suspected stroke patients</li> <li>▪ Participation in a cerebrovascular clinic for assessment of TIA and minor stroke</li> <li>▪ Exposure to longer term outcome of the full range of patients admitted to an acute stroke unit (including those who are not referred for rehabilitation)</li> <li>▪ Experience of assessment of patients for acute treatment, particularly thrombolysis, and for secondary prevention, especially anticoagulation &amp; antiplatelet drugs</li> <li>▪ Experience of decision making about the management of</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation by direct observation</li> <li>• Review of case sheets, correspondence</li> <li>• Reports from members of interdisciplinary team and patients/carers</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfactory training &amp; assessment records</li> </ul>

<ul style="list-style-type: none"> <li>▪ Ethical and legal issues relating to management of stroke illness</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>▪ Clinical assessment of stroke type and severity in the acute situation</li> <li>▪ The investigation of suspected acute stroke with appropriate use of specialist colleagues' expertise and of radiological resources</li> <li>▪ Interpretation of CT and MRI brain scans, hyperacute and late imaging</li> <li>▪ Provision of general medical care to acutely ill patients with widespread vascular disease and/or with cardio-respiratory or other complications of stroke</li> <li>▪ Provision of intensive monitoring to acute patients</li> <li>▪ Management of patients with acute dysphagia</li> <li>▪ Early rehabilitation and appropriate referral to further rehabilitation services with efficient use of resources</li> <li>▪ Provision of palliative care</li> <li>▪ Assessment and management of nutrition within a multi-disciplinary team</li> </ul> <p><b>Attitudes</b></p> <ul style="list-style-type: none"> <li>▪ To value patient and carers views on treatment decisions</li> <li>▪ Awareness of cultural and religious issues relevant to stroke</li> </ul>	<p>nutrition, hydration and infection; end of life decisions; and consent to treatment</p> <ul style="list-style-type: none"> <li>▪ Attachments to coronary care, acute general medicine and geriatrics, intensive care, neurology, neuroradiology, vascular/neuro-surgery, neuropsychology and palliative care may have direct relevance</li> <li>▪ Personal study including reading recent national and international guidelines for stroke management and intervention trials, and use of training stroke assessment videotapes and CD-ROMs</li> </ul>		
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## 2 STROKE REHABILITATION

### OBJECTIVE A

To provide specialist assessment of patients with stroke to facilitate rehabilitation to improve outcome and provide acute and long term support

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Natural history and prognosis of stroke</li> <li>• Classification schemes and scales used to guide prognosis</li> <li>• Mechanisms and patterns of recovery, neural plasticity, learning and skill acquisition</li> <li>• Complications of stroke (e.g. depression) that arise during stroke rehabilitation</li> <li>• Models of disability and their relevance to clinical practice</li> <li>• Classification of language and cognitive impairments</li> <li>• Causes and classification of vascular dementia</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Familiarity with scales commonly used in stroke rehabilitation, their validity, utility and limitations</li> <li>• Setting and reassessing rehabilitation goals</li> <li>• Prevention, identification and management of the common physical, psychological, communication, cognitive, perceptual, ADL and socio-economic problems post stroke</li> <li>• Assessment and management of specialist topics eg post-stroke pain, spasticity, dysphagia, nutrition, orthotics, seating, epilepsy and depression</li> <li>• Medical assessment &amp; screening techniques for “bedside” cognitive and language impairment</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Assessment and management of patients in stroke units, neuro-rehabilitation units, OP/day hospital/community</li> <li>• Personal study including reading recent national and international guidelines for stroke management and intervention trials</li> <li>• Specialist clinics (e.g. spasticity management, psychosexual clinics, special seating) may be relevant</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation by direct observation</li> <li>• Review of case sheets/correspondence</li> <li>• Reports from members of interdisciplinary team and patients/carers</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfactory training &amp; assessment records</li> </ul>

**OBJECTIVE B**

To provide the trainee with the knowledge, skills and attitudes to contribute to a comprehensive, multidisciplinary, coordinated and goal-orientated rehabilitation service

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Understanding multidisciplinary team working in stroke and role of team members</li> <li>• Planning discharge from hospital</li> <li>• The emotional, psychological and socioeconomic consequences of stroke on patients and carers</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Participation/leadership within multidisciplinary stroke rehabilitation team</li> <li>• Facilitating the transition from active rehabilitation to maintenance and support</li> <li>• Involving and working with carers</li> <li>• Rehabilitation within day hospital, community intermediate care and outpatient settings</li> <li>• Audit and outcome measurement of stroke services</li> </ul> <p><b>Attitudes</b></p> <ul style="list-style-type: none"> <li>• To value the patient, carers and other MDT members' perspectives in goal planning and their contribution to the rehabilitation process</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Working within hospital and community services in an organized, multidisciplinary stroke rehabilitation service</li> <li>• Multidisciplinary stroke case conferences</li> <li>• Experience of non-health service funded provision for stroke care e.g. volunteers.</li> <li>• Personal study of current law relating to the management of estate, power of attorney and powers of the court of protection as relating to stroke patients.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation by direct observation</li> <li>• Review of case sheets/correspondence</li> <li>• Reports from members of interdisciplinary team and patients/carers</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfactory training &amp; assessment records</li> </ul>

## OBJECTIVE C

To provide the trainee with the knowledge, skills and attitudes to enhance activities and participation, to re-integrate patients with stroke illness within their community, family, social and occupational roles (formerly known as disability and handicap)

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Current legislation relating to Fitness to Drive (DVLA publication and website)</li> <li>• International Classification of Function &amp; Health model of disablement</li> <li>• Services to support specific rehabilitation objectives (e.g. return to driving and employment or vocational rehabilitation).</li> <li>• Awareness of cultural and religious issues specific to stroke rehabilitation</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Familiarity with medical assessment for driving skills</li> <li>• Familiarity with medical screening of cognitive skills and appropriate referral to psychologist.</li> <li>• Completion of DVLA forms and social services forms e.g. DLA with due regard for patient confidentiality and wishes</li> <li>• Liaison with housing or employers or other relevant bodies</li> <li>• Practice risk assessment as a member of a MDT.</li> <li>• Ability to discuss sensitive issues with patients and carers – eg sexual function</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Providing patients with stroke illness appropriate information regarding driving legislation.</li> <li>• Providing patient with appropriate information on issues relating to possible future employment and reintegration into the community.</li> <li>• Take part in a multidisciplinary community assessment of a stroke patient</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation by direct observation.</li> <li>• Review of case sheets/correspondence</li> <li>• Reports from members of interdisciplinary team and patients/carers</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfactory training &amp; assessment records</li> <li>• Completed paperwork eg DVLA, DLA forms and written reports</li> </ul>

**OBJECTIVE D**

To understand the components and requirements for a comprehensive stroke service in hospital and the community

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation services and planning after hospital</li> <li>• Role of social services, voluntary and independent sectors in stroke services.</li> <li>• Organisation and planning of stroke services</li> <li>• Awareness of national strategies for stroke care</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Liaison with primary, social and voluntary care</li> <li>• Generic management skills e.g. leadership, negotiating and teamwork.</li> <li>• Presentation skills</li> </ul> <p><b>Attitudes</b></p> <ul style="list-style-type: none"> <li>• To have an appreciation of the broader community needs and of commissioning perspectives.</li> <li>• Openness to alternative ways of service provision.</li> <li>• Respect for role of other medical and non-medical specialists</li> </ul>	<p><b>Experience</b></p> <p>The following may be of relevance:</p> <ul style="list-style-type: none"> <li>• Attendance at appropriate stroke service planning committees</li> <li>• Attendance at appropriate courses or conference sessions</li> <li>• Personal study of relevant service framework documents and guidelines</li> </ul>		

### 3 STROKE PREVENTION

#### OBJECTIVE A

To be able to undertake an assessment of a patient with suspected TIA

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Differential diagnosis of suspected TIA</li> <li>• Thrombophilia and coagulopathies</li> <li>• Appropriate investigations, (e.g. CT, MRI, carotid ultrasound, MRA, echocardiography, cerebral angiography, clotting and thrombophilia tests)</li> <li>• Genetic causes of stroke</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Appropriate clinical assessment including investigation and management plan.</li> <li>• Communication of risk and impact on lifestyle (driving and occupation)</li> </ul> <p><b>Attitudes</b></p> <ul style="list-style-type: none"> <li>• Sensitivity to the anxieties provoked by diagnosis.</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Specialist neurovascular clinic</li> <li>• Stroke review clinic</li> <li>• Attachment to neurology clinics may be relevant</li> </ul>		

**OBJECTIVE B**

To be able to offer stroke preventive strategies to individuals according to prognosis and need

SUBJECT MATTER	TEACHING/LEARNING METHOD	ASSESSMENT	EVIDENCE OF COMPETENCE
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Epidemiology of risk factors (including ethnicity and novel factors) for cerebral infarction and intracerebral haemorrhage</li> <li>• BHS, NICE, Joint British Society, RCP &amp; SIGN guidelines for treatment of hypertension and hyperlipidaemia</li> <li>• Cost effectiveness of stroke prevention measures.</li> <li>• Principles of management of atrial fibrillation.</li> <li>• Principles of use of antiplatelet drugs</li> <li>• Principles of selection of patients for carotid endarterectomy and stenting</li> <li>• Current research into stroke prevention</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• Assessment of stroke risk in primary and secondary prevention setting.</li> <li>• Develop management plans for secondary prevention</li> <li>• Develop management plans for prevention of stroke due to thrombotic or vasculitic disorders</li> <li>• Treatment to lower blood pressure and lipid levels after stroke.</li> <li>• Selection of patients for</li> </ul>	<p><b>Experience</b></p> <ul style="list-style-type: none"> <li>• Neurovascular clinic</li> <li>• Stroke review clinic</li> </ul> <p>The following may be relevant:</p> <ul style="list-style-type: none"> <li>• Attachment to hypertension clinics anticoagulant/thrombophilia clinics, vascular surgery, cardiology</li> <li>▪ Visits to community-based, risk-factor management clinics</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation by direct observation</li> <li>• Review of case-sheets, correspondence</li> <li>• Reports from Members of Interdisciplinary Team and patients/carers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Satisfactory training and assessment records</li> </ul>

<p>anticoagulation</p> <ul style="list-style-type: none"><li>• Selection of patients for cerebral angiography following ischaemic stroke and cerebral haemorrhage</li><li>• Communicating risks and benefits of interventions.</li></ul> <p><b>Attitudes</b></p> <ul style="list-style-type: none"><li>▪ Non-judgmental attitude to lifestyle and age</li></ul>			
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