



**IRISH COMMITTEE
ON HIGHER
MEDICAL TRAINING**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

Post CSCST TRAINING IN

GERIATRIC MEDICINE

Stroke



This curriculum of training in Stroke was developed in 2017 and undergoes an annual review by Prof David Williams, Dr Ann O’Shaughnessy, Head of Education, Innovation & Research and by the Geriatric Medicine Training Committee. The curriculum is approved by the Irish Committee on Higher Medical Training.

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Table of Contents

INTRODUCTION	4
ENTRY REQUIREMENTS	5
RECRUITMENT AND SELECTION	5
DURATION AND ORGANISATION OF TRAINING	5
TRAINING PROGRAMME	5
TRAINEE NUMBERS	5
EPORTFOLIO	6
PROGRAMME MANAGEMENT	6
SPECIALTY SECTION	7
CLINICAL ASSESSMENT OF STROKE	7
INVESTIGATIONS	8
TIA AND STROKE MIMICS.....	9
CEREBRAL REPERFUSION	11
POST-ACUTE CARE OF STROKE.....	12
END-OF-LIFE CARE.....	13
PRIMARY AND SECONDARY PREVENTION	14
REHABILITATION REQUIREMENT	15
REHABILITATION MANAGEMENT.....	16
LEADERSHIP	17
DISCHARGE PLANNING.....	18
POST-DISCHARGE MEDICAL CARE	19
COMMUNICATION	20
ASYMPTOMATIC DISEASE	21
VASCULAR DEMENTIA.....	22
STROKE SERVICE	23
TEACHING AND TRAINING.....	24
RESEARCH	25
DOCUMENTATION OF MINIMUM REQUIREMENTS FOR TRAINING	26

Introduction

This 1 year Post CSCST Fellowship programme in Stroke has been developed to provide physicians with training in the relevant medical specialties with additional expertise and a special interest in Stroke Medicine

Stroke is the commonest cause of death and disability in Ireland. Given the ageing population, stroke incidence is likely to increase. However, up to a quarter of strokes occur in younger patients who may have different needs. Stroke encompasses elements of neurology, cardiovascular disease, general and geriatric medicine 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 contribute to providing specialist Stroke services throughout Ireland.

The primary purpose of a Stroke physician is to contribute to the provision of skilled acute and rehabilitation care to patients who have suffered a stroke as part of a multidisciplinary Stroke Service. Early specialist management, comprising both general and specific therapy, can improve patient outcome following care in a specialist unit compared to a general ward. Therefore it is necessary to acquire the necessary knowledge and skills in stroke prevention. Stroke physicians may also take a key role in the development of local hospital and community stroke services. The detailed role of a Stroke physician will therefore vary depending on the type of service within which they are practising. The training programme recognises this, but expects all Stroke sub-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.

Stroke physicians are expected to work closely with a wide range of other medical specialists, including Neuroradiologists, Neurosurgeons, Primary Care Physicians and colleagues in Neurology, Geriatric Medicine, clinical Pharmacology and Neurorehabilitation. They will also work closely with members of the multidisciplinary Stroke team, including specialist nurses, physiotherapists, occupational therapists, psychologists and social workers.

Rationale

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. This Post CSCST Fellowship training programme aims to build upon competencies gained in the main specialty in an integrated way to ensure that individuals seeking to sub-specialise in Stroke Medicine acquire the requisite training to meet the above aims. At the completion of sub 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 sub-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 and work effectively in a comprehensive multidisciplinary stroke service in hospital and/or the community and to work closely with other relevant agencies;

- The abilities to advise, develop and evaluate district stroke services in partnership with local health and social care communities.

Purpose of the Curriculum

The curriculum is designed for Post CSCST registrants (within two years of the start date of the Post CCST programme) usually in Geriatric Medicine, Clinical Pharmacology, and Therapeutics or Neurology, with the aim of adding to the training gained in that specialty, additional skills and experience appropriate to the sub specialist practice of Stroke Medicine. The Curriculum defines the training requirements, the contents of training and the requirements for supervision, assessment and appraisal

Entry Requirements

Applicants for the Post CSCST Fellowship in Stroke will have successfully completed the RCPI Higher Specialist Training programme in Geriatric Medicine or other relevant discipline (within two years of the start date of the Post CSCST Fellowship programme).

Prior experience in Stroke during Geriatric Medicine training would be an advantage.

Recruitment and Selection

Post CSCST Fellowship training in Stroke will build on broad basic and early core specialist training in Geriatric Medicine This is in line with training models internationally. Selection of candidates for Post CSCST Fellowship training in Stroke will be via a competitive recruitment process coordinated by the relevant Training Body. Recruitment will follow similar timeline where possible to HST recruitment and post will commence in July of each year (unless otherwise specified).

Duration and Organisation of Training

The Post CSCST Fellowship in Stroke is a one year training programme designed to dovetail with the Irish Higher Specialist Training programme in Geriatric Medicine. The curriculum is competency-based, however it is anticipated that the candidate will complete training within one year.

The curriculum takes into account the major areas of competence required by the subspecialist in Stroke and will be supervised by the Irish Committee on Higher Medical Training of the Royal College of Physicians in Ireland. Doctors who have successfully completed the RCPI Higher Specialist Training programme in Geriatric Medicine and are within two years of completion will be deemed eligible to apply for the Post CSCST Fellowship in Stroke. Completion of this program will ensure the knowledge and competencies in all areas of the curriculum, meeting international standards for best practice and allowing candidates to practice as a subspecialist in Stroke.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Stroke in approved training hospitals. Each post within the programme will have a named trainer/educational supervisor and the programme will be under the direction of the National Speciality Director for Geriatric Medicine

Trainee Numbers

It is expected that the Post CSCST Fellowship in Stroke will be awarded to one candidate per year.

ePortfolio

The trainee will be required to keep their ePortfolio up to date and maintained throughout their Fellowship training. The ePortfolio will be countersigned as appropriate by the Trainer to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the Curriculum. This will remain the property of the Trainee and must be produced at the end of year Evaluation meeting. At the end of year Evaluation, the ePortfolio will be examined. The results of any assessments and reports by the named trainer/educational supervisor, together with other material capable of confirming the trainee's achievements, will be reviewed.

Programme Management

- Coordination of the training programme will lie with the Medical Training Department.
- The training year will usually run from July to July in line with HST programmes
- Annual evaluations will usually take place between April and June each year
- Each trainee will be registered to the ePortfolio and will be expected to fulfil all requirements relating to the management of yearly training records
- Opportunities for audit and research may be available
- Each trainee will be issued with a training agreement on appointment to the training programme and will be required to adhere to all policies and procedures relating to Post CSCST Fellowships.

Specialty Section

Clinical Assessment of Stroke

Objective: To undertake a clinical assessment of a suspected stroke or TIA in an adult patient referred as an emergency to hospital or in an out-patient setting

Knowledge

- Regional and functional anatomy of the brain, spinal cord and peripheral nervous system
- Anatomy and physiology of the blood supply and venous drainage of the brain and spinal cord
- Pathology of cerebrovascular disease
- Methods of assessing, including scoring systems, early risk of stroke recurrence
- Presenting features of stroke, other vascular diseases of the brain and acute neurological disorders
- Epidemiology of stroke in Ireland, Europe and internationally.
- Common and rare causes of stroke at all ages
- Genetic causes of stroke
- Clinical stroke classification schemes, e.g. OCSP and TOAST and their application in the research and clinical setting
- Conditions that mimic stroke in the context of systemic disease
- Conditions that stroke can mimic which may delay a diagnosis (“stroke chameleons”)

Skills

- Ability to take a rapid and appropriately detailed medical, neurological and cardiovascular history from patients, carers and bystanders
- Ability to receive, assess and prioritise a referral received by telephone, in person or a written referral from a general practitioner or other health professional
- Ability to manage acute stroke emergency admissions prioritising cases as appropriate and ensuring continuity of care in hand-over between shifts
- Ability to perform a rapid and appropriately detailed neurological examination and examination of other relevant systems with appropriate regard for the circumstances of presentation e.g. an emergency versus elective presentation.
- Ability to formulate an appropriate differential diagnosis including stroke mimics
- Ability to identify likely pathophysiological mechanism and anatomical side of stroke based on history and examination
- Ability to conduct a bedside assessment of cognitive and communication function
- Ability to identify functional illness mimicking stroke
- Ability to perform the Glasgow Coma Score, NIH stroke score and other rating scales in stroke patients
- Ability to identify and manage according to evidence based guidelines and current state of knowledge the common complications of stroke.
- Ability to perform and assessment of a stroke patient as part of a multidisciplinary team and to coordinate the medical management and rehabilitation of stroke patients.

Assessment & Learning Methods

- Online National Institutes of Health Stroke Scale (NIHSS) course
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Mini CEX
- Feedback from Trainers

Investigations

Objective: To arrange and interpret appropriate investigations to support or exclude diagnosis of a suspected stroke or TIA and its cause

Knowledge

- Knowledge of risks of X-ray exposure and IRMER regulation relevant to patient safety
- Principles and interpretation of brain and vascular imaging, including CT, MRI, perfusion imaging, cerebral angiography, carotid artery ultrasound, transcranial Doppler
- Principles and interpretation of investigations relevant to stroke
- Principles of diagnosis of diabetes, hyperlipidaemia and hypertension in the primary and secondary prevention of stroke
- Investigation of secondary causes of hypertension
- Investigation of familial causes of dyslipidaemia
- Investigation of cardiogenic causes of stroke and their interpretation e.g. arrhythmia and structural disease of the heart
- Principles of autoimmune serology and testing for suspected vasculitis
- Principles, appropriateness and utility of other neurological investigations e.g. EEG, CSF in the diagnosis of stroke and stroke mimics
- Role of biomarkers in diagnosis of stroke
- Investigation of conditions that mimic stroke and role of other specialties

Skills

- Ability to initiate appropriate investigations, taking into account the patient's age and clinical features and degree of urgency
- Interpretation of CT, MRI, cerebral angiography, carotid ultrasound and other emergent techniques in suspected stroke and TIA patients
- Interpretation of abnormal haematology, biochemistry, clotting, thrombophilia and autonomic investigations
- Interpretation of 12-lead ECG, 24 hour ECG and blood pressure monitoring recordings
- Ability to obtain consent from a patient for invasive investigations that would likely be performed by the trainee (e.g. lumbar puncture)
- Ability to explain results in lay language understood by the patient and carers
- Referral to appropriate specialties when required

Assessment & Learning Methods

- CBD
- Online NIHSS course
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Feedback from trainers

TIA and Stroke Mimics

Objective: To manage hyperacute treatment for stroke TIA and common stroke mimics

Knowledge

- Physiology of cerebral blood flow regulation and Physiology of oxygen transport
- Pathophysiology of blood pressure and autonomic function control
- Pathophysiology of cerebral infarction and haemorrhage
- Pathophysiology of platelets, clotting mechanisms and endothelial function
- Action and side effects of drugs used in management of stroke and TIA
- Potential indication of other interventional treatments (e.g. intra-arterial thrombolysis, mechanical embolectomy)
- Indications, contraindications and management of intravenous thrombolysis and other interventional treatments in acute stroke
- Neuroprotective strategies
- Methods of non-invasive physiological monitoring
- Indications for neurosurgery in cerebral haemorrhage and cerebral infarction
- Presenting features, diagnosis and treatment of cerebral aneurysms and arteriovenous malformations
- Role of MDT in detailed assessment of patient
- Management of thrombolysis and other interventional treatments
- Management of stroke and TIA in pregnancy
- Management of cerebral venous thrombosis
- Causes of deterioration in acute stroke
- Indications for respiratory and cardiac support
- The evidence base to justify acute stroke treatments, including randomised trials, completed and ongoing, and the Cochrane Stroke Database
- Relevant sections of the National Service Framework, NICE appraisals, the National Clinical Guidelines for Stroke, and the National Stroke Strategy, as applied locally and more widely in the UK
- Understand that consent is a process that may culminate in, but is not limited to the completion of a consent form
- Knowledge of strategies to break bad news

Skills

- Selection of appropriate patients and safe administration of intravenous thrombolysis and other interventions including appropriate consent and supervision of post treatment management, including complications
- Assessment of swallowing
- Interpretation and management of the changes in physiological variables, including hypoxaemia, abnormal cardiac rhythms, hypotension, hypertension, hypoglycaemia and hyperglycaemia
- Assessment and management of fluid balance
- Interpretation and management of the changes in physiological variables, including hypoxia, abnormal cardiac rhythms, hypotension, hypertension, hypoglycaemia and hyperglycaemia
- Ability to formulate appropriate strategies for prevention of Deep Vein Thrombosis (DVT) and early stroke recurrence
- Interpretation of neurological observation charts
- Appropriate referrals to neurosurgery and interventional neuroradiology
- Ability to involve and co-ordinate the multidisciplinary team
- Appropriate referrals to ICU
- Ability to impart bad news in the context of stroke disease
- Ability to obtain consent from patients and assent from carers to treatments undertaken by the trainees
- Recognition of and use of appropriate end of life pathways

Assessment & Learning Methods

- CBD
- DOPS
- Online National Institutes of Health Stroke Scale (NIHSS) course
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Course: RCPI Delivering Thrombolysis in Clinical Practice
- Feedback from trainers

Cerebral Reperfusion

Objective: Management of patients undergoing cerebral reperfusion therapies in acute ischaemic stroke

Knowledge

- Awareness of the evidence base and registry data for intravenous thrombolysis in ischaemic stroke
- Awareness of national guidelines (e.g. NICE TA122) for intravenous thrombolysis
- Familiarity with local guidelines and protocols (on an approved training programme)
- Awareness of indications and contraindications for treatment
- Understanding of the role of other interventional treatments for acute ischaemic stroke (e.g. thrombectomy / clot retrieval) in relation to intravenous thrombolysis
- Understanding that severe neurological deficit and CT detection of early infarction are associated with adverse outcomes including bleeding risk
- Knowledge of thrombolysis side effects (e.g. intra / extra cranial bleeding, anaphylaxis) and their specific management

Skills

- Application of evidence base for thrombolysis to individual patient cases
- Taking of a focused history (with corroboration if required) including symptom time of onset and identifies if symptoms have changed
- Undertaking of a detailed clinical examination relevant and perform NIHSS
- Evaluating capillary sugar value
- Arrangement of timely appropriate neuroimaging and interpretation (with radiologist or stroke physician input where required)
- Ability to undertake a discussion about benefits and risk of treatment to patients and/ or care givers
- Ability to calculate alteplase dose in mg/kg as both bolus and infusion over 60 minutes
- Ability to demonstrate use of the infusion pump for bolus and infusion
- Ability to recognise complications of thrombolysis including neurological deterioration, signs of angioedema and shock and can initiate a treatment plan for each
- Ability to provide a clear post thrombolysis management plan including which observations, investigations and their timing
- Safe handover of patient to relevant medical and/or nursing staff
- Ability to effectively and empathetically communicate when thrombolysis is not indicated / contraindicated following assessment

Assessment & Learning Methods

- DOPs
- Mini CEX
- Online National Institutes of Health Stroke Scale (NIHSS) course
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Course: RCPI Delivering Thrombolysis in Clinical Practice
- Feedback from trainers

Post-acute Care of Stroke

Objective: To manage immediate post-acute care of stroke

Knowledge

- Principles of multidisciplinary team care relating to the acute stroke patient, including positioning, fluid balance, nutrition, bowel and bladder care, pressure area care and manual handling
- The impact of stroke on neural control of swallowing and factors influencing its recovery
- Methods of assessment of hydration and nutrition and formulating a judgement on appropriate support for individual patients
- Principles of managing fluid and nutritional replacement including parenteral feeding
- Control of bladder and bowel function, assessment of the effects of stroke on continence, and team approach to management
- Methods to prevent thrombo-embolic disease according to individual patient characteristics
- Appropriate timing and methods of initial mobilisation
- Features of focal and generalised cognitive disorder and impact on management and prognosis
- Prevention, management and monitoring of hospital acquired infections
- Ethical and legal issues relating to the management of stroke
- Mental capacity and consent issues and assessment processes for patient with cognitive impairment following stroke

Skills

- Provision of and response to monitoring of patients in the stroke unit setting
- Provision of and response to monitoring of patients in the stroke unit setting
- Provision of general medical care including regular review of medication for patients admitted with stroke recognising potential drug interactions and advising patients about potential adverse effects
- Recognising and managing cardiorespiratory and other non-neurological complications following recent stroke
- Appropriate use of antibiotics to minimise risk of hospital acquired infection
- Assessment and management of nutrition/hydration for individual patients within a multidisciplinary team
- Identification and management of the confused patient
- Identification and management of neuro-psychiatric consequences of stroke, including depression
- Appropriate timing and content of communication with patients and families
- Appropriate timing and content of communication with all members of the multidisciplinary team

Assessment & Learning Methods

- CBD
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Feedback from trainers

End-of-Life Care

Objective: To provide appropriate end-of-life care for stroke patients

Knowledge

- Determinants of prognosis after stroke and the potential impact of additional co-morbidities
- How principles of palliation relate to the complications of stroke and the care provided by multidisciplinary stroke teams
- Causes and mechanisms of deterioration and death after stroke
- Outline the role of hospital, community palliative care teams and hospice services in relation to stroke patients needs
- Know that a referral to specialist palliative care is appropriate for patients with stroke disease
- Understand the role of the second medical opinion in decisions about withdrawal of active treatment including medication and / or artificial nutrition and hydration in end of life decisions in stroke disease

Skills

- Use of palliative care models in stroke care settings
- Assessment of individual prognostic factors and the wishes of each patient during a decision to take a palliative approach following stroke
- Conduct of appropriate discussions with patients, carers and the multidisciplinary team concerning Do not resuscitate (DNR) orders and withdrawal of medication and/or feeding in end-of-life situations
- Referral to palliative care teams when appropriate
- Conduct of appropriate discussions with patients, carers and the multidisciplinary team concerning do not attempt cardiopulmonary resuscitation (DNA-CPR) orders and withdrawal of medication and/or feeding in end-of-life situations

Assessment & Learning Methods

- CBD
- Mini CEX
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent

Primary and Secondary Prevention

Objective: To manage primary and secondary prevention strategies following stroke or TIA

Knowledge

- Understand the influence of lifestyle on the incidence of stroke and factors that may influence the individual to change their lifestyle
- Quantification of early and subsequent predicted risk of recurrence and knowledge of relative and absolute risk reduction resulting from specific interventions of treatments
- Awareness of evidence base for secondary prevention, current trial data and ability to critically appraise and understand how to apply them to clinical practice
- Knowledge of the content and variety of guidelines relevant to secondary prevention
- Understanding the structure of service models which support rapid introduction of secondary prevention at various sites of presentation including A&E departments, GP referrals, and inpatients on general wards
- Optimum management of hypertension, diabetes and lipid levels to maximise secondary prevention and impact of lifestyle approaches to this reduction
- Indications for cerebral revascularisation including endarterectomy, stenting and bypass surgery
- Awareness and understanding of obesity as a significant medical condition and its relationship with stroke and other medical conditions related to stroke (e.g. sleep disorders)

Skills

- Appropriate selection of secondary prevention strategies for Stroke and TIAs, including involvement of other specialists, medications or lifestyle changes
- Ability to effectively and clearly communicate and explain to patients the reasons for secondary prevention in terms they understand so that compliance is improved
- Communication of risk-benefit issues involved in secondary prevention
- Ability to communicate clearly the absolute risk reduction of a treatment as well as risks or potential side effects of treatment

Assessment & Learning Methods

- CBD
- Mini CEX
- Feedback from trainers
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent

Rehabilitation Requirement

Objective: To assess rehabilitation requirement for patient and initiate appropriate input from other members of the MDT

Knowledge

- Patterns of recovery relevant to stroke types
- Factors associated with either a good or a poor functional prognosis.
- Impact of co-morbidities on rehabilitation
- Roles of other members of multidisciplinary rehabilitation team
- Range of rehabilitation resources appropriate for stroke care e.g. early supported discharge, specialist stroke unit, physical disability
- Neglect syndromes
- Aphasia and other communication disorders
- Swallowing problems and their management
- Theories of memory and amnesia
- Theoretical basis of rehabilitation strategies and recognition of different therapeutic approaches.
- Use of mechanical devices to restore independent mobility and function e.g. orthotic devices, wheelchairs
- International classification of function and differentiation
- Principles of early rehabilitation
- Awareness that patient partnership is important during rehabilitation

Skills

- Undertake appropriate assessment to determine rehabilitation needs
- Neurological assessment of focal cognitive impairment
- Communicate outcome of assessment to patient and relatives
- Identify appropriate rehabilitation team members
- Use and scoring of functional rating scales (Barthel, Rankin, FIMS)
- Neurological examination and measurement of power, tone and joint ranges in the rehabilitation context
- Examination of sensory deficits at the bedside including inattention, visual field loss
- Examination of cognition and communication skills in the rehabilitation context
- Examination of gait, including when to refer for gait analysis, and when to refer for orthotic devices and wheelchair

Assessment & Learning Methods

- Mini CEX
- CBD
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent

Rehabilitation Management

Objective: To contribute to the on-going rehabilitation process by providing appropriate medical management to maintain patient fitness for rehabilitation

Knowledge

- Impact of factors associated with stroke related physical impairment including cognitive, sensory, and language impairments
- Management of spasticity associated with stroke
- Causes of pain in individuals with stroke including diagnosis and management of shoulder problems and neuropathic pain
- Anatomy and physiology of gait cycle and measures used to improve gait
- Anatomy and physiology of bladder and bowel dysfunction and knowledge of management of frequent complications
- Structure and function of the shoulder girdle and genesis of shoulder dysfunction after stroke
- Pain pathways, mechanisms and side effects of analgesia, and non-pharmacological management of pain
- Diagnosis and management of the common complications of stroke, e.g. anxiety, depression, which can affect rehabilitation

Skills

- Identification and management of common problems associated with immobility including deep venous thrombosis and pressure ulcers
- Identification and management of behavioural problems associated with cognitive problems
- Identification and management of common medical problems arising in patients during rehabilitation
- Intra articular injection of the shoulder, indications and practical use
- Botulinum toxin injections in areas which commonly cause problems e.g. upper limb and calf complex
- Application of integrated care pathways
- Practical knowledge of how to communicate with patients and their families about medical issues and to enhance their knowledge including secondary prevention drugs, and side effects

Assessment & Learning Methods

- DOPS
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Feedback from trainers

Leadership

Objective: To provide leadership of a multidisciplinary team

Knowledge

- Training, skills and knowledge required in the specialties of other members of the stroke multidisciplinary team
- Evidence base for multidisciplinary and interdisciplinary rehabilitation
- Management structures and professional accountability of colleagues in other disciplines
- Goal planning, goal setting, goal measurement and team audit
- Relevant national and international guidelines and standards for continuing conditions, knowledge of standards for rehabilitation
- Systems of measurement of outcome in rehabilitation
- Clinical governance pertaining to rehabilitation including risk management, audit, clinical incident reporting
- Principles of shared decision making and accountability

Skills

- Multidisciplinary team working, goal setting after initial assessment
- Leadership of multidisciplinary team meeting
- Leadership of family meeting
- Leadership of discharge meeting
- Practical knowledge of conflict resolution between members of team
- Ability to delegate leadership to other responsible members of the team

Assessment & Learning Methods

- Feedback from trainers

Discharge Planning

Objective: To contribute to effective decision making for discharge planning

Knowledge

- Resources available in the community and the criteria that determine selection of particular types of social care
- Indications for community based and outpatient rehabilitation including the selection processes and range of facilities
- The range and type of contribution which other health allied professionals and social workers provide to discharge planning including home visits, equipment provision, environmental control assessment and packages of care
- A working knowledge of the criteria and application process for NHS continuing care
- Driving after stroke. Knowledge of the Road Safety Authority guidelines for Driving after stroke or TIA and responsibilities of stroke patients who drive. Awareness of what to tell patients and the processes available for returning to driving
- Knowledge of the impact of stroke on employment and recreational activities.

Skills

- Assessment of suitability for discharge from hospital based on patients' level of mental and physical disabilities, social support and requirement for further rehabilitation
- Ability to determine a stroke patient's limits of physical activity and level of social participation
- Understanding various measurements of outcome to determine their rate of progress and the timing of discharge. Ability to co-ordinate a multidisciplinary team (MDT) and the process of goal planning. Ability to monitor the MDT so that each discipline progresses systematically towards the discharge of patients
- Ability to resolve conflicts related to discharge arrangements between members of the MDT or between family members
- Timely communication with patients and their families about discharge arrangements, prognosis and long term medical management, including drug treatments
- Ability to chair a discharge planning meeting and resolve possible conflict
- Ability to assess a patient's mental „capacity“ to understand the full future implications of their discharge planning decisions and to take responsibility for their own discharge

Assessment & Learning Methods

- Course: Diploma in Cerebrovascular and Stroke Medicine or equivalent
- CBD

Post-Discharge Medical Care

Objective: To contribute to post-discharge medical care, rehabilitation and longer term social and vocational integration

Knowledge

- Indications for appropriate referrals to outpatient therapy services including physiotherapy, occupational therapy, speech and language therapy services or multidisciplinary teams
- Factors associated with a good or poor prognosis following discharge
- Measurement of outcome and MDT goal planning as applied to outpatient services
- Complicating factors associated with physical impairment after stroke, including cognitive, sensory, and language impairments and how these may manifest more long term
- Management of spasticity, neuropathic pain and other longer term impairments associated with stroke
- Contribution of other professions to community based rehabilitation, care and equipment provision and assessment of environment
- Long term management of chronic medical problems defined in guidelines and NSFs
- Understand that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support
- Explain the process of rehabilitation in the context of return to work and the role of other support services

Skills

- Ensure proper information transfer to allow the patient to safely be managed in the community e.g. prompt discharge letters
- Assessment of suitability for post-discharge rehabilitation and when to finish an episode of rehabilitation
- Ability to communicate with patients and their families about practical and emotional issues arising from living with disability
- Ability to communicate with patients and their families about long term medical management including drug management, assessment of long term complications and side effects of drugs
- Ability to recognise and manage longer term medical problems (e.g. depression) associated with stroke
- Ability to recognise and assess for deterioration and ability to form working diagnosis
- Ability to chair a community planning meeting
- Management of long term complications such as spasticity, neuropathic pain, seizures, depression
- Ability to assess the potential impact of work on the progress and recovery of a health condition
- Ability to identify key issues in assessing fitness for work, both before and during employment and on return to work following stroke

Assessment & Learning Methods

- CBD
- Course: Diploma in Cerebrovascular and Stroke Medicine or equivalent

Communication

Objective: To provide effective communication and information to patients and carers throughout the journey of care

Knowledge

- Principles of breaking bad news
- Principles of oral and written information including partnership
- Availability of pamphlets which may aid understanding

Skills

- Effective communication with patients and carers
- Involvement of patients and carers at every stage of decision making
- Recognition of resources to support patients and carers
- Provide effective patient and carer education with support of the multidisciplinary team

Assessment & Learning Methods

- Feedback from trainers

Asymptomatic Disease

Objective: To manage a patient with asymptomatic cerebrovascular disease or a family history of stroke

Knowledge

- Range of normal and abnormal CT and MRI brain imaging
- Implications of asymptomatic cerebral infarction and haemorrhage
- Classification and differential diagnosis of leukoaraiosis and small vessel disease
- Genetic disorders affecting cerebral vasculature, presentation and prognosis
- Classification and prognosis of asymptomatic cerebral aneurysms
- Classification and prognosis of asymptomatic arteriovenous malformations

Skills

- Ability to manage asymptomatic disease, including advice, stroke prevention strategies and referral to specialist centres

Assessment & Learning Methods

- Course: Diploma in Cerebrovascular and Stroke Medicine or equivalent

Vascular Dementia

Objective: To undertake a clinical assessment of a patient with suspected vascular dementia and advice on appropriate management

Knowledge

- Clinical and pathological features of vascular dementia
- Clinical and pathological features of other dementing disorders
- Neuroradiological features of dementing disorders
- Action and side effects of drugs used in the management of dementia
- Services available to support dementia in the community
- Relevant mental capacity legislation including that in relation to the Nursing Homes Support Scheme.
- Tests used by neuro-psychologists to evaluate focal and generalised disorders of cognitive function

Skills

- Ability to appropriately assess, diagnose and investigate a patient with cognitive impairment
- Ability to evaluate mental capacity
- Ability to offer management strategies for vascular dementia
- Ability to communicate the diagnosis and prognosis to patients and their family.

Assessment & Learning Methods

- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent
- Mini CEX
- CBD

Stroke Service

Objective: To contribute to the development of stroke service and provide leadership to such a service

Knowledge

- Epidemiology of stroke, national and regional and local relevant to age and ethnicity
- Range of services required for hospital and community care of stroke patients.
- Planning arrangements for stroke for local population and relationship to NHS structures
- Principles of service redesign
- How to prepare a business case in partnership with general management
- Role of Social Services and Voluntary Sector
- Role and principles of audit and Clinical Governance in Stroke Service evaluation
- Strategies for primary stroke prevention within a population
- Recognise the value of improving services following service evaluation and performance management
- Awareness of tools for risk assessment and risk management
- Awareness of available social welfare and social services entitlements for patients with stork including the operation of the Nursing Homes Support Scheme ('Fair deal').

Skills

- Infection control and risk minimisation
- Leadership skills in clinical setting
- Undertake audit relevant to service provision including local and national audit projects

Assessment & Learning Methods

- Feedback from trainers
- Course: RCPI Diploma in Cerebrovascular and Stroke Medicine or equivalent

Teaching and Training

Objective: To undertake teaching and training of stroke-related topics for medical undergraduates, post-graduates and other healthcare professionals

Knowledge

- Adult learning principles relevant to medical education
- Differentiate between appraisal and assessment
- Outline the workplace-based assessments in use relevant to stroke training
- Outline the appropriate local course of action to assist the failing trainee
- Awareness of the UK Forum for Stroke Training

Skills

- Vary teaching format and stimulus, appropriate to situation, subject and audience
- Provide effective feedback after teaching and promote learner reflection
- Participate in effective appraisal
- Demonstrate effective lecture, presentation, small group and bedside teaching sessions
- Participate in strategies aimed at improving patient education e.g. talking at support group meetings
- Be able to lead departmental teaching programmes including journal clubs
- Recognise the failing trainee

Assessment & Learning Methods

- Feedback from trainers

Research

Objective: To collaborate in research studies relating to stroke and other aspects of cerebrovascular disease

Knowledge

- Principles of clinical research methods, including case control
- Studies cohort studies, and randomised clinical trials
- Sources of bias in research studies
- Uses and abuses of statistics in analysing clinical research
- Principles, advantages and disadvantages of meta-analysis and systematic reviews
- The Data Protection Act, the role of the Medicines and Healthcare Products Regulatory Agency (MHRA) and other relevant legislation concerning clinical research
- Principles of research ethics, and consent relating to competent and incompetent individuals
- GMC guidance on good practice in research
- Funding of stroke research (Stroke Research Network)

Skills

- Analyse and critically assess stroke research publications, including reports of randomised clinical trials
- Explain research studies to patients and carers in lay language
- Offer patients the opportunity to participate in research studies and complete recruitment process
- Obtain consent from patients to enter research studies
- Complete case report forms at entry and follow up
- Complete adverse event report forms appropriately

Assessment & Learning Methods

- Feedback from trainers

Documentation of Minimum Requirements for Training

- These are the minimum number of cases you are asked to document as part of your training. It is recommended you seek opportunities to attain a higher level of exposure as part of your self-directed learning and development of expertise.
- You should expect the demands of your post to exceed the minimum required number of cases documented for training.
- If you are having difficulty meeting a particular requirement, please contact your specialty coordinator

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Programme	Form 045
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Programme	Form 052
Personal Goals Review form	Desirable	1	Training Programme	Form 137
On Call Rota	Required	1	Training Programme	Form 064
Section 2 - Training Activities				
Outpatient Clinics				
TIA /Rapid Assessment of TIA clinics (where available)	Required	20	Training Programme	Form 001
Neurology, Clinical Pharmacology or Geriatric clinics	Required	10	Training Programme	Form 001
Secondary Prevention Clinics and/or Hypertension clinics	Required	5	Training Programme	Form 001
Procedures				
Thrombolysis	Required	10	Training Programme	Form 005
Endovascular procedures observed	Required	5	Training Programme	Form 005
Management Experience	Desirable	1	Training Programme	Form 110
Section 3 - Educational Activities				
Mandatory Courses - if not completed during HST training				
Online NIHSS course	Required	1	Training Programme	Form 006
Delivering Thrombolysis in Clinical Practice	Required	1	Training Programme	Form 006
Diploma in Cerebrovascular and Stroke Medicine or equivalent qualification	Required	1	Training Programme	Form 007
Section 4 - Assessments				
CBD	Required	4	Training Programme	Form 020
Mini-CEX	Required	4	Training Programme	Form 023

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
DOPS	Required	3	Training Programme	Form 021
Quarterly Assessments	Required	4	Training Programme	Form 092
End-of-Post/End-of-Year Assessment	Required	1	Training Programme	Form 092