

London Hyper Acute Stroke Unit  
nursing competencies

# **Assessor's Guide**

*Creating committed and competent HASU nurses across London*



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## Introduction

This Assessor's Guide has been developed by the London Hyper Acute Stroke Unit (HASU) nursing leads to accompany the pan-London HASU Nursing Competencies.

Approximately 400 Band 5 level nurses were recruited at HASUs across London as a requirement for the acute stroke model, many of whom were newly qualified or had no specific stroke experience. In the absence of pan-London stroke-specific training to support acute nursing staff working in the HASUs and Stroke Units (SUs) across London, an opportunity arose to develop stroke specific nursing competencies for Band 5 stroke nurses.

It is recommended that assessors first complete the mentorship course to ensure they have the appropriate level of knowledge and skills to assess HASU nursing competencies. This guide is designed to give assessors more detail on what to look for when assessing nurses against each of the competencies.

Nurses will be supported by an assessor (typically a Band 6 nurse) to work through the competency document and achieve a *minimum standard* of 'Competent' for each section (as per the Benner Assessment Criteria). Assessors may wish to encourage individuals to achieve 'Proficient' or 'Expert' level in certain competencies where appropriate. It is recommended that nurses complete the competencies within a six month timeframe, however it is recognised that some individuals may take longer to complete them.

The assessment process provides the opportunity for two 'Formative Assessments' before a final 'Summative Assessment' is signed off. In the competencies document personal rating (i.e. the individual taking the competencies) is abbreviated by 'PR' and the assessor's rating is abbreviated by 'AR'. As it is likely the nurses will complete the competencies within each section at different times, there is space below each section for comments and feedback on specific competency criteria.

***The HASU nursing competencies are endorsed by the UK Forum for Stroke Training and adhere to the standards set out in the Stroke-Specific Education Framework (SSEF).***

## Competency 1: Stroke knowledge

*The nurse must complete the anatomy and physiology e-workbook.*

### **1.1 Understand the gross anatomy of the brain**

- The lobes of the brain and function
- Motor cortex
- Sensory cortex
- Speech centres (Broca's and Wernicke's areas)
- Auditory cortex
- Visual cortex
- Contra-lateral control

### **1.2 Show an understanding of the blood supply of the brain**

- Can describe that blood is fed to the brain by the carotid arteries (x2) and vertebral arteries (x2) that leads into the basilar artery
- Can name the main arteries Circle of Willis
  - Anterior communicating artery (ACOM)
  - Anterior cerebral artery (ACA)
  - Posterior communicating artery (PCOM)
  - Posterior cerebral artery (PCA)
- Can define the purpose of the Circle of Willis

### **1.3 Show an understanding of the vascular territories and symptoms that may develop**

- Name the three main vascular territories: anterior cerebral, middle cerebral and posterior cerebral
- Define the signs symptoms of a middle cerebral artery stroke
- Describe the signs and symptoms of a anterior cerebral stroke
- Describe the symptoms of a posterior cerebral stroke

### **1.4 Can discuss the different types of stroke and the risk factors**

- Can define *ischaemic stroke*
- Can define *hemorrhagic stroke*
- Can define *sub-arachnoid haemorrhage*
- Can state the risk factors of the three different types of stroke

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## Competency 2: Neurological care

### Assessment

- Differentiates between the three elements of the Glasgow Coma Scale (GCS)
- Demonstrates correct application of pain stimulus
- Demonstrates correct assessment of pupil response
- Understands suitable frequency for neurological observations and when frequency may need to be increased
- Understands neurological deterioration
  - GCS
    - Change / fluctuation
    - Increased effort to achieve same GCS
  - Cardiovascular change
    - Decreased saturation
    - Increased systolic blood pressure
    - Bradycardia
    - Abnormal respiration
  - Causes
    - Hypoglycaemia
    - Sepsis
    - Raised intracranial pressure (ICP) due to oedema, haemorrhage, space occupying lesion, etc.

### **Demonstrates an awareness of the following stroke mimics and how they differ from stroke**

- Migraine
- Seizure
- Bell's palsy
- Hypoglycaemia
- Mass lesion
- Functional hemiparesis

### **Demonstrates an awareness of the indications of the following investigations**

- CT / CTA
- MRI / MRA
- ECHO+/- bubbles
- Carotid Doppler
- Bloods

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### Seizures

- Can identify the characteristics of different types of seizures
- Can discuss appropriate patient management during seizure activity
  - Positioning
  - Airway management
  - Oxygen
  - Safety awareness
  - Medication
  - Documentation
- Demonstrates appropriate skills in managing a patient post seizure

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## **Competency 3: Thrombolysis care**

### **Background**

- Has knowledge and understanding of current and ongoing research
- Stroke Thrombolysis Register (STS MOST)
- NINDS , IST3, ECASS 1/11/111, ATLANTIS,NINDS and EPITHET trials
- Has evidence of NIHSS certificate
- Able to discuss NICE guidelines
- Recent Immediate Life Support (ILS) training

### **Treatment with rt-PA**

- Understands how rt-PA works, lysis, fibrinolysis
- Is able to calculate dosage and maximum dose
- Is able to correctly draw up rt-PA and knows how to administer
- Has demonstrated competency in use of infusion equipment
- Can demonstrate that they know local Trust's thrombolysis protocol for observing patients who have been given rt-PA
- Demonstrates correct placement of blood pressure cuff
- Understands patency of the cannula and ensuring that it is properly secured
- Knows Trust's policy for administration of intravenous medication
- Has demonstrated competency in use of infusion equipment
- Can discuss the Mental Capacity Act and understands the relation to consent and the aphasic patient

### **Adverse side effects / complications**

- Anaphylaxis 0.2%
- Haemorrhage cerebral
- Gastro intestinal haemorrhage
- Management of shock and haemorrhage
- EWS or trigger score for warning of a deterioration
- Neurological / respiratory signs of deterioration
- Leadership skills in escalating concerns regarding medical condition, knows the Trust's policy

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## **Competency 4: Respiratory**

### **4.1 Anatomy and physiology**

- Outline the gross anatomy of the lungs and airways
- Outline the mechanism of breathing
- Describe the transport of oxygen in the blood
- Describe the nervous and chemical control of respiration

### **4.2 Respiratory assessment**

- Discuss causes of airway obstruction
- Discuss respiratory assessment with regard to look, listen and feel approach
- Demonstrates the ability to perform accurate respiratory observations and can discuss normal and abnormal respiratory rates
- Demonstrate knowledge of the importance of assessing respiratory rhythm including depth and symmetry
- Demonstrates skills of chest auscultation

### **4.3 Airway management (see also 4.5 Respiratory distress)**

- Can name two types of artificial airways and discuss procedures for placement and the rationale for their use
- Can discuss different types of suction and indication for use
  - Oropharyngeal
  - Nasopharyngeal
  - Pre-oxygenation
  - Catheter size
- Saturation monitoring
- Discuss rationale for
  - Placing a patient in the recovery position
  - Head tilt, chin lift
  - Jaw thrust
- Identification of airway compromise
  - Stridor
  - Snoring
  - Wheeze
  - Abdominal breathing, including see saw pattern for total occlusion
  - Coughing, gagging, gasping
- Managing compromised airway
  - Position back slaps
  - Abdominal thrusts
  - Suctioning removal of foreign objects in line with UK Resuscitation Council guidelines

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#### 4.4 Oxygen therapy

- Discuss the importance of humidification in the patient receiving oxygen therapy
- Discuss oxygen administration devices and the maximum Fio2 delivered in each

#### 4.5 Respiratory distress

- Demonstrates an understanding of treatment required for a patient with respiratory distress
- Can discuss causes of respiratory distress
- Can discuss in broad terms what is meant by the terms Type 1 and Type 2 respiratory failure
- Can describe how to treat respiratory distress
  - Oxygen therapy
  - Positioning
  - Utilising physiotherapy
  - Suctioning/expectorating
  - Nebuliser therapy
  - Recognising when to ask for help

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## Competency 5: Cardiovascular care

### **Anatomy and physiology**

- Draw a diagram of the structure of the heart, indicating the normal flow of blood and the electrical conduction
- Describe the sequence of events in the cardiac cycle and relate this to the normal electrical conduction
- Describe the nervous regulation of the heart
- Name the great veins of the heart
- Define pre load, after load, contractility and systemic vascular resistance
  - chambers of the heart
  - Functions of the heart
  - Mitral valve
  - Bicuspid valve
  - Layers of the heart
  - Conduction system

### **Blood**

- Understands what substances are transported by blood
- Understands coagulation

### **ECG monitoring**

- Explain the importance of ECG monitoring during acute phase of stroke

### **Pulse**

- Demonstrates taking correct radial and brachial pulses
- Identifies abnormal pulse rates and rhythms and explains their significance in acute stroke
- Rhythms for identification are:
  - Sinus rhythm
  - Sinus bradycardia
  - Sinus tachycardia
  - Atrial fibrillation
  - Atrial flutter
  - Ventricular tachycardia
  - Ventricular fibrillation
  - Asystole
  - First degree heart block
  - Second degree type 1 heart block
  - Second degree type 2 heart block
  - Complete AV disassociation

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**Shock**

Can give a basic explanation of the pathophysiology of shock and its initial treatment

- Hypovolaemic
- Cardiogenic
- Sepsis
- Anaphylactic
- Neurogenic

**Cardiovascular medication used in stroke patients**

Can explain the mode of actions/adverse reactions of the following medications

- Labetalol
- Warfarin
- Glyceryl trinitrate (GTN)

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## **Competency 6: Complication, prevention and detection**

### **6.1 Dysphagia screen**

- Identify how the environment impacts on a person's ability to swallow
- Identify any supports that are needed to facilitate the swallow test
- Is able to effectively carry out three supervised dysphagia screens
- Can describe the three phases of the swallowing process
  - Oral
  - Pharyngeal
  - Oesophageal
- Can identify underlying conditions affecting swallow
  - Diagnosis
  - Chest status
  - Cognition
  - Alertness
  - Perceptual deficit
  - Mood
  - Oral hygiene
- Can identify signs and symptoms of an abnormal swallow
  - Coughing
  - Choking
  - Oxygen administration, if needed
  - Oral/tracheal suction
- Able to terminate a swallow assessment if any of the signs above are present

### **6.2 Management of sepsis and infection control**

- Is able to appropriately treat patients who are pyrexial according to local policy
- Is able to identify that pyrexia in acute stroke can worsen prognosis/outcome
- Can identify signs and symptoms of sepsis:
  - Tachycardia
  - Tachypnoeic
  - Raised white blood cell count
  - Raised inflammatory markers
  - Pyrexia / hypothermia
  - Hypotension
- Has knowledge of local sepsis protocol
- Can identify common causes of sepsis in acute stroke including
  - Urinary tract infection
  - Aspiration pneumonia
  - Pneumonia

- Able to discuss the initial management of sepsis
  - IV fluid
  - Urine / sputum / faeces cultures as necessary
  - Blood cultures
  - Antipyretics
  - Oxygen administration as appropriate
  - Nebulisers
  - Chest physiotherapy
  - Positioning
  - Antibiotics
- Has knowledge of local infection control policy and can apply to repatriation from HASU
  - MRSA screen
  - Handing over of information
  - Use of side room if appropriate
  - Knowledge of when to repatriate

### **6.3 Blood glucose management**

- Able to demonstrate knowledge of blood sugar regulation including
  - Pancreas
  - Insulin
  - Glucagon
  - Glycagon
  - Glycogenolysis
  - Glycogenesis
- Can identify other factors that affect blood sugar regulation including steroids, infection and trauma
- Can identify the difference between Type 1 and Type 2 diabetes
  - Type 1 - Insufficient or nonexistent production of insulin
  - Type 2 - Decreased response to insulin in the tissues of the body
- Can identify normal range of blood glucose level and can manage hypo or hyperglycaemia according to local policy including diabetic ketoacidosis
- Has knowledge of the effect of hyperglycaemia in acute stroke including size of infarction and its effect on neuronal cells

### **6.4 NG tube insertion and nutrition**

- Can safely pass an NG tube following local policy
- Can accurately complete a MUST assessment on a stroke patient
- Can identify signs and symptoms of dysphagia
  - Facial weakness
  - Dysarthria
  - Coughing or choking on food

- Aware of legal and ethical issues with regards to feeding including
  - Nasal bridles / hand restraint
  - When to discontinue feeding
- Aware of the necessity of good oral hygiene in a dysphagic patient

### **6.5 Hydration and fluid balance**

- Can complete a fluid balance chart accurately and has awareness of an acceptable fluid balance
- Able to administer IV fluids safely
- Can give oral fluids safely to a stroke patient and can identify when help is needed
- Can identify common colloids (normal saline, Hartmann's)
- Common crystalloids (Gelofusin)
- Is able to identify that glucose hydration in acute stroke patients is not advisable due to the effect of hyperglycaemia on neuronal cells
- Can identify oliguria and give examples of causes of low urine output
- Can demonstrate normal urea and creatinine levels and understand the implications of abnormal results

### **6.6 and 6.7 Bladder and bowel management**

- Able to identify the main anatomical features of the urinary system
- Can demonstrate knowledge of the process of micturition
- Able to assess a patient's continence and understands the importance when planning care
- Can safely use a bladder scanner and interpret the results correctly
- Able to catheterise a patient successfully using aseptic technique
- Can identify signs of urinary tract infection
  - Burning on micturition
  - Offensive urine
  - Pain upon micturition
  - Urge to urinate
  - Frequency of micturition
- Able to understand bowel assessment and its importance as well as its impact on urinary incontinence, including the use of the Bristol stool chart
- Can identify causes of bowel dysfunction including neurogenic bowel dysfunction
- Can discuss the role of laxatives in bowel care
  - Bulk forming
  - Stimulant
  - Osmotic
  - Bowel cleansing

### 6.8 Pressure area care

- Able to assess a patient using the Waterlow risk score and understands the factors that contribute to pressure ulcers including early mobilisation
- Can grade pressure ulcers appropriately
- Can dress a pressure ulcer using the appropriate dressings

### 6.9 Positioning and limb management

- Demonstrates the benefits of good positioning and strategies to achieve
  - Respiratory function
  - Functional potential
  - Swallowing
  - Communication
  - Arousal
  - Range of movements
- Aware that patients with a dense hemiparesis are at risk of developing hemiplegic shoulder pain
- Aware of local VTE prophylaxis guidelines and why acute stroke should be exempt
- Aware of CLOTS trial and the indication for graduated compression stockings in acute stroke patients

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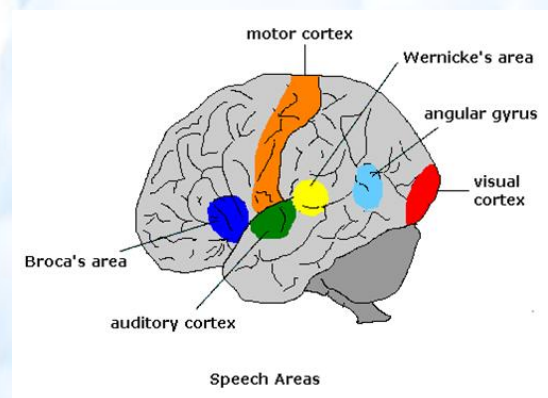
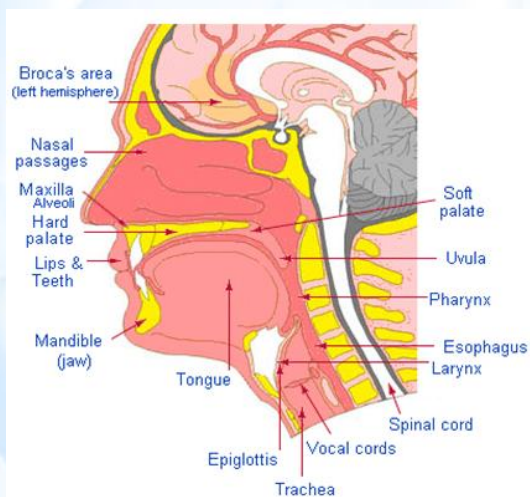
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## Competency 7: Communication

- Discusses language in relation to stroke
- Able to complete three pre morbid assessments of a person's communication
- Lists resources available (e.g. pictures boards, aphasia handbook)
- Discusses barriers to communication (e.g. noise)
- Demonstrate strategies for communicating with aphasic patients (e.g. closed questions)
- Discuss cognition in relation to communication
- Describe how depression, memory, anxiety and emotional ability can affect communication
- Uses the Mental Capacity Act to discuss consent issues
- Able to discuss the role of the Stroke Association and Connect - the communication disability network
- Label below diagrams



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## Competency 8: Secondary prevention

- Able to discuss modifiable and non modifiable risk factors for stroke and how these contribute to a person’s risk of stroke
  - High blood pressure
  - Cigarette smoking
  - Diabetes mellitus
  - Carotid or other artery disease
  - Atrial fibrillation
  - Other heart disease
  - Sickle cell disease
  - High blood cholesterol
  - Poor diet
  - Physical inactivity and obesity
  - Drug abuse
  - Alcohol abuse
  - Socioeconomic factors
  - Heredity (family history) and race
  - Age
  - Sex
  
- Discusses the importance of behavioural change including the family
- Able to monitor medication compliance
- Describes the common drugs used in secondary prevention including their side effects
- Can access information on driving laws

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### Competency 9: End of life care

- Able to discuss why and when to commence the Liverpool Care Pathway (LCP)
- Can complete the LCP, interpret results and act accordingly
- Able to signpost family and carers who are in need of extra support (e.g. bereavement counselling)
- Acts as the patients advocate amongst the multidisciplinary team

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