

NEUROSURGERY PROFORMA

CURRICULUM (see tracking document 4a)

Section	Page	Change	Reason
3.5.1	13-14	Addition of generic paragraphs on genomics, clinical informatics and sustainability. Footnotes to further references added.	These paragraphs have been included in surgical curricula to emphasise the importance of emerging areas in healthcare, ensuring that trainees remain adaptable and informed as surgical practice evolves.
5.4	38	In Management and Leadership – added wording ‘ across relevant health services and the variations between nations’	Enhanced wording proposed by lay/patient stakeholders following consultation. Trainees ought to understand any variations between the relevant health services, especially in a speciality where cross-border flows are likely.
5.4	39	In Clinical experience section – added wording – ‘ To ensure opportunities to acquire the breadth of curricular competencies in a variety of learning environments and cultures, trainees should, where geographically possible, complete a training programme that includes rotation through multiple units or sites. This recognises the importance of an ability to constructively compare different approaches to delivering surgical patient care and work-based cultures’.	To ensure optimal exposure and learning from different training cultures and environments, as well as clarifying the need for full curricula coverage. This is consistent with other curricula, namely Urology, Plastic Surgery and Otolaryngology
Throughout curriculum document		<ul style="list-style-type: none">• Amended cover page date and additional authors related to this curriculum update• Health Education England (HEE) replaced with NHS England (update)• HEE local offices removed (update)• Corrected hyperlinks (updates)• Minor changes in light of feedback – see summary of feedback and comments in track changes.	Editorial updates

SYLLABUS

Appendix	Change	Reason
Appendix 2 Syllabus	Skill level description change	The words ' <i>under direct supervision</i> ' have been added to standard 2 to clarify that, while trainees at this level can perform a straightforward procedure fluently, they must do so with continuous oversight from a supervisor to ensure patient safety and proper skill development. This addition also helps to better differentiate this level from others, particularly level 3, where trainees begin to work more independently.

Domain: O - Objective / K - Knowledge / CS - Clinical skills / TS - Technical skills

Syllabus topic	Domain (O / K / CS / TS)	Describe the change	Reason for change
COMMON CORE			
Basic sciences			
The clinical method in surgical practice			
Peri-operative care			
Basic surgical skills			
Critical care			
Surgical care of the paediatric patient			
Management of the dying patient			
Health promotion			
CORE NEUROSCIENCES			
Neuroanatomy			
Neurophysiology			
Neuropharmacology			
Neuropathology	K	Addition - tuberculosis	Has unique CNS and spinal implications
Neuroradiology			
Clinical neurophysiology			
Neuropsychology			

Neurological rehabilitation			
Medical ethics			
Neurogenetics			
COMMON NEUROLOGICAL PRESENTATIONS			
Headache - acute and chronic			
Weakness and paralysis			
Dizziness, unsteadiness and falls			
Pain and sensory loss			
Hearing disorder			
Visual disorder			
Language and speech disturbance			
Swallowing disorders			
Disorders of the Sphincteric and sexual function			
Movement disorder			
Memory and cognitive disorders			
Behavioural disorders			

Phase 1 Critical Conditions			
Impaired consciousness and seizures	TS	Removal - endotracheal intubation	Not a technical skill required of a neurosurgeon
Cranial trauma			
Acute hydrocephalus	TS	Amendment	Correct spelling of tapping
Acute tumour presentations			
Spontaneous intracranial haemorrhage			
CNS infections			
Spinal trauma			
Spinal oncology			
Acute spinal disorders and cauda equina syndrome			

Emergency paediatric neurosurgery	TS	Amendment	Correct spelling of tapping
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Phase 1 Index Procedures			
Lumbar puncture with lumbar drain insertion			
Insertion of ICP monitor			
Burr hole evacuation of chronic subdural haematoma			
Insertion of EVD			
Craniotomy			
Lumbar decompression (approach)			

PHASE 2 TOPICS			
Cranial trauma			
Early and surgical management of the head injured patient			
Neuro-intensive care and ward-based care of the head-injured patient			
Neurological rehabilitation following head injury			
CSF Pathologies			
Hydrocephalus	CS	Amendment	Correct spelling of papilloedema
Idiopathic and Venous Intracranial Hypertension	K	Addition - intracranial hypotension	Overlap with management with Neurology and a possible complication of spinal surgery
	TS	Addition - Infusion testing	Key modern technique for the assessment of shunt patency
Arachnoid cysts			
Hindbrain Herniation and Syringomyelia			
Neuro-oncology			

General principles of neuro-oncology			
Intrinsic tumours			
Meningiomas	O	Amendment	Correct spelling of meningiomas
Cerebellopontine angle tumours			
Sellar and suprasellar mass lesions			
Intraventricular and pineal region tumours			
Skull and skull base tumours			
Neurovascular			
Primary intracerebral haemorrhage			
Aneurysmal subarachnoid haemorrhage			
Intracranial aneurysms	K	Addition - knowledge of endovascular options including coiling, stents, flow diversion, WEB and contour devices	Key components of the comprehensive management of intracranial aneurysms
Vascular malformations			
Occlusive cerebrovascular disease			
CNS Infection			
Intracerebral abscess and subdural empyema			
Spinal Trauma			
General management of the spinal injury patient			
Cervical spine fractures	CS	Amendment - Change of “spinal” shock to “neurogenic” shock	Incorrect terminology
Thoraco-lumbar fractures			
Spinal Oncology			
Malignant extradural spinal tumours			
Intradural extramedullary and intramedullary tumours			
Spinal Degenerative Disease			
Lumbar radiculopathies			

Compressive cervical myeloradiculopathies			
Spinal Infection			
Spinal epidural abscess			
Vertebral osteomyelitis and discitis			
Pain, Epilepsy and Functional			
Movement disorders			
Chronic pain			
Trigeminal neuralgia and hemifacial spasm			
Epilepsy			
Paediatrics			
Paediatric head and spinal injury			
Paediatric hydrocephalus			
Paediatric tumours			
Paediatric intracranial vascular disorders			
Peripheral Nerve Neurosurgery			
Peripheral nerve compression			

Phase 2 Critical Conditions			
Impaired consciousness	TS	Removal - endotracheal intubation	Not a technical skill required of a neurosurgeon
Cranial trauma			
Acute hydrocephalus	TS	Amendment	Correct spelling of tapping
Acute tumour presentations			
Spontaneous intracranial haemorrhage			
CNS infections			
Spinal trauma			
Spinal oncology			
Acute spinal disorders and cauda equina syndrome			

Emergency paediatric neurosurgery	TS	Amendment	Correct spelling of tapping
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Phase 2 Index Procedures			
Advanced adult supratentorial			
Endoscopic and transphenoidal			
Convexity and falcine meningiomas			
Advanced adult infratentorial			
Intradural spine			
Complex spinal fusion			
Advanced paediatric supratentorial			
Advanced paediatric infratentoria			

PHASE 3 TOPICS			
Advanced microsurgical skills			
Advanced microsurgical skills			
Neuro-oncology			
Advanced surgical techniques for intrinsic tumours	K, TS	K- Addition- DTI tractography, TS - Addition fluorescence guided surgery	Key components of the armamentarium of a modern neuro-oncology surgeon
Tumours of the ventricular system and pineal region			
Brainstem tumours			
Skull Base and Pituitary			
Skull base meningiomas			
Anterior and middle fossa skull base tumours			
Sellar and suprasellar mass lesions			
Vestibular Schwannoma			
Pain, Epilepsy and Functional			
Surgical management of pain	TS	Previously described as “open”	Cordotomy is now a percutaneous procedure

Neurovascular compression syndromes			
Spasticity			
Epilepsy			
Movement disorders			
Surgery for mental illness			
Neurovascular			
Intracranial aneurysms			
Intracranial arteriovenous malformations			
Intracranial dural arteriovenous fistulae			
Cerebral ischaemia			
Spine			
Spinal trauma	C	Addition - multidisciplinary approach to spinal cord injury management	Management of spinal trauma is now a complex MDT process
Metastatic spinal disease			
Intramedullary tumours			
Advanced surgery of the ageing and degenerative spine			
Rheumatoid disease			
Paediatrics			
Paediatric neuro-oncology			
Paediatric head and spinal injury			
Paediatric Hydrocephalus			
Congenital spinal disorders			
Craniofacial disorders			
Paediatric epilepsy			
Paediatric intracranial vascular disorders			
Paediatric spasticity and movement disorders			

Phase 3 Critical Conditions			
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Impaired consciousness and seizures	TS	Removal - endotracheal intubation	Not a technical skill required of a neurosurgeon
Cranial trauma			
Acute hydrocephalus	TS	Amendment	Correct spelling of tapping
Acute tumour presentations			
Spontaneous intracranial haemorrhage			
CNS infections			
Spinal trauma			
Spinal oncology			
Acute spinal disorders and cauda equina syndrome			
Emergency paediatric neurosurgery	TS	Amendment	Correct spelling of tapping

Phase 3 Index Procedures			
Advanced adult supratentorial			
Endoscopic and transphenoidal			
Convexity and falcine meningiomas			
Advanced adult infratentorial			
Intradural spine			
Complex spinal fusion			
Advanced paediatric supratentorial			
Advanced paediatric infratentorial			