Neurosurgery Entrustable Professional Activities (EPA)

EPA titles	EPA Entrustment Level to be attained by Exit
EPA 1: Managing General Neurosurgical Outpatient Clinics	Level 4
EPA 2: Managing Neurosurgical Inpatients	Level 4
EPA 3: Performing On-call Duties	Level 4
EPA 4: Performing Neurosurgical Procedures	See nested EPA for details
EPA 4.1: Craniotomy and Resection of Convexity Meningioma	Level 4
EPA 4.2: Craniotomy for Intra-axial Brain Tumours	Level 4
EPA 4.3: Decompressive Craniectomy	Level 4
EPA 4.4: Aneurysm Approach / Craniotomy and Splitting of the Sylvian Fissure	Level 4
EPA 4.5: Anterior Cervical Exposure, Discectomy and Fusion	Level 3
EPA 4.6: Posterior Spinal Exposure and Decompression without Instrumentation	Level 3
EPA 4.7: Paediatric VP Shunt Insertion and Ventriculostomy	Level 2
EPA 4.8: Paediatric Craniotomy	Level 2
EPA 4.9: Adult VP Shunt Insertion/Revision and Ventriculostomy	Level 4

Entrustment Scale

Entrustment Level	Description
Level 1	Be present and observe, but no permission to enact EPA
Level 2	Practice EPA with direct supervision
Level 3	Practice EPA with indirect supervision
Level 4	Unsupervised practice allowed
Level 5	May provide supervision for the practice of this EPA

EPA 1: Managing General Neurosurgical Outpatient Clinics

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Title	**Managing General Neurosurgical Outpatient Clinics**
Specifications and limitations	The practice of the EPA should align with Appropriate and Value-based Care (AVBC) principles where relevant – (i) Care is evidence-based, (ii) Care is patient-centred, (iii) Care is right-sited, (iv) Care is integrated and coordinated, and (v) Care is cost-effective and sustainable. This EPA contains the following elements: 1. Make a full assessment of patients by taking a structured history and by performing a focused clinical examination 2. Request, interpret and discuss appropriate investigations to synthesise findings into an overall impression, management plan and diagnosis 3. Identify and plan the management of co-morbidity and medical complications, referring to other specialties as appropriate. 4. Select patients for conservative and operative treatment plans as appropriate. 5. Communicate using language understandable to the patient/next-of-kin, and demonstrate communication skills in breaking bad news. 6. Obtain informed consent for procedure in collaboration with senior surgeon. 7. Escalate to a senior surgeon appropriately. 8. Make appropriate referrals to other specialties and/or allied health and completes all required documentation. 9. Book operative cases with appropriate urgency, duration, equipment and patient preparation.
	Limitations: Booking of cases and informed consent are limited to the operative cases in EPA 4 and excludes niche subspeciality cases.
EPA Entrustment Level to be Attained by Exit	Level 4

EPA 2: Managing Neurosurgical Inpatients

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Title	**Managing Neurosurgical Inpatients**
Specifications and limitations	The practice of the EPA should align with Appropriate and Value-based Care (AVBC) principles where relevant – (i) Care is evidence-based, (ii) Care is patient-centred, (iii) Care is right-sited, (iv) Care is integrated and coordinated, and (v) Care is cost-effective and sustainable. This EPA contains the following elements: 1. Identify at the start of a ward round if there are acutely unwell patients who require immediate attention. 2. Coordinate the ward round, demonstrating prioritisation and inclusiveness of patients to be seen. 3. Make a full assessment of patients by taking a structured history and by performing a focused clinical examination. 4. Request, interpret and discuss appropriate investigations to synthesise findings into an overall impression, management plan and diagnosis. 5. Identify when the clinical course is progressing as expected and when medical or surgical complications are developing and recognise when operative intervention or re-intervention is required. 6. Ensure follow-through of management plans prescribed for the day. 7. Manage complications safely, requesting help from colleagues where required. 8. Identify and plan the management of co-morbidity and medical complications, referring to other specialties as appropriate. 9. Make good use of time, ensuring all necessary assessments are made and discussions held, while continuing to make progress with the overall workload of the ward round. 10. Identify when further therapeutic manoeuvres are not in the patient's best interests, initiate palliative care, refer for specialist advice as required, and discuss plans with the patient and their family. 11. Summarise important points at the end of the ward rounds and ensure all members of the multi-disciplinary team understand the management plans and their roles in achieving them. 12. Prescribe appropriate advice for discharge documentation and follow-up.
	Limitations: • ICU patients ('closed-system' with dedicated intensivists involved). • ED patients (assessed under EPA 3) • 'Blue-letter' referred patients (assessed under EPA 3)
EPA Entrustment Level to be Attained by Exit	Level 4

EPA 3: Performing On-call Duties

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Title	**Performing On-call Duties**
Specifications and limitations	The practice of the EPA should align with Appropriate and Value-based Care (AVBC) principles where relevant – (i) Care is evidence-based, (ii) Care is patient-centred, (iii) Care is right-sited, (iv) Care is integrated and coordinated, and (v) Care is cost-effective and sustainable. This EPA contain the following elements: 1. Make a full assessment of patients by taking a structured history and by performing a focused clinical and neurological examination 2. Request, interpret and discuss appropriate investigations to synthesise findings into an overall impression, management plan and diagnosis 3. Identify and plan the management of co-morbidity and medical complications, referring to other specialties as appropriate. 4. Select patients for conservative and operative treatment plans as appropriate (after informing and discussing with the consultant on call during training) and explaining these to the patient, and carrying them out 5. Assess acutely unwell and deteriorating patients promptly 6. Consider urgency and potential for deterioration, in advocating for the timely execution of stabilisation therapy (in consultation with specialist advice during training). 7. Communicate using language understandable to the patient/next-of-kin, and demonstrate communication skills in breaking bad news. 8. Make and deliver ongoing peri /post-operative neurosurgical care in ward and critical care settings, recognising and appropriately managing medical and neurosurgical complications, and referring for specialist care when necessary 9. Advise teams from other specialties on the immediate management of neurosurgical conditions during blue letter consultations 10. Give and receive appropriate handover (Need to include blue letter management)
	Limitations: Informed consent limited to the operative cases in EPA 4 and excludes niche subspeciality cases.
EPA Entrustment Level to be Attained by Exit	Level 4

EPA 4: Performing Operative Neurosurgical Procedures

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Title	**Performing Operative Neurosurgical Procedures**
Specifications and limitations	The practice of the EPA should align with Appropriate and Value-based Care (AVBC) principles where relevant – (i) Care is evidence-based, (ii) Care is patient-centred, (iii) Care is right-sited, (iv) Care is integrated and coordinated, and (v) Care is cost-effective and sustainable. 1. This EPA comprises the following nested EPAs: EPA 4.1: Performing Craniotomy and Resection of Convexity Meningioma EPA 4.2: Performing Craniotomy for Intra-Axial Brain Tumours EPA 4.3: Performing Decompressive Craniectomy EPA 4.4: Performing Aneurysm Approach / Craniotomy and Splitting of the Sylvian Fissure EPA 4.5: Performing Anterior Cervical Exposure, Discectomy and Fusion EPA 4.6: Performing Posterior Spinal Exposure and Decompression Without Instrumentation EPA 4.7: Performing Paediatric VP Shunt and Ventriculostomy EPA 4.8: Performing Paediatric Craniotomy EPA 4.9: Performing Adult VP Shunt Insertion / Revision and Ventriculostomy 2. This EPA includes the following elements: i. Review the operating list, accounting for case mix, skill mix, operating time, clinical priorities, and patient co-morbidity ii. Consider urgency and potential for deterioration, in advocating for the timely execution of a procedure or therapy iii. Ensure the “Time-Out” / safety checklist (or equivalent) is completed for each patient iv. Prescribe prophylactic antibiotics, when required, based on local protocol v. Prioritise and order relevant investigations, and interpret imaging to guide surgical approach selection vi. Synthesise the patient’s surgical condition, the technical details of the operation, comorbidities, and medication into an appropriate operative plan for the patient vii. Obtain informed consent for procedure and communicate procedural risks, alternative treatments viii. Perform and/or assist the operative procedures to the required level in a technically safe manner as described in the DOPS technical steps operative form ix. Adapt operative strategy to take account of pathological findings and any changes in clinical condition x. Demonstrate application of knowledge and non-technical skills in the operating theatre, including situation awareness, decision-making, communication, leadership, and teamwork xi. Manage unexpected findings and intraoperative complications appropriately and safely, including proper escalation to senior surgeon as required xii. Write a full operation note for each patient, ensuring inclusion of all post-operative instructions xiii. Communicate long-term follow-up to patients and next-of-kin

	xiv. Deliver ongoing post-operative surgical care in ward and critical care settings, recognising and appropriately managing medical and surgical complications, and referring for specialist care when necessary.
	Limitations: See nested EPAs for details
EPA Entrustment Level to be Attained by Exit	See nested EPAs for details

NESTED EPA REQUIREMENTS

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- The requirements for the nested EPAs should be read in context with the parent EPA 4 above.

Nested EPA	Procedure(s)	EPA Entrustment Level to be attained by Exit
4.1	**Craniotomy and Resection of Convexity Meningioma** (Excludes complex cases involving dural venous sinuses and skullbase)	Level 4
4.2	**Craniotomy for Intra-Axial Brain Tumours, Including Posterior Fossa Lesions** (Excludes gliomas and complex cases involving deep and/or eloquent locations e.g. intraventricular, brainstem, insular lesions)	Level 4
4.3	**Decompressive Craniectomy** (Excludes complex neurotrauma involving cranial facial structures and dural venous sinuses)	Level 4
4.4	**Aneurysm Approach / Craniotomy and Splitting of the Sylvian Fissure**	Level 4
4.5	**Anterior Cervical Exposure, Discectomy and Fusion** (Excludes complex multi-level (>2) degenerative and traumatic conditions)	Level 3
4.6	**Posterior Spinal Exposure and Decompression without Instrumentation** (Excludes complex deformity conditions)	Level 3
4.7	**Paediatric VP Shunt Insertion and Ventriculostomy** (Excludes revision surgery)	Level 2
4.8	**Paediatric Craniotomy**	Level 2
4.9	**Adult VP Shunt Insertion/Revision and Ventriculostomy**	Level 4