



MALAYSIAN MEDICAL COUNCIL

SPECIALTY-SPECIFIC REQUIREMENTS (SSR)

(NEUROSURGERY)

Prepared By:

Specialty Education Subcommittee (SEC)
of the Medical Education Committee (MEC),
Malaysian Medical Council

Approved by the Malaysian Medical Council:

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Preface

1. The Specialty-Specific Requirements (SSR) pertain to requirements within each specialty and specify the minimum requirements pertaining to the training curriculum, trainers, educational resources and head of programme.
2. The Specialty-Specific Requirements (SSR) are intricately linked to the MMC Malaysian Standards for Medical Specialist Training 2019, and the Standards and SSR must be read and applied together.

**Specialty-Specific Minimum Requirements for Training
Curriculum (Based on Area 1.2.4 of Malaysian Standards
for Medical Specialist Training) -**

Neurosurgery

Specialty-Specific Requirements (Reference Standard)	Criteria										
1) Minimum entry requirements for postgraduate training (Standard 3.1.)	i. Fully registered with the Malaysian Medical Council with a current annual practising certificate ii. 2 years of experience in surgical related fields post housemanship (1 year in neurosurgery, 6 months in general surgery, 6 months in other surgical related fields) iii. Successful entry evaluation into the programme										
2) Minimum duration of training programme (Standard 1.2.4 - Table 2)	Completion a minimum of 48 months of specialised training in the specialty programme.										
3) Structure of training (rotation/modules) (Standard 1.2.4 - Table 3 & Table 4) Training overview Training rotation/modules and case mix	The program should have a clear pathway encompassing phases of training which shall include the basic and advanced components in neurosurgery. <table><tr><th>Areas</th><th>Details</th><th>Minimum Duration (months)</th></tr><tr><td>Neurosurgery</td><td>-</td><td>40</td></tr><tr><td rowspan="2">Non-neurosurgical specialties</td><td>Neurology</td><td rowspan="2">8</td></tr><tr><td>Critical Care</td></tr></table>	Areas	Details	Minimum Duration (months)	Neurosurgery	-	40	Non-neurosurgical specialties	Neurology	8	Critical Care
Areas	Details	Minimum Duration (months)									
Neurosurgery	-	40									
Non-neurosurgical specialties	Neurology	8									
	Critical Care										

		Neuroradiology and/or Neuropathology	
*Duration of training per year is 48 weeks			
4) Assessments (Standard 2.2.1)	Assessments should i. Employ appropriate methods and levels that are well-aligned with learning outcomes. These include a variety of methods and tools such as written assessments, clinical assessments, supervisor’s report, logbook, attendance, training attended, practice diary, research report, communication skills including methods appropriate to assess ethics and professionalism. ii. Include formative and summative assessments throughout each rotation, semester, or year of study. iii. Include clear criteria for progression to next year of study. iv. Include an exit evaluation/assessment.		
5) Additional requirements for completion of training (Standard 1.2.4)	i. Completion of graduate-level research or clinical audit project. ii. Basic Life Support iii. Advanced Trauma Life Support iv. High Speed Drilling course v. Ethics and Biostatistics Course vi. Research Methodology		
6) List of competencies to be acquired upon completion of training (Standard 1.1.4)	<u>Generic competencies</u> Able to: i. Independently manage common neurosurgery cases holistically, including complications, whilst considering social, health economics and preventive aspects ii. Function competently and professionally in a team-based environment iii. Maintain a high level of integrity and ethical conduct in practice iv. Ensure effective communication with patients, colleagues and other healthcare-adjacent providers v. Advance the evidence-based practice of surgery through research, audit and scientific writing		

- vi. Exemplify life-long learning through continual professional development, including acquisition of new skills and competencies
- vii. Demonstrate exemplary leadership qualities, including setting and maintaining standards, supporting others and having the resilience to cope with pressure
- viii. Cultivate an entrepreneurial mindset, balancing risks and benefits, for creative problem-solving

Specific specialty competencies

Able to perform the following procedures competently including pre- operative and post-operative care:

Type of surgery (performed independently)	Minimum Number of Cases Performed Independently
<u>CSF Diversion Procedures</u> 1) External Ventricular Drainage 2) Ventriculoperitoneal Shunt	50 30(Adult) 10 (Paeds)
<u>Burrhole Drainage of Subdural Collection</u>	20
<u>Supratentorial Craniotomy</u> Evacuation of Blood Clots /Trauma / Tumours	30 (Adult) 10 (Paeds)
<u>Decompressive Craniectomy</u>	20
<u>Infratentorial Craniotomy /Craniectomy</u>	10

	Trauma/ Tumour/ Infection	
	Spine – Cervical / Lumbar Anterior and Posterior Approaches Non Instrumented	<i>5</i>
	Lumbar Puncture / Drain	<i>10</i>

***Note : These criteria represent the minimum standards. Each educational programme provider may exercise their autonomy to state criteria above and beyond these minimum standards.**

**Specialty-Specific Minimum Requirements (Items 4-7) for
Training Centres (Based on Areas 3-6 of Malaysian Standards
for Medical Specialist Training) -**

Neurosurgery

Item no	Specialty-Specific Requirements (Reference standard)	Criteria														
4	Trainer-to-trainee ratio. (Standard 3.1.3)	1:4														
5	Minimum qualifications and experience of trainers (Standard 4.1.2)	i. Registered with National Specialist Register ii. Completed training-of-trainer course/equivalent														
6	Minimum requirements for educational resource (Standard 5.1.1)	The diagnostic facilities and equipment requirement of the programme training centres must collectively be able to accommodate the following minimum requirement: i. Services <table><thead><tr><th colspan="2">Services/Facilities</th></tr></thead><tbody><tr><td colspan="2">Teaching hospital with wards, clinics, operating theatres</td></tr><tr><td colspan="2">Critical care facilities</td></tr><tr><td colspan="2">Emergency facilities</td></tr><tr><td colspan="2">Educational facilities (library, lecture rooms/auditoriums, Audiovisual (AV) facilities)</td></tr><tr><td colspan="2">Nursing and physiotherapy (general and critical care)</td></tr></tbody></table> ii. Equipment <table><thead><tr><th>Equipment</th><th>Quantity</th></tr></thead><tbody></tbody></table>	Services/Facilities		Teaching hospital with wards, clinics, operating theatres		Critical care facilities		Emergency facilities		Educational facilities (library, lecture rooms/auditoriums, Audiovisual (AV) facilities)		Nursing and physiotherapy (general and critical care)		Equipment	Quantity
Services/Facilities																
Teaching hospital with wards, clinics, operating theatres																
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Educational facilities (library, lecture rooms/auditoriums, Audiovisual (AV) facilities)																
Nursing and physiotherapy (general and critical care)																
Equipment	Quantity															

		Imaging equipment (radiography, Ultrasonography (USG), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), interventional radiology & intraoperative imaging)	1 each								
		Operation Theatre (OT) equipment for the relevant specialties, critical care equipment, intraoperative microscope, intraoperative neurophysiology monitoring, pathology equipment (for Histopathology Examination (HPE), frozen sections, microbiology)	1 each								
		iii. Case Load									
		The case mix and case load of the programme training centres must collectively be able to accommodate the following minimum requirements:									
		<table><tr><th>Areas</th><th>Quantity Per year</th></tr><tr><td>Departmental clinic</td><td>1500</td></tr><tr><td>Surgical admissions</td><td>500</td></tr><tr><td>Elective</td><td>100</td></tr><tr><td>Emergencies neurosurgical operations</td><td>250</td></tr></table>		Areas	Quantity Per year	Departmental clinic	1500	Surgical admissions	500	Elective	100
Areas	Quantity Per year										
Departmental clinic	1500										
Surgical admissions	500										
Elective	100										
Emergencies neurosurgical operations	250										
7	Minimum qualifications and experience of Head of Programme (Standard 6.2.2)	i. 5 years of working experience after national specialist registration ii. Experience in administration and/or academic management									

***Note : These criteria represent the minimum standards. Each educational programme provider may exercise their autonomy to state criteria above and beyond these minimum standards.**

ACKNOWLEDGEMENT

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