
National postgraduate medical curriculum: enhancing anaesthesiology training in Malaysia

Azrina **Md Ralib**¹, Noorjahan Haneem **Md Hashim**², Ina Ismiarti **Shariffuddin**²

¹*Department of Anaesthesiology and Intensive Care, Kulliyah of Medicine, International Islamic University Malaysia, Pahang, Malaysia;* ²*Department of Anaesthesiology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia*

Postgraduate medical education in Malaysia started in 1973 with the launch of two clinical postgraduate programmes, Master of Psychological Medicine and Master of Pathology, by Universiti Malaya. Subsequently, the Government of Malaysia decided the responsibility for postgraduate medical education should rest with the universities, with the involvement of the Academy of Medicine of Malaysia (AMM) and the Ministry of Health (MOH). To date, Malaysian universities offer 23 postgraduate clinical programmes, including Master of Anaesthesiology. These programmes are conducted at individual universities, but in the spirit of uniformity, they are run in collaboration with all universities offering similar programmes as well as the AMM, and the MOH.

There are two pathways for postgraduate anaesthesiology training in Malaysia: the university pathway and the parallel pathway. The university pathway started in 1988; to date, seven universities offer the training programme.¹ The Anaesthesiology Specialty Committee (*Jawatankuasa Kepakaran Anestesiologi*) coordinates training for the university pathway and is responsible for the entrance exam, trainee selection, and conjoint Part I and Part II examinations. The parallel pathway programme, the Fellowship of College of Anaesthetists of Ireland, was recognised by the MOH in 2014. The training programme and Certificate of Completion of Training is organised and managed by the MOH and the College of Anaesthesiologists Academy of Medicine Malaysia.²

Correspondence: Professor Dr. Azrina Md Ralib, Department of Anaesthesiology and Intensive Care, Level 5, Kulliyah of Medicine, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Bandar Indera Mahkota, 25200 Kuantan, Pahang, Malaysia
E-mail: azrinar@iium.edu.my

The Ministry of Higher Education (MOHE) developed the National Postgraduate Medical Curriculum (NPMC) in 2014 to deliver a unified and structured curriculum for training medical specialists throughout Malaysia. It provides a standardised framework to ensure postgraduate training is of the highest standard, thus safeguarding patient safety and quality of care. The first cohort of NPMC documents for 12 specialties was launched in August 2021. The NPMC for Anaesthesiology Training Curriculum was launched recently in the second cohort October 2023.³ The launch marks the continuous efforts of the MOHE, MOH, and the Anaesthesiology Specialty Committee to improve the standard of training and subsequently patients care in Anaesthesia and Critical Care.

The NPMC Anaesthesiology bridges and harmonises the university and parallel pathways. The launch of NPMC Anaesthesiology affects Anaesthesiology training in Malaysia in the following ways:

1. Ensures standardisation across different programmes: NPMC Anaesthesiology provides a common structure and process guide for programme owners to deliver standardised teaching, learning, and assessment to achieve common outcomes for anaesthesiology training in Malaysia. This is important to all stakeholders in ensuring that training standards and outcomes are similar across different platforms.
2. Assists in the accreditation processes: NPMC Anaesthesiology complies with the *Malaysian Standards for Medical Specialist Training* by the Malaysian Medical Council⁴ and the *Code of Practice for Programme Accreditation* by the Malaysian Qualification Agency (MQA), providing a basic framework for higher education providers and institutions in preparing for programme accreditation.
3. Provides clear expectations for trainee selection: In addition to the current entry requirements, NPMC Anaesthesiology includes eight Entry Essential Learning Activities (ELAs) indicating the required knowledge, skills, and attitudes to demonstrate before programme entry. This allows trainers and trainees to prepare adequately before entering the programme.
4. Provides clear expectations of standards: NPMC Anaesthesiology provides a comprehensive, structured curriculum and expected level of attainment for knowledge, skills, and professional behaviours at each stage of training.⁵ This provides an important guide for trainers in teaching, facilitating learning, and assessing trainees.

5. Emphasises competency-based training: The syllabus and learning opportunities are arranged for increasing competence achievement at each specific module and stage of training.⁶ Furthermore, incorporating structured formative assessments supports the development of specific skills and abilities necessary for the anaesthesiologist.
6. Integrates technology: With rapid technological advances, its contribution to medical education should be emphasised. Simulation-assisted learning is instrumental in providing a safe and controlled environment for learning crises, managing rare conditions, and practising procedures.⁶ It also allows for effective feedback and repetitive practice, making individualised learning possible.
7. Enhances collaborative activities between different institutions: NPMC Anaesthesiology provides a shared framework across different programmes and institutions, creating opportunities for a shared training programme, for example, a common platform for e-learning. E-learning is beneficial as it offers flexibility and accessibility to a larger target audience. Sharing educational resources between higher education providers can further enhance the teaching and learning processes by reducing the trainers' academic burden and providing trainees access to experts and collaborators across institutions.
8. Standardises exit criteria across different programmes: NPMC Anaesthesiology provides standardised exit criteria with nine Exit ELAs outlined, which demonstrate the knowledge, skills and attitude required and behavioural markers expected of a trainee about to exit the programme. This ensures that graduates from all programmes achieve equal standards.

Postgraduate medical education in Malaysia has evolved over 40 years since its inception. It has produced thousands of medical specialists fulfilling the needs of the country's healthcare system. NPMC provides an excellent platform to ensure the standards for producing competent specialists for the country. A periodic curriculum review is essential to evaluate the need for change as medicine evolves. Hesitancy for a change will impede progress and the delivery of effective training, eventually compromising our health care system's future.

Acknowledgements

The authors wish to acknowledge the contribution of all NPMC for Anaesthesiology Writing Group (Chan Yoo Kuen, Foo Li Lian, Jaafar bin Md Zain, Jahizah Hassan, Laila Abdul Mukmin, Lee Choon Yee, Marzida Mansor, Melor Mohd Yusof Mohd Mansor, Mohd Fahmi Zakariah, Nik Abdullah Nik Mohamad, Noor Airini Ibrahim, Noorul Hana

Sukarnakadi Hadzrami, Raha Abdul Rahman, Sharon Oh Yeok Gim, Wan Rahiza Wan Mat, and Yong Chow Yen) and contributors.

References

1. Hassan WMNW, Yusoff ATM, Hassan MH, Yusoff MSB, Shukeri WFWM, Yaacob NM. A study of the factors affecting the academic performance of postgraduate examinees in the Master of Medicine (Anesthesiology) Part-1 examination. *Anaesthesia, Pain & Intensive Care*. 2021;25(4):478-86.
2. Arumugam GP. Parallel Pathway Training of the College of Anaesthesiologists, Academy of Medicine of Malaysia in collaboration with the College of Anaesthesiologists of Ireland (CAI). *Berita Anesthesiologi*. July 2021;29(2).
3. National Postgraduate Medical Curriculum (NPMC) for Anaesthesiology Writing Group. *Anaesthesiology & Critical Care Postgraduate Training in Malaysia: Training Curriculum*: Majlis Dekan Fakulti Perubatan Universiti Awam Malaysia; 2023.
4. Malaysian Medical Council. *Medical Education & Recognition*. 31 July 2023. Available from: <https://mmc.gov.my/medical-education-recognition/>
5. Ebert TJ, Fox CA. Competency-based education in anesthesiology: history and challenges. *Anesthesiology*. 2014;120(1):24-31. <https://doi.org/10.1097/ALN.000000000000039>
6. Issenberg SB, Gordon MS, Gordon DL, Safford RE, Hart IR. Simulation and new learning technologies. *Med Teach*. 2001;23(1):16-23. <https://doi.org/10.1080/01421590020007324>

Reviewer Acknowledgement 2023

The Editorial Board of Malaysian Journal of Anaesthesiology gratefully acknowledges the following individuals for reviewing the papers submitted for publication:

1. Professor Dr Nor'azim Mohd Yunos
2. Professor Dr Yin Choy Choy
3. Dr Abdul Jabbar Ismail
4. Dr Lim Siu Min
5. Dr Mohd Afiq Syahmi bin Ramli
6. Dr Mohd Aizad
7. Dr Muhamad Rasydan Abd Ghani
8. Dr Noor Hashida Juita Hassan
9. Dr Sanah Mohtar
10. Dr Sanihah Che Omar