

NeuroEM Special Interest Group: Bridging the Gap in Neurological Emergency

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Abstract

The Neuroemergency Special Interest Group (NeuroEM SIG) was founded in 2022 to address knowledge and skill gaps in neurological emergency management within Malaysia's emergency medicine sector. Since the inception of Malaysia's postgraduate emergency medicine training program in 1998, the field has advanced significantly, including the formation of 11 Special Interest Groups. NeuroEM SIG's mission is to foster multidisciplinary collaboration among emergency physicians, neurologists, and neurosurgeons to enhance the rapid recognition and intervention of neurological emergencies. Through initiatives such as the Malaysia Emergency Neurological Life Support (MyENeLS) and Neurological Emergency Exclusive Updates Series (NEXUS), NeuroEM SIG has trained approximately 170 healthcare professionals across disciplines and borders, supporting ASEAN countries like Indonesia and the Philippines. Additionally, NeuroEM SIG has hosted national symposiums and virtual continuous medical education sessions, accumulating 33 hours of accessible online learning for healthcare providers. Feedback has underscored the efficacy of these efforts in reducing "neurophobia," fostering confidence, and developing competence in neurological emergency management. NeuroEM SIG aspires to cultivate a lasting impact on emergency medicine by addressing the crucial need for specialized neurological care knowledge and bridging interdisciplinary gaps in patient care.

Keywords: neuroemergency, neurophobia, emergency medicine

INTRODUCTION

The four-year postgraduate emergency medicine training program in Malaysia was initiated in 1998. Since then, over 700 emergency physicians (EPs) have successfully graduated from the program. As the field of emergency medicine continues to advance, 11 Special Interest Groups (SIGs) have been established to drive innovation and specialized care within emergency services.¹ Among these, the Neuroemergency Special Interest Group (NeuroEM SIG), founded in 2022, is one of the newest. Its primary objective is to enhance the knowledge base and clinical acumen in managing neurological emergencies. The NeuroEM SIG comprises emergency physicians (EPs) and unites specialists from neurology and neurosurgery. This multidisciplinary collaboration is crucial in advancing early recognition and intervention strategies for patients presenting with acute neurological emergencies, ensuring timely and efficient care for those in critical need. Evidence indicates that prompt recognition, stabilization, treatment, and early referral in time-sensitive neuroemergencies reduce inefficiencies and improve patient outcomes.²

NEUROPHOBIA

Neurology is frequently perceived as a challenging discipline by medical students and clinicians alike. The intricate nature of the nervous system, particularly its neuroanatomical localization, is often presented as a complex concept, contributing to its perceived difficulty. Studies conducted globally demonstrate that neurology is less favoured due to the difficulty in comprehending foundational neuroscience principles.^{3,4} The term “neurophobia” describes the fear of neurology and the difficulty in integrating basic neuroscience knowledge into clinical practice.⁴ Systematic reviews show that neurology is regarded as one of the most challenging subjects, with the lowest



Image 1: The Malaysia Emergency Neurological Life Support (MyENeLS) workshop, where participants underwent two days of intensive learning and practiced at ten skill stations.

knowledge levels among medical students and clinicians.⁵ Clinicians also report the least confidence in assessing, diagnosing, and treating patients with neurological disorders.⁵ Paradoxically, despite its challenges, neurology is often rated as one of the most interesting medical disciplines.^{3,5} To enhance knowledge and skills in this field, innovative teaching methods, case-based discussions, hands-on practice, and technology-assisted education are essential.^{5,6} The NeuroEM SIG has initiated training programs for EPs and emergency medicine residents to help reduce neurophobia.

TRAINING BY NeuroEM SIG

Recognizing the importance of addressing knowledge gaps and the lack of skills in diagnosis and management, NeuroEM SIG is committed to conducting courses such as Malaysia Emergency Neurological Life Support (MyENeLS) and Neurological Emergency Exclusive Updates Series (NExUS). Since 2022, MyENeLS has conducted six sessions, training approximately 170 participants, including emergency physicians, medical officers, paramedics, and medical students. The participants were from diverse departments, including internal medicine and radiology departments. The participants from Indonesia and the Philippines also supported neighboring ASEAN countries.



Image 2: Neurological Emergency Exclusive Updates Series (NExUS) course in collaboration with the Malaysia Epilepsy Council, held at the Endocrine Institute, Putrajaya, on 17th January 2024.

NExUS, in collaboration with the Malaysia Epilepsy Council and the Malaysia College of Emergency Physicians, delivers lectures on acute seizure management presented by neurologists, emergency physicians, and neurosurgeons. Future plans include one-day multidisciplinary lectures on neurological emergencies (e.g., stroke and imaging interpretation) aimed at further enhancing participants' knowledge

and bridging gaps across specialties, fostering better collaboration and understanding.

In addition, NeuroEM SIG successfully organized a two-day national symposium known as Emergency in Neurological Medicine (EMINEMs), attracting 140 participants nationwide from emergency departments, internal medicine, and neurosurgery.



Image 3: Emergency in Neurological Medicine Symposium (EMINEMs): 15-16 July 2024

Virtual CME is another effort to accommodate those unable to attend physical courses. Initiated in March 2021, these sessions initially catered to NeuroEmergency SIG members but later opened to the public due to their broader benefits. Recorded lectures are available on YouTube for those unable to attend live. Owing to increasing physical activity, the frequency of online webinars has been reduced to once every three months. To date, 33 hours of virtual learning sessions have been conducted.



Image 4: Neuroemergency Webinar Series (NEWS), which is held once every 3 months to promote flexibility via online learning related to neurological emergencies topic.

FEEDBACK FROM THE PARTICIPANTS

Positive feedback from participants, particularly for the MyENeLS workshop, indicates that these activities provide a valuable platform for junior doctors to understand the importance of neurological emergencies. They gain confidence to systematically manage neurological emergencies, even in the absence of specialists. By instilling the belief that neurology is a “learnable” skill, NeuroEM SIG hopes to inspire attendees to further their knowledge in this field.

CONCLUSION AND FUTURE DIRECTION

Our efforts to combat “neurophobia,” especially within emergency medicine, are intended to create a lasting impact. As medical litigation related to neurological complaints increases, ensuring that emergency physicians possess optimal knowledge of neurological emergencies is imperative. We aim for a snowball effect that will bolster this knowledge and improve patient care in the future.

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