

# Profile of neurological practice in Myanmar

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## Abstract

Neurological services in Myanmar began in 1969 in the Yangon General Hospital. Presently the country has 10 neurologists and 13 neurosurgeons serving the 54 million populations in 4 neurological centers. The ratio of population per neurologist is 5.4 million. All of the centers have CT scan, 2 have MRI and EEG, and one has electromyography. The pattern of neurological diseases is largely similar to elsewhere, with stroke, epilepsy and headache as the main illnesses treated. There is a training program for neurologists in the Yangon General Hospital. The Myanmar Neurology Society was founded in 2000. It is affiliated to World Federation of Neurology and ASEAN Neurological Association.

## GENERAL INFORMATION

Myanmar, also known as the land of Pagodas is a country with 676,578 sq km, stretching 2200 km from north to south and 925 km from east to west at its widest part. Myanmar's population of 54 million is made up of many ethnic groups, the largest group being Bamar (Burman) constituting about 68% of population.

Myanmar health care system evolves with changing political and administrative system. Health care delivery system has been functioning under the guidance of National Health Committee and all programs of National Health Plan have been carried out in accordance with guidelines and directions of Ministry of Health. National Health Policy was set in accordance with the social objective to narrow gap between health cares for urban and rural areas. Seventy percent of the population is residing in the rural areas.

In Myanmar, there are 14 states and divisions, and divisions are again sub-divided into districts. One district health department oversees 3-7 townships under its jurisdiction. There are at present 52 districts, 324 town-ships, 13,762 village tracts and 65,235 villages in the country. At the District level, there are hospitals for secondary curative care. These have been upgraded by appointment of specialists in clinical care. The District Medical Officer is responsible for the overall health management of the population under his or her jurisdiction.

For the year 2003-2004, there were 790 government hospitals in the country. The total number of doctors was 17,476; 6,331 doctors were serving in the public sector, and 11,145 in

the private sector. The total number of nurses was 16,079.

## NEUROLOGICAL CARE SERVICES

Neurological care services began in 1968 in Yangon General Hospital, Yangon, when the founder Neurosurgeon Dr. U Saw Nyunt started with a team made up of a Neurologist, a Neuroanaesthetist and Neuro-radiologist. Through the passing years, the service had gradually grown in quality and quantity.

Presently there are 4 Neurology Centers in Myanmar, Yangon General Hospital (YGH), Yangon from 1968; Mandalay General Hospital (MGH), Mandalay from 1998; Defense Services General Hospital (DSGH), Mingalardon, Yangon, from 2000; and North Okkalapa General Hospital (NOGH), Yangon from 2002.

Most of the population in Myanmar has no medical insurance. Those who can afford would consult neurologists in private practice while the rest would rely on government hospitals to take care of their sickness, from either neurologists or general physicians.

The staffing and investigatory services available in these centers are listed in Table 1. As shown, there are 10 neurologists and 13 neurosurgeons serving a population of approximately 54 million. The population per neurologist is thus 5.4 million, and 4.2 million for neurosurgeon. Most of the neurologists and neurosurgeons are practicing in government hospitals, but they can also do private practice after their official duties.

**Table 1: The specialists and investigatory services available in the various neurological centers in Myanmar**

Hospitals	No of neurologist	No of neurosurgeon	EEG	EMG/NCS	CT scan	MRI
YGH	4	5	+	+	+	+
MGH	2	3	+	--	+	+
DSGH	1	1	--	--	+	--
NOGH	2	1	--	--	+	--

YGH: Yangon General Hospital, MGH: Mandalay General Hospital, DSGH: Defence Services General Hospital, NOGH: North Okkalapa General Hospital, EEG: Electroencephalography, EMG: Electromyography, NCS: Nerve conduction studies

### THE SPECTRUM OF NEUROLOGICAL DISORDERS

According to the Yangon General Hospital Statistic Report, there were 3,888 patients with neurological disorders seen as outpatients and inpatients in the year 2004. Among them, 54% was male and the remaining 46% was female. The breakdown of the neurological disorders is shown in Table 2. As shown, the spectrum of neurological disorders seen in Myanmar is basically similar to that of many other countries. The number of cases with cerebrovascular disease is high. On the other hand, the incidence of multiple sclerosis is low.

As in many other parts of the developing world, the epidemiological features of the common neurological disorders such as stroke, epilepsy, Parkinson's disease and myasthenia gravis are poorly documented. The etiology causes of central nervous system infections and peripheral neuropathy may be different from that published in the text books, which are usually based on studies from the developed world. Poverty, illiteracy, poor sanitation, and poor access to health care probably directly or indirectly contribute to differences in the etiology as well as care of neurological disease in the developing countries.

**Table 2: Spectrum of neurological disorders including outpatients and inpatients in 2004 at Yangon General Hospital (Total 3,888 patients)**

Diagnosis	No of patients (percent)	Old patients	New patients
Stroke	777 (20%)	457	320
Headache	737 (19%)	420	317
Epilepsy	708 (18%)	368	340
Vertigo/dizziness	504 (13%)	154	350
Polyneuropathy	194 (5%)	82	112
Spinal disorders	194 (5%)	71	123
Cranial nerve palsies	146 (4%)	20	126
Memory impairment	116 (3%)	76	40
Parkinson's disease	77 (2%)	50	27
Pain/neuralgia	77 (2%)	30	47
Myasthenia gravis/myopathy	77 (2%)	53	24
Encephalopathy	77 (2%)	20	57
Dystonia	19 (0.5%)	71	123

## **PROFESSIONAL TRAINING FOR NEUROLOGY**

There are 5 universities of medicine in Myanmar, 3 in Yangon, one each in Mandalay and Magwe. The undergraduate MBBS course extends for 5 years. After successful completion of the final MBBS examination, all students are required to continue the hands-on training for one year as house surgeons. They are posted to the recognized teaching hospitals in Yangon, Mandalay and other State and Division Hospitals. The MBBS degree is awarded only after completion of the house surgeon-ship. The majority of graduates enter private practice after that.

Like many ASEAN countries, formal training programme in Neurology, Cardiology, Gastroenterology, Haematology and other specialties are available in Myanmar. Presently there is only one hospital, Yangon General Hospital that offers training programme in Neurology. The trainee must have the prerequisite of Master Degree in Internal Medicine or MRCP (UK), not older than 50 yrs, and already having 2 years clinical experience in Neurology. There is a formal yearly assessment during the training period. The duration of the training programme is 3 years, and the trainee must submit a thesis by the end of third year.

## **ACADEMIC ACTIVITIES**

Continuous medical education programmes on neurological disorders are usually conducted once or twice per year for general practitioners and junior doctors.

## **PROFESSIONAL ORGANIZATION FOR NEUROLOGY**

Myanmar Neurology Society has been founded since 2000. All members of our society are also members of World Federation of Neurology Society. The Society is also part of ASEAN Neurological Association (ASNA).

## **PUBLIC HEALTH SERVICES**

Field trips on community health care of neurological diseases have been organized in various townships once a year.

A project on community-based strategies for reduction of treatment gap in epilepsy (major seizures) was conducted from March 2005 to December 2006. The project was held at 8 health care centers in Nyaungdon Township, Ayeyarwady Division. The project was a collaboration between

WHO and Department of Neurology, Yangon General Hospital. The aims and objectives were firstly, to reduce the treatment gap for major seizures; secondly, to develop a model through which all persons with major seizures will receive appropriate treatment through a community-based programme and thirdly, to develop a model that can be applied nationwide.