

EVENT REPORT

Symposium

What should Malaysian policy and decision makers know about stroke and how can we do better?

11 August 2022

The Galen Centre of Health and Social Policy organised a symposium on the side-lines of the Malaysia Stroke Conference 2022 in Penang on Thursday, 11 August 2022.

This event was intended to discuss the findings of the White Paper - Advancing And Optimising Acute Stroke Care In Malaysia, and produce a series of recommendations for consideration of adoption into the Government's White Paper for Health Reform

Closing the gaps in stroke care

- Increase the number of neurologists and related multi-disciplines managing stroke cases
- Need for more interventional radiologists and relevant facilities
- Increase availability of thrombolytic therapy
- Decentralise acute stroke care
- Creating stroke care teams in each hospital
- Redesign stroke care delivery in remote areas to overcome logistical challenges
- Provide adequate rehabilitation centres for post-stroke care

Background

The National Health and Morbidity Survey (NHMS) 2019 highlighted that the prevalence of known hypertension among adults aged 18 years and above was found to be 15.9%. One in five deaths among women was attributable to heart disease or stroke in 2018. The Second Malaysian Burden of Disease and Injury Study (2009-2014) found that cerebrovascular disease, namely stroke, were the 3 main causes of death.

Approximately 75% of DALYs were attributable to noncommunicable diseases, with ischaemic heart disease, cerebrovascular disease and diabetes mellitus being the top 3 burden contributors.

With the National Strategic Plan for Non-Communicable Diseases (2016-2025) currently at the mid-term stage of its implementation, there is an opportunity to bring increased attention and commitment to stroke, within the context of the NCD crisis in Malaysia, especially to advance stroke prevention and care at all levels.

Stroke is a disease of immense public health importance with serious economic and social consequences. The burden of stroke lies both in the high mortality and the high morbidity which causes up to 50 percent of survivors being chronically disabled. Globally, it is the number one cause of complex disability.

Gaining a deeper understanding of inequalities in access to stroke detection, care and management presents a significant opportunity to reduce the burden of stroke in Malaysia, particularly within the context of the COVID-19 pandemic.

The purpose of the meeting today is to gather and consolidate views, perspectives and recommendations from people such as yourselves on the current state of ischaemic stroke care to discuss the findings of the White Paper - Advancing And Optimising Acute Stroke Care In Malaysia, which have produced a series of recommendations for consideration of adoption into the Government's White Paper for Health Reform.

The paper covered areas such as patient education, clinical practice for stroke prevention and detection, clinical treatment and professional training, and awareness among policymakers.

The National Health and Morbidity Survey 2019 demonstrated that risk factors for stroke, such as hypertension, diabetes, hypercholesterolemia, and smoking, remain prevalent or increased in the population. Stroke patients from Malaysian studies are on average younger than those in Thailand, United Kingdom, or United States of America. Therefore, improvements in stroke prevention, detection and care practices are especially crucial.

Welcome Remarks

Azrul Mohd Khalib,
Founder and Chief Executive Officer, Galen Centre for Health and Social Policy

Presentation: Advancing And Optimising Acute Stroke Care In Malaysia

In LMICs, people die of stroke at a younger age, **15 years earlier** than those in high-income countries on average. Malaysia is an upper middle-income country however our rates are similar to those of LMICs. In Malaysia, hypertension, diabetes, obesity, and cigarette smoking are of high prevalence and poorly controlled.

Diagnostic tools, stroke, specialists, and stroke care centres are insufficient and of low coverage. The result is often high stroke fatality. Disability and suffering are mainly borne by patients and their families.

An estimate of **over 40,000 strokes** occur in Malaysia annually which result in 13,799 deaths. Strokes are the second leading cause of death and disability, after ischaemic heart disease.

An average of **92 admissions** due to stroke occur daily nationwide and stroke is one of the **top 5 causes of hospitalization**. Ischaemic stroke incidence increased annually by 29.5% while haemorrhagic stroke increased by 18.7%. A quarter of stroke patients in hospital have had a prior stroke and 16% of all hospitalised cases are young strokes (involving those between 19-50 years of age).

At least **32 people** die of stroke each day. Over **500,000 DALYs** were lost to stroke in 2019.

Hypertension is the major risk factor, accounting for 70% of cases while diabetes accounts for 41% and hyperlipidemia accounts for 24%.

Cost of stroke care.

As the number of stroke patients increases, especially of those needing hospitalised care, the cost of stroke management will rise.

Stroke management costs an estimated **213 million ringgit annually**.

Stroke severity also influences the cost of outpatient care such as attendant care, medical equipment purchases, and medical expenses on services such as rehabilitation.

Despite heavily subsidized medical services, patients and their families bear most of the costs related to disability and long-term care, logistics, meals and equipment.

Trajectory of stroke care

Out of 123 registered neurologists, only 31 are practicing in Ministry of Health hospitals with the rest working in private hospitals.

ASU with reperfusion therapy would potentially significantly reduce stroke morbidity & mortality + reduce hospital treatment expenditure (SGH pilot study 2018).

In 2012, thrombolytic therapy approved for use in public hospitals. However, only ten currently provide full access, 24 hours -7 days a week.

Lack of awareness and recognition of stroke symptoms lead to delays. Inconsistent stroke referral systems and post-stroke care across healthcare setting.

Only **0.65%** of stroke patients were treated with thrombolysis. The target rate is set at **3%**.

Recent advances in **thrombolysis and thrombectomy** have shown a strong impact on such treatments restoring function and saving the lives of severely disabled acute stroke patients.

The number of neurologists are limited (123 neurologists + fellows) nationwide. Priority should be given for more to be trained and recruited – especially when considering the increasing ageing population. Roles can be given for primary care doctors, especially in post-stroke care.

Only 21 percent of stroke patients were able to be treated at a medical facility within 3 hours of the onset of symptoms. The **median time was at 7 hours or more**.

Echo trainings for thrombolysis assessment and administration proposed as part of required training plans under Phase I of the stroke care delivery model.

Currently, 11 hospitals, both public and private, have been recognised under the ANGELS initiative and have been awarded.

It remains crucial that doctors **treat stroke patients as early as possible**, for better outcomes.

Conclusion

Reduce the burden of stroke through enhanced preventive strategies, better access to hyperacute care, improved treatment coverage and modalities, and commitment to long term care.

Provide high quality and effective treatment utilising existing resources via a patient-centred approach (70% of population utilize public healthcare system)

Addressing gap in acute stroke services, ensuring that efficacious treatment is available and provided during the critical first 4.5 hours, will save lives, improve outcomes, and reduce the overall cost of stroke, both to society and to the economy.

Malaysia has the **means and opportunity** to transform people's outcomes of stroke. **Better survival outcomes** for stroke patients are possible.

Discussion Panel

*Dr Wong Yee Choon,
Consultant Neurologist, Head of Stroke Unit, Pantai Hospital Penang*

*Dr Irene Looi,
Clinical Neurologist, Hospital Seberang Jaya Penang*

*Lim Shu Min
Physiotherapist, National Stroke Association Penang*

Reflections on stroke care and what our policy makers need to know

Malaysia has done well in terms of what services are available such as hyperacute stroke care, thrombectomies, primary care teams, and rehabilitation. However, there is a lot of room for improvement.

The majority of thrombectomy centers are concentrated in Kuala Lumpur and the Klang region. Other regions of Malaysia are less well-supplied with these services.

A patient who receives a thrombectomy or thrombolysis within the golden period will be able to make a fast recovery within days. This is a significant improvement to patients who do not receive these treatments in time.

Differences between public and private stroke care

Private sector care serves a smaller population but has more neurologists available. However, not all neurologists specialise in stroke care. It would be beneficial to have more neurologists who specialise in stroke and also primary care doctors with an interest in stroke care to fill the gaps.

Hospital Seberang Jaya is the only government hospital in all of Penang that provided thrombolysis and thrombectomy.

It would be helpful to also have collaboration between the public and private sector to increase the provision of stroke care.

Public awareness of stroke

Public awareness of stroke is extremely poor at the moment. More must be done to educate and increase public awareness in recognising stroke symptoms (BEFAST) and knowing where to send stroke patients.

Many people are not aware of where to send someone with a stroke. Patients have a tendency of getting referred several times to different hospitals before they are able to receive appropriate stroke care.

Many hospitals lack the fast-track service to provide an urgent CT scan for stroke patients. Only hospitals that function as stroke centres are able to provide this service. Therefore, it is not just about whether a patient can arrive in the hospital on time. The hospital needs to be prepared to handle stroke cases.

Most patients listen to advice given by healthcare professionals regarding risk factors and consequences but it is difficult to change behaviours, particularly in those of the older generation.

Undiagnosed stroke and asymptomatic stroke

Strokes may go unnoticed if they do not affect movement or produce significant symptoms. Strokes occurring in non-motor areas of the brain may also go unnoticed. The majority of the time strokes do produce symptoms but these may be dismissed by the patient.

Changes in stroke care since COVID-19

The COVID-19 pandemic has slowed down the progress and improvements to stroke care. Perhaps without COVID-19, more progress could have been made and stroke care would be further ahead today.

Q&A

Why is the stroke protocol and directing patients to the right hospital not initiated right away when a person calls 999?

The stroke protocol and screening questions are asked when a patient calls 999. However, sorting out where to send a stroke patient is still an issue. Some people also have a time delay from when they notice their symptoms until they call 999 which delays them from receiving treatment.

Many people prefer to transport themselves to the hospital and do not have enough confidence in ambulance and emergency services. This results in not enough people calling 999 and not calling fast enough.

“At the end of the day, we are helping to save lives. Stroke is life changing but we can make it less traumatic.”

How can we reduce the hospital burden and family burden for existing stroke patients?

Physiotherapists have many patients besides stroke patients and in many cases, patients are only able to attend physiotherapy sessions once a week or once a fortnight. This is insufficient physiotherapy for recovery.

Those who can afford private sector physiotherapy are able to obtain more sessions but there are many who cannot afford it or cannot afford to travel to their physiotherapist.

There has been an increase in rehab over the telephone however many people do not have proper access to remote consults or are unable to navigate the technology.

It would be helpful for healthcare providers to travel to their patients to help overcome this issue and provide more care to more people.

More effort needs to be given to ensure that families of stroke patients are properly educated on post-stroke care. This is to prevent complications or confusion arising which would require patients to return for another consult.

Education is important in emphasizing ways to reduce complications and risk as well as ensuring proper aftercare.

Stroke awareness among healthcare providers is also lacking which results in delays in delivering treatment to patients. More courses on stroke care should be conducted to increase awareness.

Collaboration and teamwork are key factors that are important in ensuring better care for patients. Therefore, collaboration between the private and public sector as well as between healthcare professions will increase coverage and improve care.

The current Ministry of Health is placing smaller hospitals into 'clusters' with larger hospitals. This is to help distribute resources among their patients and ensure that more people have access to healthcare facilities. Hospitals lacking in CT scanners are able to directly send patients to larger hospitals with the available scanners without having to go through another consultation process.

Closing remarks

Malaysia has made progress in stroke care over the years. However, we are not yet on par with neighbouring countries such as Thailand and Singapore. It is still promising that we have made progress and continue to do so but there is still work to be done.

The fact that discussions are being held, such as this symposium, is hopeful and shows that people are interested in improving stroke care.

Anything is possible and where there is a will, there is a way.

The Galen Centre is grateful for everyone coming to this symposium and the excitement given to the Stroke Conference taking place in Penang.

