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# Non-biomedical Stroke Practitioners in Aceh: Panorama

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## Introduction

Research indicates that stroke can be most effectively managed in defined units with a multidisciplinary team of specialist personnel. <sup>1</sup> Such resources are limited in low and middle income countries, where the rate and burden of stroke is increasing most rapidly. <sup>2</sup> This imbalance has resulted in calls to develop more stroke units<sup>3</sup>, and include local or traditional services within rehabilitation.<sup>4,5</sup> However, very little is known about the non-biomedical stroke services that are currently available in these regions. The few studies available illustrate some important areas for consideration. One is that non-biomedical practitioners are regularly consulted by stroke survivors, often in preference to biomedical resources.<sup>6,7</sup> Furthermore the local healers frequently demonstrate a theoretical basis of practice which makes reference to concepts which lie outside of biomedicine.<sup>6-9</sup> These points not only highlight the importance of local healers in stroke care, but also some of the challenges that may occur when local and biomedical systems are brought together, as recommended. Investigation in other low and middle income countries is urgently required.

## Stroke in Indonesia

Indonesia is in the midst of the health transition. It has a rapidly ageing population<sup>10</sup>, smoking is a major health concern<sup>11</sup>, obesity and diabetes are increasing and stroke is already the

number one cause of death<sup>12</sup>. Indonesia also has a long history of medical pluralism and local community based therapies are commonly available. Some of these are noted as being involved in community stroke treatment<sup>13</sup>. Furthermore, despite the commitment of the Indonesian government to promote biomedical health care throughout the country, large short falls of personnel and resources are evident <sup>12-14</sup>. This creates a challenging scenario for the development of resources for stroke.

This paper will present a snapshot of available non-biomedical stroke 'services' used by stroke survivors in two sub-districts of Aceh, Indonesia. Data were collected through interviews, observations, focus groups and vignettes with stroke survivors and their carers (n=29), biomedical practitioners (n=14) and non-biomedical practitioners (n=8).

#### Non-biomedical stroke 'services'

All stroke survivors in this study had sought assistance from a number of healers over a prolonged period of time including both biomedical and non-biomedical practitioners, both of whom were sought equally frequently. All services involved considerable direct and in-direct costs.

The non-biomedical practitioners aligned themselves with one of two categories: traditional (also referred to as village healers or *dukun*) and alternative, a semi-professional group who claimed difference from traditional practitioners through completion of a non-registered but formalised training programme and a limited belief in spirits.

### Traditional practitioners

These healers understood stroke to be an interruption of blood flow which was directly caused by spirits, dirty cold winds, inappropriate consumption of fatty and heating foods, and a number of variations on thinking (fear, heavy thought, thinking too much). Such

explanations were aligned with their held concept of the porous body in which the physical, spiritual and social environment influences health as much as internal bodily functions.

Treatment relied on locating the blockage and a number of tools were used for this purpose. Eggs for instance could act as a lens through which the origin of the blockage could be seen; similarly glass could stick to the skin at the point of the blockage. Once the location was known the blockage and the cause could be removed. Massage physically dispersed the blockage, but also gently enticed the spirit to leave the body. The *mangkur* fruit was also used to capture the removed spirit. Other techniques included *bekam* in which heat or pressure from sucking was applied with cups over the blockage to draw it out. Herbal pharmacopeia was also common. Most used prayer to ensure Allah's blessing on the acts. Once the blockage was removed normal function should return and rapid cure from symptoms was expected.

Most of the traditional healers had inherited their skills or obtained them through periods of intense piety or in dreams. The traditional beliefs were not distinguished from religion and all the traditional healers acknowledged their abilities as gifts from Allah.

#### Alternative practitioners

For the alternative practitioners, stroke was identified through signs of hemiplegia as a result of a blockage in blood flow caused by hypertension, anaemia, diabetes, hot or cold blood, shock, physical tension, thinking too much and spirits in the body. Assessment was undertaken in order to differentiate these causes and investigations included measurement of blood pressure, internal energy flow (*totok*), and function of the internal organs through the regularity of the pulse (an indication of the influence from Chinese medicine).

Treatments similarly illustrated a combination of concepts covering exercise and movement facilitation, as well as deep reflex stimulation at specific points in order to awake the dead limb. The *totok* technique used the internal energy force of the practitioner to improve the flow of the clients' blood.

Like the traditional healers, treatments were usually initiated or accompanied with a plea to Allah for his blessing. The alternative healers reported that full recovery for the patient was dependent on Allah's desire for them to recover and not only on the restoration of blood flow. Successful treatment leading to a cure therefore, was not the responsibility of the healer.

### Summary

All practitioners discussed and demonstrated an understanding and approach to stroke treatment with multiple layers of influence. These predominantly included education, religion and culture (both local to the region and Chinese). These influences presented themselves variously and there were a number of areas of overlap as well as difference between the two categories. Some of these influences were also evident in the biomedical practitioners. A summary is shown in figure 1.

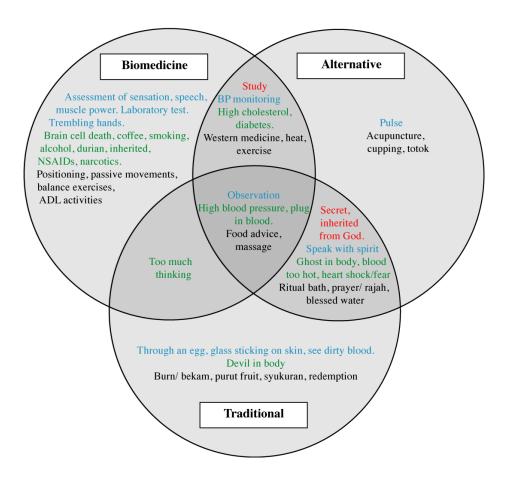
#### Conclusion

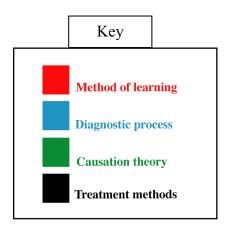
This brief overview challenges some of the statements made about including local healers in the care of people post stroke, supported by global policies on task shifting<sup>15</sup>. Such recommendations do not address the differences in approaches and basis of practice. It is unclear how practitioners who work on the basis of the power of Allah and inherited skills and manage stroke through the redemption of spirits in the body can work within a

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biomedical paradigm of care. Such approaches also assume that local healers are cheaper, more accessible than biomedical services, and are motivated to be included into a formalised care pathway. While this may be true in other areas, this study would not support such assumptions. Models of service provision must be developed that satisfy the calls for best practice within the realities of a particular context. The international stroke community must do more to understand the current realities of local provision and not rely only on models designed for particular (western) contexts.

## Figure 1: Comparison of practice





### References

- (1) Langhorne P, Dennis M, Stroke Unit triallists' Collaboration. Stroke units: an evidence based approach. London: BMJ Books; 1998.
- (2) Strong K, Mathers C, Bonita R. Preventing Stroke: saving lives around the world. Lancet Neurol 2007;6(2):182-187.
- (3) Chandra V, Pandav R, Laxminarayan R, Tanner C, Manyam B, Rajkumar S, et al. Neurological Disorders. Disease Control Priorities in Developing Countries. second ed. NY: Oxford University Press; 2006. p. 627-644.
- (4) Brainin M, Teuschl Y, Kalra L. Acute treatment and long-term management of stroke in developing countries. Lancet Neurol 2007;6:553-561.
- (5) Donnan G, et al. Asia Pacific consensus forum on stroke management. Stroke 1998;29:1730-1736.

- (6) Hundt G, Stuttaford M, Ngoma B. The social diagnostics of stroke-like symptoms: healers, doctors and prophets in Agincourt, Limpopo Province, South Africa. J Biosoc Sci 2004;36:433-443.
- (7) Mshana G, Hampshire K, Panter-Brick C, Walker R. Urban-Rural contrasts in explanatory models and treatment-seeking behaviours for stroke in Tanzania. J Biosoc Sci 2007;40:35-52.
- (8) Al-oraibi, S. Stroke patients in the community in Jordan. University of Brighton; 2002.
- (9) Bham Z, Ross E. Traditional and Western Medicine: Cultural Beliefs and Practices of South African Indian Muslims with Regard to Stroke. Ethn and Dis 2005;15:548-554.
- (10) SEARO. Country Health Profile: Indonesia. Available at: www.searo.who.int/LinkFiles/Indonesia\_indonesia.pdf. Accessed 08/19, 2008.
- (11) Ng N. Physician assessment of patient smoking in Indonesia: a public health priority. Tob Control 2007;16:190-196.
- (12) Kusuma, Y., Venketasubramanian, N., Kiemas, L., Misbach, J. Burden of Stroke in Indonesia. Int J Stroke 2009;4:379-380.
- (13) Misbach J, Ali W. Stroke in Indonesia: A first large prospective hospital-based study of acute stroke in 28 hospitals in Indonesia. J Clin Neurosci 2000;8(3):245-249.
- (14) UNDP. Human Development Index. 2006; Available at: <u>http://hdr.undp.org/hdr2006/statistics/countries/data\_sheets/cty\_ds\_IDN.html</u>. Accessed 1/23, 2007.

 World Health Organisation. Task Shifting. Global Recommendations and Guidelines. 2007; Available at: <u>http://data.unaids.org/pub/Manual/2007.ttr\_taskshifting\_en.pdf</u>. Accessed 11/3, 2008.