Study highlights the burden of epilepsy in the developing world

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The burden of epilepsy in poorer parts of the world could be readily alleviated by reducing the preventable causes and improving access to treatment, according to a review article published today in the *Lancet*.

The researchers call for greater recognition from international and national health agencies to address the management of epilepsy in the developing world.

Despite being one of the most cost-effective disorders to treat, there are twice as many people living with epilepsy in low- and lower-middle-income countries than higher income nations and more than 60% of those affected in these regions are not accessing any appropriate treatment.

Lead author Professor Charles Newton, who works in the Wellcome Trust programmes in Tanzania and Kenya, said: "Epilepsy needs to be brought into the agenda of non-communicable diseases. It was not mentioned in the UN General Assembly Meeting in New York to address the global burden of non-communicable diseases, and yet it represents a substantial burden of ill health."

Epilepsy is a common disorder, particularly in poor areas of the world, but deriving accurate figures on the epidemiology of epilepsy in low- and lower-middle income countries is very difficult. There have been very few surveys to gather appropriate data and such studies tend to be expensive, especially for countries whose health research funding is likely to be very limited.

Professor Newton and Professor Hector Garcia, both Wellcome Trust Senior Research Fellows, conducted a comprehensive review of academic articles about epilepsy in developing countries in order to piece together a picture of the burden of the disease in poorer parts of the world.

They conclude that the high number of people with epilepsy in these regions is likely caused by the higher incidence of risk factors, such as head trauma, complications during childbirth, and parasite infections such as pork tapeworm (neurocysticercosis), and river blindness (onchocerciasis).

The study also reveals the enormity of the treatment gap in poorer nations, with over 60% of people living with epilepsy in low- and lower-middle-income countries not accessing appropriate care. This is partly due to poor adherence to prescribed treatment but there remain huge barriers to accessing care, particularly in rural areas. The stigma associated with the disorder and cultural beliefs around causation is identified as a major problem, along with distance from a health-care facility and inadequate skilled manpower.

The epilepsy burden could be easily reduced by addressing some of the risk factors, say the authors. They highlight several ways in which epilepsy care could be improved at low cost, including by engaging traditional healers who for many people are the only point of care for epilepsy. Given the lack of expertise in management of epilepsy in poorer areas, they suggest that neurologists and psychiatrists should combine to set up services for the management of epilepsy in these regions.

"Sadly, adequate facilities for diagnosis, treatment and on-going management of epilepsy are virtually non-existent in many of the world's poorest regions. Many people with epilepsy or their families do not even know that they have a disorder that can be controlled with biomedical treatment, so it is vitally important that awareness is raised and medical care improved in these regions," added Professor Newton.

**More information:** C.R. Newton & H.H Garcia. Epilepsy in poor regions of the world. The *Lancet*, 1 / 2