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Commentary

Epilepsy in Africa: Can we end suffering and financial hardship due to lack of access to effective and affordable care?

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Some diseases, such as epilepsy, are simply neglected in the tropics, even if they aren't neglected tropical diseases. Epilepsy is a major source of death and disability in Africa [1]. Among neurological disorders, epilepsy ranked second only to stroke for the most disability-adjusted-life-years per 100,000 people in the southern African region, and among the top five causes in the three other regions of Sub-Saharan Africa. It is also a major financial burden for people with epilepsy in Africa and their families as reported for example, in estimates of the economic burden of epilepsy in rural Democratic Republic of Congo [2].

Estimates of the economic burden, referred to by economists as cost of illness studies, are known for calling attention to a disease, because the high cost of appropriately treating an illness is newsworthy [3]. In many cases, those costs could be saved by reducing exposure to risk factors or reducing the incidence of the illness. Fodjo and colleagues report that a substantial share of household income was devoted to treating epilepsy among poor farmers [2]. Equally important, they report that the resources were devoted to inappropriate treatment. In the absence of epilepsy care at health centers, 68.2% of monetary expenditures were on traditional medicine. Inexpensive and effective drugs to treat epilepsy are essential medicines [4], and included in proposed universal health coverage packages [5]. Suffering and financial hardship due to lack of access to effective, affordable care is truly newsworthy.

Three other approaches to research on costs in health economics are: cost analyses, cost-effectiveness analyses, and cost–benefit analyses. For cost-effectiveness analyses, there are widely accepted guidelines and initiatives to standardize methods and reporting to make results comparable across studies [6,7]. For global health, guidelines for cost analyses were recently created [8], and for cost–benefit analyses are in-progress [9]. There are however, no widely accepted guidelines or standards for cost-of-illness studies. Fodjo and colleagues demonstrated this point well in their Table 1, which reported differences across studies in the measures of direct cost, and differences in methods for calculating indirect costs including not calculating them [2].

Economists will caution against using cost-of-illness studies to prioritize diseases on which to intervene or interventions to adopt. The results are at best the maximum amount that could be saved. Cost-effectiveness analysis, which is the ratio of cost to health outcomes, is more widely accepted, because researchers can systematically calculate the cost of an intervention net of the cost-of-illness saved, and the health outcomes gained. For example, treatment with anti-epileptic drugs in a primary care setting had some of the lowest cost per disability-adjusted-life year averted in Sub-Saharan Africa in a comparison of strategies to reduce the burden of neuropsychiatric conditions [10].

Fodjo and colleagues wisely acknowledge that their estimate of the economic burden of epilepsy is the first step towards conducting cost-effectiveness analyses of interventions such as improved access to treatment for epilepsy at health centers [2]. In the Democratic Republic of Congo and similar settings, a proportion of epilepsy is due to infectious and neonatal causes, suggesting that interventions such as improving hygiene and sanitation that would reduce the incidence of neurocysticercosis and cystic echinococcosis, as well as reducing transmission and improving control of onchocerciasis, should also be evaluated. Their ongoing research will help to answer the question posed in our title.

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