Stroke Prevention in Poor Countries
Time for Action

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See related article, pages 3063–3069.

Stroke is a cause of poverty and is caused by poverty. Stroke prevention, along with the prevention of other chronic (noncommunicable) diseases, is a grossly neglected feature of the global development agenda, despite the huge economic and health burdens due to stroke. The reasons for this neglect are complex. They include a series of myths which have perpetuated the mistaken notion that stroke and chronic diseases in general are primarily problems of wealthy countries and which do not require serious government intervention. Nothing is further from the truth. A serious and balanced global health development agenda should include all key health issues, not just those which have a historical precedence.

Stroke is the third leading cause of death, responsible for \( \approx 5.7 \) million deaths each year, the vast majority of which occur in low-income and middle-income countries. Stroke rates in middle-aged people (30 to 69 years) are 5 to 10 times higher in large countries such as Russia, India, China, Pakistan and Brazil, compared with the United Kingdom or the United States. Projections suggest that, without intervention, the number of deaths from stroke will rise to 6.3 million in 2015 and 7.8 million by 2030 with the vast bulk in poor countries.

The article on stroke in India in this issue of Stroke illustrates the key challenges to be addressed in the global prevention and control of stroke. First, stroke is becoming an even more important cause of premature death and disability in low-income and middle-income countries, largely driven by demographic changes (increased size and the ageing of populations) and enhanced by the increasing prevalence of the key modifiable risk factors, especially in urban populations. Second, the poor are increasingly affected by stroke, both because of the changing population exposures to risk factors and, most tragically, because of the high costs of care. Because the majority of survivors of an acute event continue to live with disabilities, the costs of ongoing rehabilitation and care, largely undertaken by family members, will further impoverish families.

The staggering costs of rtPA in India and other poor countries is scandalous; this is particularly ironic because India is the home of a thriving generic drug industry. Over three quarters of the costs of care for the patient described in scenario 1 by Pandian et al was for rtPA which should be administered in the context of a stroke unit. It is no wonder that poor people cannot afford modern therapies even where appropriate facilities are available. Even aspirin, although relatively cheap and readily available, is not routinely administered in low-income and middle-income countries. There is an urgent need to further explore the effectiveness of a cheap combination pill for people at high risk of cardiovascular disease.

As Pandian et al note, given the particular health and development problems in India and other low-income and middle-income countries, the way forward is to ensure much more emphasis on the prevention of stroke in the first place. There is sufficient information available on the importance of the main risk factors to guide action. The significance of these risk factors is the same in all countries and all subpopulations even if the chronic disease rates are higher in some populations due to their risk factor exposures.

WHO has proposed a global goal, additional to the Millennium Development Goals, which aims to reduce chronic disease death rates by an additional 2% per year over current trends. The goal, if reached, would avert \( \approx 36 \) million chronic disease deaths by 2015, of which about one sixth (6.5 million) would be due to stroke. These averted deaths would result in substantial economic savings. The Lancet chronic disease prevention initiative will be presenting evidence in December 2007 on the health impacts and costs of a small number of population-wide and individual level interventions directed toward achievement of the global goal.

Improved information on stroke incidence and mortality is a key challenge in all countries. In an effort to assist low-income and middle-income countries to get started in establishing surveillance systems for stroke, WHO recommends a stepwise approach (STEPS Stroke) through the use of standardized tools and methods for ongoing core, expanded, and optional data collection. Four Indian sites, supported by WHO South East Asian Region and the Indian Medical Council, were included in a test of the feasibility of this approach in low-income and middle-income countries.

WHO has also proposed a stepwise approach to chronic disease prevention and control which builds on the experience in the Western Pacific Region. The main principle of this approach is a phased implementation of interventions—core, expanded and optimal—based on the availability of resources and political and community support.

There is some cause for optimism. There is increasing involvement of international stroke nongovernmental organizations. The World Stroke Organization incorporating the
International Stroke Society, the World Stroke Federation and the World Federation of Neurology is supporting a greater emphasis on stroke surveillance and prevention in poorer regions. In India, the pilot phase of an integrated program for the prevention and control of diabetes mellitus, cardiovascular disease and stroke has begun.\textsuperscript{13,14} For this optimism to be realized, however, a serious scaling up of the response to stroke and other chronic diseases is urgently required in all low-income and middle-income countries. Until this is achieved, the health and economic consequences of stroke will continue to devastate the poor.

Disclosures

None.

References


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