

**EDITORIAL****CHRONIC NON-COMMUNICABLE DISEASES IN ETHIOPIA—  
A HIDDEN BURDEN****Martin Prevett, Neurologist, University Hospital Southampton, UK.**

It is only relatively recently that chronic non-communicable disease in low-income countries has started to receive the attention that it deserves. The Millennium Development Goals, which have dominated the global health agenda for the last decade, did not include chronic disease, but in 2005 a World Health Organization report drew attention to the neglect of chronic disease (1) and in 2011 chronic non-communicable disease was the subject of a United Nations high-level meeting (2). The linked articles from Jimma University and collaborators published in this issue are timely and serve to highlight the problem of chronic non-communicable disease in Ethiopia (3,4).

The research team from Jimma conducted a cross sectional study of chronic disease and risk factors for chronic disease in 4,469 adults from the population around Gilgel Gibe Field Research Centre in southwest Ethiopia using the World Health Organization's STEPS protocol. They found an overall prevalence of chronic disease of 8.9% (diabetes 0.5%, cardiac disease 3%, hypertension 2.6%, asthma 1.5%, epilepsy 0.5%, depression 1.7%), and 80% of the subjects studied had at least one risk factor for chronic disease. The data on prevalence of chronic diseases were dependent on subjects reporting that they had been given a diagnosis by a health professional. When a sample was screened for hypertension and diabetes, the prevalence of hypertension was found to be 3.5 times higher than that reported by the subjects and the prevalence of diabetes six times higher, indicating a large hidden burden of disease.

The prevalence of diabetes and hypertension, both self-reported and measured, was unsurprisingly higher in urban communities. The high prevalence of risk factors (exercise, diet, alcohol) in this group underlines the urgent

need for policies for the prevention of these conditions.

The prevalence figures for cardiac disease, asthma, epilepsy and mental illness are more difficult to interpret as they rely solely on self-reporting by the patients and as a result they may reflect an underestimate of the true prevalence of these conditions. In addition, the relatively small sample size may be a source of bias. Having said that the prevalence of epilepsy in this study (0.5%) was very similar to that found in a door to door survey in a population of 60,000 in central Ethiopia (0.52 %) (5) and, as the authors pointed out, their prevalence data for asthma are very similar to that previously reported from Jimma (6).

Epilepsy and mental illness also appeared to be more common in urban communities, but this may be a reflection of under-reporting and limited access to medical facilities in rural areas. Unlike type 2 diabetes and hypertension, which are associated with demographic change and urbanization, epilepsy and mental illness are examples of chronic diseases, which are prevalent amongst the rural poor. Another is rheumatic heart disease, but unfortunately the data from the Jimma team do not distinguish between rheumatic heart disease and other causes of cardiac disease. A study from Malawi, however, found that rheumatic heart disease was more common than hypertensive heart disease and coronary artery disease was rare (7). In addition, echocardiographic screening in Mozambique revealed that the burden of rheumatic heart disease was approximately 10 times higher than was suspected clinically (8). Much of the recent interest in chronic non-communicable disease in low-income countries has focused on those diseases associated with demographic change, and chronic diseases amongst the rural poor,

which are responsible for much disability, remain a neglected area.

Over the last 15 years Jimma University Hospital in southwest and, University of Gondar Hospital in northwest Ethiopia have been pioneering primary care treatment for chronic disease in rural communities (9). Patients with chronic diseases must attend regularly for monitoring of treatment over long periods of time and they find it difficult to attend distant hospitals. Adherence is likely to be better and the costs to the patient reduced if treatment is made available closer to their homes. It has been demonstrated that, with support and training, nurses and health officers can manage chronic diseases effectively in health centres (10,11) and there is now a strong argument for this model to be adopted more widely.

The large hidden burden of chronic disease identified in the population studied by the team from Jimma and in other studies indicates that, as well as improving access to treatment, there is a need for community education and improved case detection. Using the experience gained through educational campaigns on HIV, tuberculosis and malaria, schools, churches, mosques and local mass media could be used to improve awareness about chronic diseases. Health extension workers also have the potential to play an important part in education and improving case detection.

Although the studies from Jimma University were performed in a single, relatively small population, the findings are consistent with previous reports from both Jimma and Gondar and call for a greater prioritization of chronic disease in healthcare policy.

## REFERENCES

1. WHO. Preventing chronic diseases: a vital investment. 2005; [http://www.who.int/chp/chronic\\_disease\\_report/en/](http://www.who.int/chp/chronic_disease_report/en/)
2. United Nations. Political declaration of the high-level meeting of the general assembly on the prevention and control of non-communicable diseases (document A/66/L1). UN, 2011.
3. Muluneh TA, Haileamlak A, Tessema F, *et al.* Population based survey of chronic non-communicable diseases at Gilgel Gibe Field Research Center, southwest Ethiopia. *Ethiop J Health Sci*, 2012; 22 (special issue): 7-18.
4. Alemseged F, Haileamlak A, Muluneh TA, *et al.* Risk factors for chronic non-communicable diseases in southwest Ethiopia: a population based study. *Ethiop J Health Sci*, 2012; 22(special issue): 19-28.
5. Tekle-Haimanot R, Abebe M, Gebre-Mariam A, *et al.* Community-based study of neurological disorders in rural central Ethiopia. *Neuroepidemiology* 1990; 9:263-77.
6. Yemaneberhan H, Bekele Z, Venn A, Lewis S, Parry E, Britton J. Prevalence of wheeze and asthma and relation to atopy in urban and rural Ethiopia. *Lancet*, 1997; 350:85-90.
7. Soliman EZ, Juma H. Cardiac disease patterns in northern Malawi: epidemiologic transition perspective. *J Epidemiol*, 2008; 18:204-8.
8. Marijon E, Ou P, Celermajer DS, *et al.* Prevalence of rheumatic heart disease detected by echocardiographic screening. *N Engl J Med*, 2007; 357: 470-76.
9. Mamo Y, Seid E, Adams S, Gardiner A, Parry E. A primary healthcare approach to the management of chronic disease in Ethiopia: an example for other countries. *Clin Med*, 2007; 7:228-31.
10. Watkins P, Alemu S. Delivery of diabetes care in rural Ethiopia: an experience from Gondar: *Ethiop Med J* 2003; 41:9-17.
11. Berhanu S, Prevett M. Treatment of epilepsy in rural Ethiopia: 2 year follow-up. *Ethiop J Health Dev*, 2004; 18:31-34.