

of proven cost-effective and affordable interventions to address them. We advocate the strengthening of health systems, and in particular primary health services for long-term patient-centred care; such a focus will benefit patients with mental illnesses as well as people with other chronic disorders.

We agree with Nicholas Freudenberg that there is a need to confront industries that profit from unhealthy products and contribute to the rising NCD burden. We support the full range of fiscal, market, regulatory, legislative, and educational measures to reduce the NCD burden. The history of tobacco control reveals that interaction with such industries cannot simply be viewed as “partnerships”. Dialogue with industry—excluding the tobacco industry—should be based on a shared vision of public health goals and independent monitoring of progress and commitments.

We declare that we have no conflicts of interest.

*Robert Beaglehole, Ruth Bonita
r.beaglehole@auckland.ac.nz

University of Auckland, Auckland 1010,
New Zealand

The preparations for the UN’s High-Level Meeting on Non-Communicable Diseases (NCDs) are dominated by the NCD Alliance and allied partners and support groups.¹ We recognise their efforts, but note a skewed attention towards the prevention of risk factors. At the multistakeholder discussion during the World Health Assembly hosted by the NCD Alliance and *The Lancet*,² the advocacy of the panellists for the “four-by-four approach” (prevention of four risk factors for four diseases) and their repetitive emphasis on tobacco control and obesity measures illustrated the focus of the present movement, which is also seen in other preparation documents.^{1,3} The need for secondary and tertiary prevention and organisation of health care is not well targeted. Although the words

primary care and health systems were often mentioned, the message on how NCDs should be integrated into present health care in low-resource settings remained unclear.

The health systems element that lacks most attention is how to organise human resources. We know from the response to the AIDS crisis that access to essential medicine is crucial, but not enough. The shortage of competent staff, especially in the public sector in sub-Saharan Africa, forces us to rethink classic delivery models of primary health-care teams. Instead, we should think about using and optimising all channels to deliver support and all levels of prevention to patients with chronic illnesses, including assessment of the private and informal sectors and of current practices in the community and among patients. Task sharing, patient groups, self-management, and distant support through mobile phones need serious attention to move forward in implementing care for NCDs.

These issues need the input of technical health systems experts, clinicians, and decision makers on the front line. These stakeholders should become much more vocal before and during the UN meeting. The simplicity of the four-by-four chorus might lead to heads of states pulling out their wallets at the UN summit for the NCD cause. But oversimplification risks the creation of false expectations. The technical debate about how to use resources in the health system should be started in parallel.

We are members of an international network on care for chronic diseases in low-income countries, part of the network Switching International Health Policies and Systems. We declare that we have no conflicts of interest.

*Josefien van Olmen, Grace Marie Ku,
Slim Slama
jvanolmen@itg.be

Institute of Tropical Medicine, 2000 Antwerp, Belgium (JvO); Veterans Memorial Medical Center, Diliman, Quezon City, Philippines (GMK); and Geneva Health Forum, Division of International and Humanitarian Medicine and Department of Community Medicine, Primary Care and Emergency, Geneva University Hospitals, Geneva, Switzerland (SS)

- 1 Beaglehole R, Bonita R, Horton R, et al. Priority actions for the non-communicable disease crisis. *Lancet* 2011; **377**: 1438–47.
- 2 The NCD Alliance. NCDs and development: working together for integrated action and a successful UN summit. http://www.world-heart-federation.org/fileadmin/user_upload/documents/Advocacy/NCDAlliance_2011/NCDInvitation_16_May_2011.pdf (accessed May 26, 2011).
- 3 The NCD Alliance. Proposed outcomes document for the United Nations High-Level Summit on Non-Communicable Diseases. <http://www.healthycaribbean.org/hcc/publications/ncd-un-summit-wishlist.html> (accessed May 26, 2011).

Next month, the UN General Assembly will hold a High-Level Meeting on the prevention and control of non-communicable diseases (NCDs), with particular reference to developing countries. Recent reports, including in *The Lancet*,^{1,2} propose strategies to address NCDs that focus largely on adult interventions that have been adopted in developed societies, often with mixed success.

Alongside the adult interventions that are proposed, we urge that consideration is given to the established and growing evidence that risk of NCDs is set in substantial part during early development.^{3–5} Such developmental factors can explain, for example, why there is not a simple relation between adiposity and risk of NCDs, or why adult interventions are less effective in some individuals and groups than in others. Development affects a range of processes, including appetite, food preference, and metabolic control, which in turn affect responses to an obesogenic environment later. The underlying mechanisms involve both biological and cultural factors through epigenetic and learning processes.⁵

These points suggest a life-course approach to NCD prevention, and require that attention is given to the full range of maternal, perinatal, infant, and childhood influences on the risk of developing NCDs later in life. Such an approach will provide both short-term and long-term benefits, for example by having a