

Only connect...

Political will and inter-sectoral partnerships for integrated disease prevention

Lord Paul Boateng

When we think about global health, what often springs to mind is the image of a child being immunised. Fifty years ago, in newly independent Ghana, I was that child, one of the early beneficiaries of the fight against polio in Africa. The recent launch by the Government of Ghana of the GAVI-sponsored roll out of the pneumococcal and rotavirus vaccines, which I was privileged to participate in, will help protect a new generation of young Commonwealth citizens from the scourge of pneumonia and diarrhoea, two of the biggest killers of children worldwide.

But, of course, it is not just about drugs. We all know that you cannot provide drugs to a patient without thousands of other pieces of the puzzle fitting together, such as supply chains, procurement systems, physicians who are well-trained and working in clinics in places where there is patient demand, or even the presence of clinics, with electricity and equipment and security. Providing health may look to some like the provision of specific and focused action on killer diseases, but with a closer look we begin to see the complexity involved in providing such interventions in a health-care system.

Weak health systems pose major obstacles to attaining the health-related Millennium Development Goals (MDGs) by 2015. The response to this has often been to take a more horizontal health systems strengthening approach as opposed to vertical disease-specific interventions. The reality is, as ever, more nuanced than this. What we need are diagonal approaches: disease-specific interventions that are scaled up over time and include a number of related health interventions that are integrated into the broader health system.

It is widely recognised that infectious diseases such as tuberculosis (TB) or HIV/AIDS cannot be adequately addressed through a health systems strengthening approach alone. Due to their significant burden, these diseases require dedicated funding injections into fragile health systems if we are to tackle the strain of such major epidemics. However, in parallel, integration of disease-specific programming into other, more horizontal health interventions such as maternal health services or family planning is now widely viewed as more cost-effective and efficient than vertical service programming alone. Instructive examples of diagonal approaches include TB, a disease that kills 1.4 million people every year and has both a vertical approach through the Global Fund to Fight AIDS, TB and Malaria, as well as relying heavily on health systems to deliver results.

The Global Fund provides around two thirds of all external financing to fight TB. Strong national budgets are critical, but many would be woefully under-funded without the Global Fund's

contribution. However, last year the Global Fund was forced to admit that huge shortfalls from donors meant it was no longer able to open its next funding window, 'Round 11', and has had to suspend new grants until 2014. This critical development in funding for global health is likely to have dire consequences as countries will have to scale back on interventions that have, to date, saved the lives of millions of people.

Underinvestment in health only makes the problem worse in the future. The recent discovery of cases in India of what have been popularly termed 'totally drug-resistant tuberculosis' bring home just how bad the repercussions can be if we fail to address TB and let drug resistance develop. Similarly, the Joint United Nations Programme on HIV/AIDS (UNAIDS) strategic investment framework takes what we know works in the fight against this pandemic and for the first time credibly shows us how to reduce the future costs of controlling the disease – but it is likely to go unfunded, placing an even bigger burden on stretched health systems.

This is hard to understand. Within the current constrained economic landscape surely small up-front investments with huge long-term savings make sound fiscal sense. While some donors are willing to make such investments, not enough have committed funds, and leadership from donors like the UK needs to be backed by both traditional and emerging donor countries, with middle-income countries stepping up investment of their own resources in their own people's health.

Governments everywhere, and especially donors, are increasingly interested in results-based spending to show quick, tangible results that can be used to highlight value for money to their respective publics. This may help explain a welcome rise in attention for immunisation, which has a broad base of support as a global health 'best-buy' and is a global public health success story. One study cites vaccines as second only to clean water in their ability to reduce the burden of infectious disease (Parker, 2005), and it is the single most efficient and cost-effective means of controlling the diseases they immunise children against.

The global community has seen an impressive increase in vaccine coverage rates since the introduction of the World Health Organization (WHO) Expanded Programme on Immunizations in 1974. Millions of lives have been saved and much suffering averted. Dramatic increases in coverage for the basic combination vaccine for diphtheria, typhoid, and pertussis (DTP3) have been shown across the world. Globally, DTP3 coverage rates reached 85 per cent in 2010 (WHO and UNICEF, 2012), up from just 20 per cent in 1980, a measure that tells us that the basic suite of childhood vaccines are reaching many more children.

In addition to these successes, thanks to the donor community providing \$4.3 billion in crucial funding for the Global Alliance for Vaccines and Immunisations (GAVI) and thanks to developing countries committing their own resources to vaccination programmes, exciting new vaccines against pneumococcal disease and rotavirus are, for the first time, being rolled out in both developed and developing countries simultaneously. We are at a crucial point in harnessing the power of technology to address leading causes of death among children.

There is a catch. Despite these impressive gains, we still fail to reach nearly a quarter of children in Africa every year (WHO and UNICEF, 2010). As a result, the most recent figures indicate that 1.5 million children died of vaccine-preventable diseases in 2010 alone (WHO and UNICEF, 2012). We are often reminded that 'vaccines do not inject themselves'; their distribution relies on functional health systems, continuous cold chains, impressive logistics and trained health workers. Studies show inadequate training of health-care workers and human resource shortages are weakening health systems and posing a major obstacle to the delivery of immunisation programmes. We undervalue and under-invest in our health workers at our peril.

But, even then, a simple provision of infrastructure is not enough. With the rates for basic vaccination around 80 per cent, this still leaves the fifth child unprotected. It is that fifth child who is likely to be in the remotest and poorest community and is often the child who would most benefit from getting a full set of vaccines.

The global health community needs to ensure that we build health systems that are inclusive of the needs of the most vulnerable and marginalised children, ensuring the delivery of high-impact interventions like vaccination. We must build equity into the system at both national and sub-national levels. All children deserve to have access to the newest vaccines as well as to the standard set of childhood vaccines. Failing to reach children from the poorest and most remote areas and marginalised groups puts their lives at risk and perpetuates inequality and poverty.

How do high-impact interventions like those funded by the Global Fund or GAVI translate into an approach that strengthens health systems more broadly?

An excellent example can be seen in Rwanda. There, the Global Fund has helped pay for the establishment of clinics that have excellent integrated TB, HIV and malaria services. This is of particular importance for TB and HIV, which are closely linked as TB causes a quarter of all AIDS-related deaths. Integrating TB-HIV services has allowed Rwanda to tackle this co-epidemic in tandem without forcing patients to travel to different clinics to access treatment and care from two separate vertical services. The clinics are used as vehicles for channelling investments by the Rwandan Government and other donors to provide essential primary health services to the communities they serve – they are not restricted to the three diseases.

In some places Rwanda goes even further. The health clinic is located adjacent to the maternity ward, where expectant mothers can safely deliver with a skilled birth attendant. Pre- and antenatal care gives health systems an ideal opportunity to engage the expectant mother on other aspects of health beyond her pregnancy, so having these services side by side is a smart investment. Such approaches are part of building a well-



Mothers in Mozambique take their children for vaccination,
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functioning health system that supports not just the MDGs but broader health for the entire community.

When we discuss health we also need to discuss more than a traditionally defined health system. In relation to nutrition, for example, The Economist recently reported that in 2008 malnutrition contributed to 35 per cent of the 8.8 million under-five child deaths (The Economist, 2012) – that is just over three million lives lost. According to figures from the WHO, 2 billion people worldwide are anaemic, many due to iron deficiency, with serious consequences for their health and productivity and for national development (WHO, 2012). These numbers are shocking, and this issue contributes to perpetuating chronic hunger, poverty and risk for disease.

TB and HIV are two prime examples of how malnutrition not only increases the risk of disease but also make treating disease much more difficult. People who live in hunger or fear of starvation are more prone to getting TB, and TB patients who are malnourished are twice as likely to die during treatment (Papthakis, Obispo and Piwoz, 2008). Researchers have also found that the absence of food security can undermine the successes achieved by providing HIV-positive patients with life-saving antiretroviral treatment (Weiser et al., 2010).

People trying to fight illness in general, and TB and HIV in particular, need a balanced diet that is high in nutrients. TB and HIV patients should receive nutritional assessment upon diagnosis and be provided necessary food support and micronutrient supplements. Unfortunately, such nutritious foods are more expensive and difficult to access. If these cannot be provided by a medical facility, patients are sometimes forced to choose between paying for food or for medication. Increasing food and nutrition support programmes as part of our health interventions is critical given the role malnutrition plays in disease control.

However, treating malnutrition as a medical problem that is addressable by a health system only looks at part of the issue. As those who care about health we should not restrict our remit to purely health systems interventions but should be aware of and try to deal with harder, systemic issues such as agriculture or lack of food security. Examples of good practice in these areas abound. School lunch programmes, where schools are supplied with locally

grown food, create a stable market for local smallholder producers while preventing malnutrition, providing an incentive for children's school attendance and fuelling young minds with the energy needed to learn.

Links can even be made to climate change: with the United Nations Framework Convention on Climate Change moving slowly towards agreement and billions of pounds set to flow into new adaptation financing, micro crop insurance for smallholder farmers shows promise. By providing insurance that rapidly pays out when a typhoon hits or when drought begins (rather than waiting until the drought is severe), micro insurance can provide cash to families so that they do not have to sell productive assets to weather the hungry season. Perhaps more importantly, with farms protected by insurance, farmers, rural lenders and donors can safely invest in them, increasing productivity, disaster resilience and food security and decreasing malnutrition.

The key to progress will be the development of a holistic and integrated approach, across a variety of government departments, to promote better health outcomes for the Commonwealth. I know from my own experience as a Minister in both the Department of Health and Her Majesty's Treasury that this is always easier said than done. Invariably, the development of multi-disciplinary and cross-sectoral approaches and the creation of permissive regulatory environments presents real challenges. However, when you add this to the promotion of research and development, in both academia and the private sector, and the utilisation of new approaches to information and communications technology (ICT), the prospects for real improvements in service delivery are massively enhanced. The possibilities are exciting. What remains certain, however, and needs to be our guiding light is that prevention is always better than cure.

References

- Papthakis, D.P., Obispo, S.L. and Piwoz, D.E. (2008). *Nutrition and tuberculosis: a review of the literature and considerations for TB control programs*. Washington DC: USAID.
- Parker, C. (2005). Immunization and vaccination. In: Jones, R., Britten, N., Culpepper, L., Gass, D., Grol, R., Mant, D. and Silagy, C. (eds.) *Oxford textbook of primary medical care*. Oxford: Oxford University Press, pp. 373–83.
- The Economist (2012). The nutrition puzzle: why do so many people in poor countries eat so badly – and what can be done about it? 18 February. www.economist.com/node/21547771
- Weiser, S.D., Tuller, D.M., Frongillo, E.A., Senkungu, J., Mukiibi, N. et al. (2010) Food insecurity as a barrier to sustained antiretroviral therapy adherence in Uganda. *PLoS ONE* 5(4): e10340.
- WHO (World Health Organization) (2012). Nutrition: micronutrient deficiencies. www.who.int/nutrition/topics/ida/en/
- WHO (World Health Organization) and UNICEF (United Nations Children's Fund) (2010). Global and regional immunization profile: Africa region. http://apps.who.int/immunization_monitoring/en/globalsummary/GS_AFRProfile.pdf
- WHO (World Health Organization) and UNICEF (United Nations Children's Fund) (2012). Global immunization data. March. www.who.int/immunization_monitoring/Global_Immunization_Data.pdf

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