

Editorials



Drug-resistant tuberculosis: collaborative regional leadership required

The drug-resistant tuberculosis crisis provides urgency and focus for coordinated action to improve regional health and development

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Success in stabilising the global tuberculosis (TB) epidemic is threatened by the emergence and spread of drug-resistant (DR) strains. The DR-TB challenge is similar in scale and impact to HIV infection in the 1980s; however, the international response has been slow and insufficient. Those worst affected by TB or DR-TB are from disadvantaged communities in low-income countries with little visibility or political influence. The Asia-Pacific region carries the bulk of the global TB burden (58%), including the majority of all estimated multidrug-resistant (MDR) cases (54%) (resistance to isoniazid and rifampicin).^{1,2} The regional DR-TB challenge is daunting and needs to be tackled before it overwhelms health systems, as happened in some former Soviet Union countries. Visionary political leadership is urgently needed to champion a comprehensive regional strategy that draws on novel and creative solutions,¹ similar to the Asia Pacific Leaders Malaria Alliance created to contain the emergence of drug-resistant malaria.³

Four years ago, the World Health Assembly declared DR-TB a “global public health threat” and ministers from 22 high burden countries signed a “call to action”.⁴ This global resolution aimed to achieve universal access to diagnosis and treatment of DR-TB by 2015; but the response will fall well short. The number of people living with MDR-TB has risen from an estimated 440 000 in 2008 to 680 000 in 2012, and less than 20% receive appropriate treatment.² These estimates are limited by insufficient laboratory capacity for drug-susceptibility testing and inaccurate reporting. The existing tools to diagnose, treat and prevent DR-TB are inadequate and much more costly than for drug-susceptible TB. Widespread rollout of the GeneXpert (Cepheid) test should improve the situation, but its impact will be limited in the absence of quality-assured laboratory infrastructure, shorter and more effective drug regimens and the scale-up of treatment programs for DR-TB. Modelling studies show that if TB control strategies only focus on drug-susceptible disease, DR-TB will become the predominant strain.⁵ This is supported by new evidence showing that DR-TB has the potential for true epidemic spread in high burden settings.⁶

The vast majority of countries in the Asia-Pacific region have limited capacity to mitigate the imminent threat of DR-TB. The Global Fund to Fight AIDS, Tuberculosis and Malaria, an international public-private partnership for financing, provides most of the global funding for TB and DR-TB control activities, but there remains a gap of US\$2.3 billion per year until 2015 for a full response to

the epidemic.² Investment and coordinated action from growing national economies and business enterprises within the Asia-Pacific region are urgently required to avert this regional threat. While “ownership” of the DR-TB response should be in the hands of the countries most affected, Australia is presented with an opportunity to show regional leadership and collaboration, serving a pivotal coordinating function. Although ultimately health systems should be strengthened to provide universal coverage, the threat of DR-TB provides a clear focus to initiate action and develop regional solutions to complex, interrelated health and development issues.

It is estimated that if the global TB funding gap for the period 2013–2016 is not financed, an additional 1 million lives will be lost.⁷ Besides the human cost, TB (and DR-TB in particular) places an extraordinary economic burden on communities and traps people in poverty. TB does not respect international borders, and while numbers of DR-TB cases are low in Australia, a steady increase has already been seen.⁸ Investment in DR-TB treatment programs is required which, despite the high individual treatment cost (400 times higher than for drug-susceptible TB), are cost-effective overall.⁹ TB control is intimately linked to health system development and socioeconomic factors.¹⁰ Failure to specifically address DR-TB will result in major long-term human and economic costs, and ultimately may pose a major threat to regional development.

Defining a course of action requires careful consideration and discussion with the many stakeholders, but the global challenge posed by DR-TB presents an urgent need for bold regional leadership to:

- 1) Engender political commitment at the highest level among key regional players;
- 2) Explore a range of regional financing options, including joint funding from national governments, external organisations, donors and private industry;
- 3) Ensure quality-assured drug supply and control mechanisms;
- 4) Prioritise the urgent scale-up and implementation of DR-TB programs with strong oversight and laboratory support to contain the epidemic. Innovative and context-specific models of care should be integrated with existing health care structures; and
- 5) Identify mechanisms for increased regional investment in research (basic science, epidemiology, operational research). The development of new tools to fight

TB is urgently needed. This is an area where Australia can make a major contribution.

There is a compelling case for Australia to facilitate a coordinated response to the DR-TB threat by mobilising regional political commitment and resources. Such an investment serves the most vulnerable populations, while promoting stability and sustainable development in our region.

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