The WHO 2014 Global tuberculosis report—further to go

In May 2014, the World Health Assembly officially approved the Draft Global Strategy and Targets for Tuberculosis Prevention, Care and Control after 2015.[1] The target of the strategy is the elimination of tuberculosis as a public health threat by 2035. This target is ambitious, but the commitment to the end of tuberculosis is laudable. The recently published 19th WHO global tuberculosis report 2014,[2] provides an opportunity to think once again on the global tuberculosis strategy, and to assess just how much further effort is needed before global tuberculosis control can be achieved.

Previously,[3] we declared that the 1·3 million deaths per year from tuberculosis reported in the 2013 WHO global tuberculosis report was unacceptable in the 21st century. The latest 2014 WHO global tuberculosis report has revised its estimates of new tuberculosis cases worldwide from previous years, and now shows that almost half a million more cases of tuberculosis occurred worldwide than in their 2013 estimate.[4] Of an estimated 9 million people who developed tuberculosis in 2013, 1·5 million people died (deaths up from 1·3 million estimated in 2012).

The 2014 WHO report also states that the problem of drug-resistant tuberculosis is worsening, with an estimated 480 000 new cases of multidrug-resistant (MDR) tuberculosis in 2013. This number too might be an underestimate, since estimates for the true burden of drug-resistant tuberculosis across sub-Saharan Africa, Asia, and eastern Europe are impaired by the fact that drug-resistance testing and treatment services are generally unavailable at most health-care facilities.[5,6] Perhaps even more concerning was that, of the nearly half a million estimated cases of MDR tuberculosis worldwide, only 136 000 cases were officially diagnosed. The outlook for these patients is bleak, with treatment completion rates remaining at 48% and a widening gap between people who are diagnosed and those who receive treatment. Furthermore, 9% of people with MDR tuberculosis are estimated to have extensively drug-resistant (XDR) tuberculosis—ie, nearly 50 000 people worldwide have a form of the disease that, at present, cannot be treated.

The increased revised estimates in the 2014 report arise from a series of studies in five high-burden countries: Gambia, Laos, Nigeria, Pakistan, and Rwanda. One of these countries, Nigeria, was reported to have a tuberculosis diagnosis rate of about 50%—ie, only half of all people with tuberculosis were notified that they had the disease.[2] After the prevalence study, it was estimated that just 16% of all patients with tuberculosis were notified by the national treatment programme. Results from a similar study in Indonesia[2] showed that prevalence had been substantially underestimated and the number of cases could be nearly one million more than were previously estimated. The report states that the rate of progress against the disease has remained largely unchanged. The number of new cases has decreased by roughly 1·5% each year between 2000 and 2013. At these present rates of progress, the target of elimination by 2035 seems remote.

So what can be done by the global community to accelerate progress to achieve global targets? First, many cases of tuberculosis are clearly not officially diagnosed or treated. The so-called missing 3 million continue to be a major driver of the epidemic. This challenge was the theme of World Tuberculosis Day 2014.[7] People with active tuberculosis who are not treated can transmit the disease to others, while people who are treated unofficially, outside national tuberculosis programmes, are at increased risk of developing drug-resistant strains of the disease. As the revised data and other studies suggest,[8,9] the more tuberculosis is looked for, the more is found. Therefore, approaches are needed that look for tuberculosis more thoroughly, and diagnose more people as soon as possible, allowing them to receive the appropriate high-quality treatment. Fully funded projects like TB REACH, which has a proven record of piloting innovative ways to diagnose and treat great numbers of people, would be a good first step.

If the gap between those who are officially diagnosed and those who are ill can be closed, transmission reduction can begin, and progress against the disease can be accelerated. The fight against HIV has adopted a powerful message of treatment as prevention—this is even more appropriate in the fight against tuberculosis. This effort must be led by the countries with the heaviest tuberculosis burdens; donor countries can provide financial and technical assistance, strengthen

health systems, and help to identify innovative methods to reach patients, but these efforts must be locally led.

If the search for and treatment of patients must be done at the local level, what more can donor countries do to help defeat the disease? The answer is simple: more resources are needed for proactive screening, and new ways to diagnose, prevent, and treat tuberculosis should be identified. A report by the Treatment Action Group,[10] released on the same day as the Global tuberculosis report 2014,[2] shows how little is invested in tuberculosis research and development, compared with what is needed. The 2014 Report on Tuberculosis Research Funding Trends[10] revealed that total global investment in tuberculosis research and development was about US$675 million. Although this amount might seem substantial, it is barely a third of the estimated $2 billion needed to develop new drugs, vaccines, and diagnostics.

In October, 2014, the All Party Parliamentary Group on Global Tuberculosis published a report[11] investigating the failure to develop much-needed new drugs for neglected diseases—including tuberculosis—that affect millions of people but represent a relatively small financial market. The report made clear that the commercial market had failed with respect to these products. Treatment Action Group's report[10] estimates that, in 2013, spending on tuberculosis by pharmaceutical companies was just $99 million. This total is the lowest since Treatment Action Group started reporting research spending in 2005.

Where markets fail, governments must intervene, and the UK is a global leader in this field. The UK Prime Minister launched a commission[12] into the failure of markets to develop new antibiotics, and much of the commission's work will be equally relevant to failures to develop new tuberculosis drugs. The Department for International Development[13] has committed £150 million over 5 years for product development partnerships—non-profit organisations that seek to develop treatments for diseases that do not attract attention from pharmaceutical companies. Nonetheless, these investments are small compared with both the resources needed for, and the potential rewards of, for example, a new tuberculosis or HIV vaccine. The future challenge is to convince other countries to invest more in research and development for global health.

Irrespective of development of new drugs, diagnostics, and an effective vaccine, which could transform the fight against tuberculosis, much can be done with the methods available at present. We reiterate[3] that the means, knowledge, and expertise to achieve global tuberculosis control exist, and the time has come for urgent, swift, and visionary action to enable stepping up of the efforts in tuberculosis control and to drive down tuberculosis incidence as soon as possible. Increased financial investment into universal access to high-quality care for all people with tuberculosis, and reduction of human suffering and socioeconomic burden associated with tuberculosis should be prioritised by all governments and donors. Tuberculosis is curable and to reach the missing 3 million (or more) and treat them will be a crucial step towards the ultimate goal of the elimination of tuberculosis.

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