

TB, HIV and maternal-child health: the case for integrated services

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Despite being both preventable and curable, tuberculosis (TB) is one of the world's leading killer diseases. Ninety per cent of the burden of TB is in developing countries. TB affects the poorest and most vulnerable people in society; not only are people living in poverty more vulnerable to TB but the disease can also drive them deeper into poverty. Social and cultural determinants therefore loom large, particularly poor and over-crowded housing conditions. There is also a gender bias, with physicians often wrongly considering TB to be a 'male disease'. Women sufferers can also have difficulty accessing health care due to factors such as lack of education, stigma and low socio-economic status.

More than 3 million women and 1 million children are affected by TB every year. The World Health Organization (WHO) reported that in 2008 3.6 million women fell ill with TB and 700,000 women died, including 200,000 women with HIV, more than all causes of maternal mortality combined. Millions of children are left orphaned due to losing one or both parents to the disease. While fewer women are diagnosed with TB than men, a greater proportion die from it.

TB is also the most common opportunistic infection and the leading cause of death in people living with HIV (PLWHA), responsible for nearly a quarter of the 2 million HIV-related deaths. HIV increases the risk for development of active TB by 20- to 30-fold. Since HIV and TB have a number of commonalities in terms of disease burden, epidemiology and strategies for control, taking targeted action against both diseases makes practical sense. Integration increases health system cost efficiency and access to services while improving outcomes by reducing deaths among HIV patients and increasing cure rates among TB patients. Investment in TB/HIV integration and laboratory infrastructure has a profound effect on quality of HIV care and quality of TB care for all patients.

Policy gaps

In 2004 the WHO issued policy guidance that all TB patients should be tested for HIV and that all TB patients living with HIV should be provided with preventative therapy and antiretroviral therapy (ART). The Stop TB strategy identifies HIV as the main reason for failure to meet global TB control targets; as a result it is dedicated to reducing HIV-related TB through collaboration between national programmes and stakeholders and guiding policy and global activities in the area. The Joint United Nations Programme on HIV/AIDS (UNAIDS) is committed to reducing TB deaths among people living with HIV by half by 2015, a goal shared by the UK Government's Department for International Development (DFID).

Recognition of the need for a practical approach to these related challenges is growing. Yet, to date the burden of TB among women has been a neglected issue and the disease is somehow

forgotten in maternal and child health (MCH) services. Although there is a wealth of evidence to suggest that screening and treatment for active TB within MCH services would be a beneficial intervention, both in terms of improving health outcomes and delivering value for money and cost-effectiveness, this has not been adequately reflected in policy, at either global or national level, or in implementation on the ground. This is largely due to a lack of political will, inadequate financing and stigma. Meanwhile there is a huge disparity in investment and attention towards TB control in comparison with HIV and malaria interventions. To date there has been little evidence of countries developing a strategy for integrating TB, MCH and HIV services as part of best practice.

TB in women of reproductive age

TB is the third leading cause of death worldwide among women of reproductive age (15–44). It can cause infertility and contributes to other poor reproductive health outcomes, especially for women with HIV infection. In areas where TB is endemic, high rates of TB during pregnancy can be found, exacerbated by the overlap of peak rates in women of reproductive age for both TB and HIV. A study in Durban, South Africa showed that 79 per cent of mothers with TB were also infected with HIV, with 62 per cent of the TB cases attributable to HIV.

TB infection during pregnancy can lead to serious complications, both for the mother and for the infant. Recent studies from Mexico and India indicate that women with TB are two times more likely to give birth to a premature or low-birth-weight baby and four times more likely to die during childbirth. There is also evidence to suggest that women with TB are more likely to give birth to a stillborn infant and that maternal TB can be damaging to neonatal health.

Target TB and our partners recently conducted an assessment on the need for and scope to integrate TB and MCH services in their programmes and are looking at ways they can address the current gaps and challenges. While all Target TB partners reported having government and/or privately run MCH services available in their working area, 80 per cent reported that there were no integrated TB/MCH services and 90 per cent stated that there were no recommendations to integrate TB and MCH services in their national policies. Recommendations and ideas from Target TB's grassroots-based partners on practical ways to integrate TB and MCH services include: improving services to screen pregnant women for TB at antenatal clinics; improving the screening of infants for TB; and using existing health promotion services such as prevention of parent-to-child transmission (PPTCT) counselling centres and community outreach services to increase TB awareness.



Box 1

TB and MCH: country examples

Pasquela da Silva (East Timor) is 22 years old and has three daughters, the youngest of whom is 7 months old. In May 2011 Pasquela became sick with a persistent cough and was diagnosed with a very infectious form of TB. As her young baby was at high risk of infection, in line with the National TB Programme guidelines not only was Pasquela started on TB treatment but her baby daughter also received isoniazid therapy to prevent TB developing in case she was infected. Young children living in close contact with adults with infectious TB are at particular risk of infection. Administering prophylaxis treatment to children at risk, such as Pasquela's daughter received, is an effective way of preventing infection.

Esther (Zambia) discovered she was HIV-positive through routine antenatal testing during her most recent pregnancy. She started ART immediately. Later in her pregnancy Esther experienced difficulty in breathing and chest pains but she did not seek any medical advice. However, the problems persisted and Esther became so weak and lost so much weight that she was admitted to hospital. After two weeks in hospital an X-ray was taken and she finally received a diagnosis of extrapulmonary TB. Esther has now been linked up to free TB treatment and is improving.

Workers with the Think TB! tuberculosis campaign in The Gambia

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Social and cultural determinants

‘Everyone feared me when I got TB. Whenever I visited people’s homes and asked for drinking water, they would throw away the cup that I drank from immediately I left saying “that one already has HIV.”’ – Focus group discussion with ex-TB patients, Uganda

A recent study among Target TB’s grassroots-based partners in Africa and Asia indicated that in countries and regions with high HIV prevalence, the greatest promoter of TB-related stigma in communities is the fear of association with HIV. Without exception, co-infection of HIV and TB was identified as resulting in greater stigmatisation. Even when people presented with TB and were HIV negative, in high HIV prevalence communities partners reported assumptions being made that those people were HIV positive.

To reduce morbidity and mortality of TB amongst PLWHA, it is essential that the most efficient diagnostics are used to enable the detection and swift treatment of cases. HIV testing among TB patients in 2010 reached 34 per cent globally and 59 per cent in the African region, yet just 7.5 per cent of the 33.3 million people



Promoting awareness in South Africa that tuberculosis is curable (Reverie Zurba)

living with HIV globally were screened for TB. Cases of TB in PLWHA are more difficult to detect, and countries with high HIV/TB co-burdens often still rely on outdated TB diagnostic techniques. Community-based support can help to address the barriers to care represented by time and cost of travel to different facilities.

Slum settlements

Uganda is just one Commonwealth country undergoing rapid urban population growth. Some 60 per cent of its urban population is estimated to live in slums, which are increasing in size by 5–7 per cent per annum. If this rate continues there will be over 20 million Ugandans living in urban areas by 2035. Uganda is classified as a high TB burden country, with an estimated prevalence in 2010 of 193 cases per 100,000 population (WHO, 2011). There is a lack of reliable data on TB needs in slum communities that can inform effective strategies. In a rapid assessment of socio-economic vulnerabilities, Target TB (with International Medical Foundation) found that of 1,366 slum households surveyed:

- 66 per cent of people did not own their property and the same proportion used communal latrines
- 20 per cent of people ate only one meal a day
- 20 per cent of houses had no window and 40 per cent of houses had only one; rooms slept on average four people
- The majority were aware of TB, but 25 per cent said they felt they had no access to TB information
- Although the majority lived well within reach of health facilities, there were significant barriers in terms of service delivery (absenteeism, lack of drugs), user fees and lack of transport.

Mechanisms for integrating services

Despite substantial global commitments to the issue, recognition of the highly dangerous relationship between TB and HIV needs to increase and be translated into action at all levels. Globally, funding imbalances need to be addressed so that the benefits of life-saving technological advancements can be available for all.

Work on the ground must be integrated to ensure that prevention, detection, treatment and care and support can be provided in the most efficient way possible to those affected by the dual epidemics. The sharing of lessons and experiences in the field means that the global health community can learn best practice for different settings, informing true, effective collaboration between organisations and agencies at local, national and international level.

Organisations often work in isolation, representing an unnecessary use of resources as well as reduced service coverage. HIV organisations offering community-based care and support should, at a minimum, be providing health education about TB and referring their clients for screening and testing. Similarly, TB organisations need to refer patients for HIV counselling and testing. Improved outcomes rely on robust referral systems, and it would be preferable for one organisation to be able to provide truly integrated care and support for both diseases. Such provision is a more efficient use of resources and a more effective way of preventing, detecting and treating HIV and TB co-infections.

For example, in Zambia, 206 community support volunteers have been trained by Target TB and the Zambia Tuberculosis and Leprosy Trust (ZATULET) in joint TB and HIV home-based psycho-social support, providing assistance to health-care workers and patients in monitoring treatment progress, assessment and provision of socio-economic support for patients undergoing treatment, as well as family and community support for the volunteers who deliver all of this.

Target TB has also recently celebrated the launch of an integrated TB/MCH/HIV project in Malawi, which will integrate TB health education and screening at ante-natal and under-five clinics, targeting pregnant women and infants who are highly vulnerable to TB, particularly those who are also HIV positive. Over three years, the project will test out an operational model for integrating these health services, with the aim of rolling out the model across Malawi and other countries in the region.

Box 2

The tipping point

Missi lives in the Namuwongo slum in Kampala, Uganda, with his three children, all aged under 5. He had infectious TB of the lungs, so bad that one lung collapsed and he nearly died. After his hospital stay, Target TB provided Missi with treatment, care and support – his volunteer TB carer helped him take strong drugs every week. But Missi was so thin, ill and weak he could no longer work as a security guard and provide for his family and his wife left him. Alone, Missi was too weak to care for his three children. He could not lift them to bathe them after a day in the dust and dirt of the slum. He had no family nearby. He was behind on his rent and was struggling to provide food for everyone.

Together with a local partner in Uganda, Target TB provided Missi with support to care for his children and with treatment and care until he became strong and well again. TB is often the tipping point for families living in poverty, who are already struggling just to get by.

Recommendations

- Integrating TB and MCH services should be considered a key priority in all relevant international and national policy, with more emphasis placed on ensuring effective implementation. DFID, the Global Fund for AIDS, TB and Malaria and the WHO have all highlighted the need for integration of TB and MCH services.
- All pregnant women in areas where TB is endemic should be routinely screened for the disease and receive appropriate treatment and care. Women should also have access to accurate and up-to-date information about the risks of TB during pregnancy and how to access relevant services.
- This should be supported by programmes that identify and address existing barriers that limit access to quality MCH services at all levels of the health system including sensitisation of service providers to the risks that TB poses to women and children, particularly pregnant women, to address existing gender biases.
- There is a paucity of research on the most cost-effective and sustainable models of integration in different settings. While some studies and examples of best practice do exist, such as a WHO case study on integration in Malawi (WHO, 2009) and documentation on PEPFAR-funded integration in Rwanda,¹ examples are almost exclusively from sub-Saharan Africa. More studies are needed to assess, demonstrate and learn from setting specific experiences of integration.
- There is an urgent need for further research into new, more effective diagnostic tools, such as Xpert MTB/RIF, since existing diagnostic tools are slow and insensitive for both women and children, alongside broader operational research to identify and

Box 3

Commonwealth support for civil society initiatives

In 2010 the Commonwealth Foundation supported Target TB to bring together all its local partners (from Africa and Asia) for the first time. The meeting in Mahaballipuram, Tamil Nadu, India, focused on better engaging civil society in TB control. In the state of Tamil Nadu itself, in the year before the workshop, Target TB and Network Theni had referred over 2,500 people for tests in Theni district. Over 10 per cent of these tested positive for TB or TB-HIV co-infection. Another local partner, Blossom Trust, had reached nearly 200,000 people with street drama, talks, exhibitions and rallies aimed at all-round health awareness. According to some estimates, less than 1 per cent of the estimated 275,000 multi-drug resistant TB patients in India are treated in the public system. Very many of the remainder in the private system are not taking the right drugs.

In order to lobby governments and donors effectively, and to seek funding, civil society needs strong advocacy skills. In 2011 the Commonwealth Foundation supported translation of advocacy materials into both Sinhala and Tamil languages and their distribution. The toolkit, developed by the Asia Pacific Council of AIDS Service Organizations (APCASO), is being used in India, Malaysia and elsewhere in the region.

Source: Adapted from Commonwealth Foundation, 2012.

develop the best and most cost-effective practices in delivering TB/MCH integrated services. Global, national and local level advocacy efforts need to be stepped up, raising awareness of the specific risks TB poses to pregnant women and children and highlighting the value of effective integrated TB, MCH and HIV services.

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Endnote

¹ See, for example, www.pepfar.gov/documents/organization/158503.pdf

Nikki Jeffery is Director of Target TB, which was established in 2003 in response to the global TB epidemic and works in partnership with local organisations in developing countries to support communities affected by the disease. Together Target TB and its partners work to tackle the social and economic issues surrounding TB as well as the disease itself. Target TB has prioritised the integration of TB with MCH programmes within its 2012–15 strategic plan. For full briefing papers and reports on these issues, please contact njeffery@targettb.org.uk or visit www.targettb.org.uk