TB/HIV CO-INFECTION

Introduction

Tuberculosis, more commonly known as TB, is a bacterial infection that usually affects the lungs but can affect any part of the body except hair, teeth and nails. Unlike HIV, TB is completely preventable and treatment is a fraction of the cost of medications used to treat HIV. When a person is infected with HIV, they are at an increased risk of also contracting TB. Co-infection with TB can also mean an accelerated progression to AIDS.

TB can be latent (inactive) or active. Close to one-third of the world’s population has dormant or latent TB. While many will simply live with dormant TB and not know it, for those whose immune systems are compromised (be it through general poor health or through another infection, like HIV), active TB can develop and, without treatment, will most certainly be fatal. An HIV-negative person with a latent TB infection has a 10% chance of progressing to active TB over his or her entire lifetime, whereas an HIV-positive person has a 10% chance of developing active TB each year. ¹

It is estimated that almost 33% of all people living with HIV are co-infected with both TB and HIV (between 12 and 15 million people). In parts of sub-Saharan Africa, up to 70% of TB patients are co-infected with HIV. It is estimated that up to 33% of all AIDS deaths worldwide can be directly attributed to TB. In sub-Saharan Africa this increases to 50%.²

Tuberculosis and HIV together are responsible for the deaths of over 4 million people annually.³ TB is one of the most common infections that threaten people living with HIV in the developing world. Of the 1.7 million deaths from TB in 2008, almost one-third were people co-infected with HIV or AIDS.

An effective cure for tuberculosis has existed for over 40 years. With this cure and the political commitment to eradicate this disease in developed countries, TB has been eliminated as a significant public health concern. However, in developing countries, a lack of consistent action and the high prevalence rates of HIV infection mean that TB is, once again, a matter for international concern - and one that threatens to roll-back the gains made in improving the lives of people living with HIV and AIDS (PLWHA).

Most leading international bodies, such as the World Health Organization (WHO) and the United Nations Joint Programme on AIDS (UNAIDS), agree on the importance of a collaborative approach to dealing with TB-HIV co-infection, including testing and treatment.

Testing for TB: Only 2 out of every 100 people with HIV are tested for TB

Little is being done to address HIV and TB co-infection. The WHO reports that only 2.4% of all people living with HIV or AIDS are even being tested for TB. This low rate of screening is shocking, given that TB causes a third of global HIV/AIDS deaths.⁴ Political and resource commitments are needed to make the necessary diagnostic facilities accessible.

Testing for TB in HIV+ people is not without difficulty. People living with HIV are more susceptible to contracting TB outside of the lungs (extra-pulmonary). The most widely used diagnostics, however, only look for pulmonary TB. It is therefore difficult for people with extra-pulmonary TB to get a correct diagnosis within a relatively short period of time. Increasing the number of PLWHA being tested for all forms of TB is the first critical step to addressing TB-HIV co-infection. Similarly, it is also essential that TB patients have easy access to HIV testing and counselling.

TB Treatment for People Living with HIV

TB diagnostics and treatments are generally quite old and cumbersome. Microscope analysis and growing cultures from sputum samples are the most

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March 2010
commonly used diagnostic tools. Neither are broadly used at the point of care because of the cost of tools and equipment, a lack of laboratory facilities and a shortage of trained personnel. Unlike most drugs used in the treatment of HIV, the newest TB drug is over 40 years old. The standard treatment regimen requires a minimum of 6 months of daily intake of multiple drugs.

Despite these difficulties, organizations like UNAIDS and the WHO recommend providing appropriate TB therapy for all HIV positive people who test for either the latent or active forms of the disease. The WHO has issued guidelines on TB treatment for HIV+ people living in resource poor health and community health settings. For TB patients who then test positive for HIV, antiretroviral therapy and/or other appropriate treatment is also recommended.

From diagnosis to treatment: The cost of TB-HIV treatment

The internationally accepted strategy for TB control is known as DOTS (Directly Observed Treatment, Short Course) and involves five components:

1. Sustained political and financial commitment
2. Case-detection through quality-assured bacteriology
3. Standardized treatment with supervision and patient support
4. An effective drug supply and management system
5. Monitoring and evaluation system and impact measurement

The cost of both TB and HIV treatments in developing countries has decreased significantly during the last decade. The full cost of the drug regimen to cure TB is now about $20. In the mid to late 1990s, antiretrovirals cost a staggering $10,000 - $15,000 per person per year. The most commonly used first-line combination of drugs now costs $88 per person per year. Therefore, in many cases, we can cure a co-infected person of their TB and make sure that they are getting life-saving ARVs for just over $100 per year.

The treatment challenges for TB-HIV co-infection relate primarily to the rising cost of drugs along with the danger of developing drug resistance. The most common cause of drug resistance is treatment interruption but drug-resistant strains of TB can also be passed on to others. The most common cause of treatment interruption is a decision by the person to stop taking the drugs. TB patients start to feel better long before their six-month drug course is finished.

MDR-TB (multi-drug resistant) and XDR-TB (extensively drug resistant) are much more complicated to treat. The treatment period is often extended to two years and the costs increase dramatically to about $5,000 per person as second or third line therapies are much more expensive. Reducing treatment time with new, shorter drug regimens is consequently the best way, over the long-term, to avoid drug resistant TB.

Implementing preventative TB therapy for people living with HIV is believed to be more cost-effective than limiting treatment to existing cases. Preventative therapy in HIV+ people involves treating latent TB with the $20 TB drug regimen. This is a cornerstone of the WHO’s recommended guidelines for collaborative TB-HIV policies.

Avoiding drug resistance by ensuring uninterrupted supplies of treatments and appropriate care to ensure compliance, providing preventative treatment where possible and developing and ensuring affordable access to new treatments are key to keeping the cost of TB-HIV co-infection treatment down.

Addressing TB-HIV Co-infection: The Political Climate

At the international level, there have been several opportunities to move the HIV-TB co-infection agenda forward – at least at the policy level. In 2007 the World Bank acknowledged in its 5 year plan on HIV/AIDS that addressing co-infection issues, “tuberculosis in particular” was critical. At the Global Leaders Forum in 2008, the World Health Organization (WHO) issued a challenge to achieve
universal access to quality TB-HIV services and halve deaths by 2015. In addition, WHO’s Stop TB Partnership has formed the TB/HIV Working Group which develops policy and advises those who tackle TB and HIV on how to work together to develop global policy that will address co-infection issues. In 2009, shortly after becoming the new Executive Director of UNAIDS, Michel Sidibé ranked TB-HIV co-infection among his top priorities. The Global Fund to Fight AIDS, TB and Malaria has included reference to TB-HIV as a footnote on the application form for Rounds 8 and 9, and has distributed a factsheet on TB-HIV as part of its application process.

Barriers to Addressing Co-infection

Despite the availability of treatment guidelines and the full support and insistence of the WHO that TB-HIV co-infection must be addressed, little progress has been made at the programmatic level, both internationally and nationally. Factsheets, footnotes and policy statements alone will not save lives.

Major barriers to addressing the TB-HIV co-epidemic have been identified as:

- The lack of resources: Donor countries and multilateral institutions have not dedicated sufficient resources to addressing TB-HIV co-infection.
- The existence of inconsistent policies: TB-HIV policies vary considerably – from clear and ambitious policies such as Ethiopia’s Health Extension Services Programme, to the more vague representations of the World Bank’s now defunct Africa Multi-country AIDS Programme, to the complete absence of policies at the Canadian International Development Agency (CIDA).
- Inadequate programming: This is particularly evident in a number of high prevalence countries where donor countries and multilateral institutions have failed to implement adequate programming to address TB-HIV co-infection.

Programming Initiatives: A Call for Change

World Bank

While recognition of the issue is welcomed, the World Bank’s approach to addressing TB-HIV co-infection remains insufficient. An analysis of the World Bank’s Africa Multi-Country AIDS Program (MAP), undertaken in 2009, indicated that attempts to address TB-HIV were inconsistent, poorly tracked, and that there was no comprehensive strategy to guide TB-HIV activities. Additionally, even though TB-HIV activities were eligible for MAP funding, it was impossible to determine, from public documents, whether any actual funding had been provided to support TB-HIV programming. The MAP program has since been cancelled and it is important to ensure that any initiative that seeks to replace MAP must contain explicit resources and guidelines for TB-HIV collaborative activities.

Global Fund to Fight AIDS, TB and Malaria

The Global Fund is an obvious place to showcase collaborative programming efforts. Unfortunately, the Fund has done little more than issue policy statements and include TB-HIV as an “add-on” to grant application forms. The Global Fund must amend its application process to promote greater resource flows to TB-HIV while ensuring that programs meet international TB-HIV standards of care and adequately track the implementation and outcomes of TB-HIV activities. In 2008, the Global Fund Board adopted a decision that, if implemented effectively, could lead to significantly improved TB-HIV integration within proposals in future funding rounds.

Canada

The Canadian International Development Agency (CIDA) estimates that between 2003/4- and 2007/8, the Agency spent just over $1 billion dollars on HIV/AIDS and TB initiatives ($220 million on TB, $840 million on HIV/AIDS). Despite this, research from public documents suggests that only $44 million dollars, or 4%, was spent on addressing HIV/ TB co-infection.
Furthermore, there was only one programmatic example in which HIV/AIDS and TB were addressed collaboratively as opposed to being two objectives within the same program or project. The existing evidence and programmatic benefits of adopting a collaborative approach to the two diseases would be useful to inform CIDA’s aid effectiveness agenda.

Progress: Slow but there is a way forward

Despite the current lack of bold action and commitment to address TB and HIV collaboratively, there are examples that can provide insight as to how to provide appropriate, collaborative services. For example, in Ethiopia, the Ministry of Health has created a health extension worker (HEW) program which is in the process of installing two community-health trained practitioners at health posts in every rural community. Each will serve between 500 and 1,500 households. Thirty thousand health extension workers are now in place throughout Ethiopia. The program, financed domestically and through Global Fund grants as well as other donor funds, allows each operating health post to offer collaborative TB-HIV services. The services offered are simple—HIV testing and counselling are offered to all TB patients and all HIV+ patients are screened for TB. Antiretroviral therapy is offered to those who test HIV+ and TB testing and treatment are provided for all those with an active or latent infection.

Conclusion

The simple fact that TB is a leading cause of death in people living with HIV makes addressing TB-HIV co-infection critical in any strategy that aims to reach those most in need.

While TB rates are relatively stable around the world, they are on the rise in sub-Saharan Africa. TB is a preventable and curable disease. Millions of dollars invested in addressing HIV are wasted if patients put on antiretroviral therapies die because they cannot access TB drug regimens that cost as little as $20 per person. Progress towards universal access to treatment and care for people living with HIV will not be met if they are dying from TB.

The continued disconnect between TB and HIV policy and programming is ineffective, inefficient and fiscally misguided. Collaborative approaches could, quite simply and most importantly, ensure that more lives are saved.

Notes and References:

1. Stop TB Partnershiop 2006
10. ACTION 2009 and Results Canada/ACTION November 2009 reports
11. RESULTS Canada November 2009 report
12. Global Fund Board Decision GF/B18/DP12 Part 3: “The Board recognizes that the slow progress in implementing core TB-HIV collaborative services is a risk to achieving successful outcomes under current and future Global Fund tuberculosis and HIV grants. Given the large gap in tuberculosis screening in HIV settings and vice versa, the Board emphasizes that all applicants should include and implement significant, robust tuberculosis interventions in their HIV/AIDS proposals and HIV/AIDS interventions in their tuberculosis proposals. The Board requests the Secretariat to review the guidelines for phase 2 requests to require that, in respect of continued funding for tuberculosis or HIV grants, CCMs explain their plans for scale up to universal TB-HIV collaborative services and explicitly articulate what TB-HIV activities, funding, and indicators will be included in each proposal.”
13. RESULTS Canada November 2009 report, Pg 3

ICAD’s mission is to lessen the spread and impact of HIV and AIDS in resource-poor communities and countries by providing leadership and actively contributing to the Canadian and international response. Funding for this publication was provided by the Public Health Agency of Canada. The opinions expressed in this publication are those of the authors/researchers and do not necessarily reflect the official views of the Public Health Agency of Canada. ICAD would like to thank Results Canada for their assistance in developing this fact sheet.