

# Evidence Update

Summary of a Systematic Review

Tuberculosis Series

**Does the integration of TB and HIV services improve healthcare delivery and cost-effectiveness in Sub Saharan Africa?**

**Concurrent screening for TB and HIV and the provision of cotrimoxazole during routine TB care may improve the overall clinical and cost effectiveness of TB and HIV services.**

Researchers conducted a systematic review to examine the overall clinical and cost effectiveness of TB and HIV service integration. The search identified 52 studies reported in 56 articles that fulfilled the inclusion criteria of the review.

## Why is this question important?

HIV and TB infections interact synergistically. Infection with HIV increases the risk of acquiring active TB and activating latent TB. TB infection is also associated with an increase in HIV viral load in HIV-infected patients.

Currently, HIV and TB patients have to access different services for HIV and TB screening, testing, care, treatment, and adherence support. Due to the high prevalence of TB in HIV-infected people it could be advantageous to both the patient and the healthcare system to integrate TB and HIV services.

Integration of healthcare services aims to improve access, quality, user satisfaction and efficiency. Integrated TB and HIV health-care facilities should be able to diagnose, initiate early treatment and provide access to preventative therapies for both infections. Integrated TB and HIV care could improve management of clinical complications resulting from anti-TB and antiretroviral drug interactions. TB and HIV programmes involve similar activities that use the same health system resources, therefore integration of these services allows for more effective use of limited resources.

## What does the research say?

Seven randomised controlled trials (RCTs), 10 quasi-experimental studies, 30 observational studies, and 5 costing studies were included in the review. Studies were conducted in urban (30 studies) or rural (16 studies) or both urban and rural settings (6 studies). Concurrent screening for TB and HIV in health care facilities and HIV voluntary counselling and testing (VCT) centres appears to be beneficial to both the patient and the health care provider.

Providing co-trimoxazole to co-infected patients during routine TB care reduced the risk of death and improved survival. Providing isoniazid preventative therapy (IPT) to HIV-infected patients is both clinically and cost-effective, although further research is needed to assess the effect of integrating IPT into routine HIV care. Further research is also needed to assess the benefits of integrating antiretroviral therapy into TB care, improving condom accessibility in TB facilities, providing HIV risk reduction counselling in patients with TB and implementing TB infection control in HIV healthcare settings.

## Are the review findings reliable?

This review had some methodological limitations meaning it was judged at high risk of bias; the results should therefore be interpreted with caution. 3 relevant databases were searched but this was restricted to published English language articles only and so there is the possibility of publication and language bias. The search was conducted in June 2010 and so may no longer be up to date. The inclusion criteria were not clearly defined with specific details only reported for study design and some exclusion criteria. Only one reviewer was involved in selecting studies for inclusion and it was unclear how many reviewers were involved in data extraction, therefore giving the potential for bias in the review process. Study quality was not formally assessed. A narrative synthesis was used to combine results, which was appropriate given the differences between studies. However, the reliability of the primary studies was not appropriately considered and sufficient details of included studies, particularly in relation to the interventions employed, were not provided.



### Can the research findings be applied to my setting?

Included studies were conducted in health care facilities and VCT centres in South Africa (14), Uganda (10), Malawi (9), Zambia (4), Côte d'Ivoire (3), Kenya (3), Ethiopia (2), Botswana (1), Burkina Faso (1), Cameroon (1), Democratic Republic of the Congo (1), Ghana (1), Rwanda (1), and Tanzania (1). Compared to other parts of the world, the prevalence of HIV and TB in Sub-Saharan Africa is very high.

#### More information

**This summary is based on the following systematic review:** Uyei J, Coetzee D, Macinko J, Guttmacher S. Integrated delivery of HIV and tuberculosis services in sub-Saharan Africa: a systematic review. *Lancet Infect Dis.* 2011 Nov;11(11):855-67

**What is a systematic review?** A systematic review seeks to answer a well formulated and specific question by identifying, critically appraising, and summarising the results of all relevant studies, published and unpublished, according to pre-stated and transparent

