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Integrating tuberculosis services into a PMTCT HIV programme in South Africa

GLOBALLY, the human immunodeficiency virus (HIV) epidemic is most concentrated in the Southern African region, and South Africa has the largest numbers of patients. After a halting start, South Africa has nevertheless made significant progress in managing and controlling its HIV epidemic.[1] The tuberculosis (TB) epidemic in South Africa has remained a principal cause of mortality, despite a decrease in the proportion of deaths due to TB between 2008 (12.6%) and 2010 (11.6%).[2] The key driving force behind the resurgence of TB is the HIV epidemic, with large numbers of co-infected individuals adding to the increasingly high incidence of TB, estimated at more than 900 per 100 000 population per year.

As failure to prevent and treat TB during pregnancy impacts negatively on both maternal and child health, TB screening is a sensible strategy. Given the difficulties associated with diagnosing and treating paediatric TB, and the poor outcomes, it is widely recommended that pregnant women be targeted for TB screening and management. South African government policy and major donors such as the US President's Emergency Plan for AIDS Relief (PEPFAR) strongly support the integration of TB screening into prevention of mother-to-child transmission (PMTCT)/paediatric HIV programmes,[3] but more evidence is needed to establish the most effective methods and best practices for doing so.

Trends in the epidemiology of TB and HIV show that, despite striking progress in current strategies to screen, detect and treat TB and HIV at individual and facility levels, there are large gaps in knowledge and implementation success. In much of Southern Africa health systems are weak, wasteful and inefficient, and fail to deliver well-functioning programmes; the main barriers to delivery include insufficient, inadequately trained health personnel, poorly equipped health facilities, weak financial management, suboptimal use of resources and inadequate, uncoordinated monitoring systems. There is, intuitively, a strong case for combining TB and HIV services for greater effectiveness. However, intuition can founder on the rocks of hard implementation. A recent randomised control trial that tested, inter alia, the integration of HIV with an enhanced TB service at clinic, community and household levels, failed to demonstrate that the interventions led to a statistically significant improvement in TB prevalence.[4]

Integration of cognate services (HIV-TB) needs to be tested in numerous situations, facilities, health personnel and different combinations of diseases,[5] and evidence is sparse. The paper from South Africa by Uwimana et al. in this issue illustrates some of the barriers to integration of TB services into PMTCT programmes.[6] The results are based on cross-sectional surveys of exit interviews from antenatal services. There was variable knowledge of TB symptoms, and the yield was low: 1.3% of 150 subjects had a diagnosis of TB. There were gaps in the TB services, and isoniazid (INH) for prophylaxis was rarely available. The barriers to integration were, unsurprisingly, unskilled, unsupervised personnel, the physical layout of each of the services, and weak service delivery mechanisms. This paper illustrates the need for more rigorous study designs to disentangle the complexities of integrated services.

Clearly, more implementation studies, based on sound, effective health service principles for early identification of TB, contact screening and treatment outcomes, costs and use of INH prophylaxis, are required.

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Risk factors for treatment default among adult tuberculosis patients in Indonesia

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SUMMARY

SETTING: Defaulting from anti-tuberculosis treatment hinders tuberculosis (TB) control.

OBJECTIVE: To identify potential defaulters.

DESIGN: We conducted a cohort study in newly diagnosed Indonesian TB patients. We administered a questionnaire, prospectively identified defaulters (discontinued treatment ≥2 weeks) and assessed risk factors using Cox's regression.

RESULTS: Of 249 patients, 39 (16%) defaulted, 61% in the first 2 months. Default was associated with liver disease (HR 3.40, 95%CI 1.02–11.78), chest pain (HR 2.25, 95%CI 1.06–4.77), night sweats (HR 1.98, 95%CI 1.03–3.79), characteristics of the head of the household (self-employed, HR 2.47, 95%CI 1.15–5.34; patient's mother, HR 7.72, 95%CI 1.66–35.88), household wealth (HR 4.24, 95%CI 1.12–16.09), walking to clinic (HR 4.53, 95%CI 1.39–14.71), being unaccompanied at diagnosis (HR 30.49, 95%CI 7.55–123.07) or when collecting medication (HR 3.34, 95%CI 1.24–8.98) and low level of satisfaction with the clinic (HR 3.85, 95%CI 1.17–12.62) or doctors (HR 2.45, 95%CI 1.18–5.10). Health insurance (HR 0.24, 95%CI 0.07–0.74) and paying for diagnosis (HR 0.14, 95%CI 0.04–0.48) were protective.

CONCLUSION: Defaulting is common and occurs early. Interventions that improve clinic services, strengthen patient support and increase insurance coverage may reduce default in Indonesia.

KEY WORDS: adherence; health service; tuberculosis control

THE WORLD HEALTH ORGANIZATION (WHO) and the Stop TB Partnership aim to eliminate tuberculosis (TB) globally by 2050, and while the number of new cases is falling the burden remains enormous.[1] Treatment default, defined by the WHO as missing treatment for >2 consecutive months,[2] remains a threat to TB control and elimination.[3,4] Defaulting patients suffer poor treatment outcomes, may require retreatment, remain a possible source of transmission and may develop multidrug-resistant tuberculosis (MDR-TB).[4,5] Early identification of those most at risk of treatment default would be advantageous.

Previous research has identified factors associated with treatment default, including at the individual (substance abuse, male sex, low socio-economic status), health care (poor health care accessibility, attitudes of health care workers) and societal levels (stigma).[6–16] There is a need for site-specific research that enables development of relevant interventions.

Indonesia ranks fifth among the 22 high-burden countries, with an annual incidence rate of 189 per 100 000 population in 2009. MDR-TB is estimated at around 15% among retreatment cases.[17] Although treatment success rates are over 85%, treatment default may be as high as 30% in some settings (personal communication, B Alisjahbana, Padjadjaran University, Bandung, Indonesia). Little is known regarding predictors of treatment default in Indonesia.

We conducted a prospective cohort study in Bandung, West Java, to identify predictors of treatment default, which was defined as missing treatment for ≥14 consecutive days, as this results in patient home visits, incurring significant cost.

METHODS

Setting and study population

Participants were recruited from a community lung clinic that diagnoses around 1500 new TB patients annually (50% sputum smear-positive). Medication is free and is collected by the patients every 2 weeks during the intensive phase (first 2 months), and monthly thereafter. The clinic conforms to the Indonesian treatment guideline of a 2-month intensive phase of rifampicin (RMP), isoniazid (INH), pyrazinamide (PZA) and ethambutol (EMB), followed by

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