

## How can we reduce TB deaths?

THE TB DEATH RATE, i.e., the death of any patient on TB treatment from whatever cause, is an increasingly important indicator for National Tuberculosis Programmes (NTPs).<sup>1</sup> Reduction of the TB death rate by 50% is one of the global health targets agreed in Okinawa in 2000, and forms one of the Millennium Development Goal (MDG) indicators for 2015. Despite this, TB death rates have been increasing, especially in countries with high HIV prevalence, prompting an international policy for TB-HIV collaboration that includes HIV testing of TB patients and the provision of antiretroviral therapy (ART) to those who need it.<sup>2</sup> Routine HIV testing and provision of ART is considered to be the optimal strategy for reducing the TB death rate, and has been largely adopted by those countries most affected by the dual TB and HIV epidemics.

In this month's *Journal*, Zachariah et al. present the treatment outcomes for a cohort of HIV-infected TB patients in rural Malawi.<sup>3</sup> Malawi has been at the forefront of both collaborative TB-HIV activities and the programmatic roll-out of ART, especially involving TB patients. In the Malawi programme, as CD4 counts are not available, all TB patients, although eligible to start ART, are not commenced on ART until they have completed 2 months of TB treatment. The rationale for this is to reduce side effects, especially with the combination of ART and rifampicin, to reduce the pill burden and to increase adherence.

The paper by Zachariah et al. finds no survival benefit in those patients who started ART compared to those who did not. This finding may surprise and disappoint NTP managers who are relying on ART to help reduce TB death rates. Several reasons why no benefit was seen are described in the paper: this was an observational cohort that compared self-selected patients choosing to access ART with those who did not, most patients were taking cotrimoxazole to reduce opportunistic infections and, most importantly, the majority of deaths occurred during the first 2 months of TB treatment, before ART could be initiated.

The main question, therefore, is whether HIV-infected TB patients would benefit more from ART offered earlier in their TB treatment. There may be a

benefit for some patients, but previous studies have suggested that early mortality may be due to TB itself rather than opportunistic infections or HIV.<sup>4</sup> If this is the case, however important ART is for long-term survival and quality of life, we are failing TB patients by diagnosing TB too late.

Much has been written about the problems of diagnosing TB in HIV-positive individuals and the need for new diagnostic tools. We also need to look hard at the policy and practice of passive case finding for TB and consider how we can identify cases earlier. Many NTPs are failing to ensure that TB suspects are recognised, resulting in long delays between the onset of symptoms and the commencement of TB treatment. This leads to increased transmission of TB and increased mortality.<sup>5</sup> To achieve the MDGs and reduce TB death rates we must first identify cases of TB; only then can we ensure that they receive the HIV care that they undoubtedly need.

HELEN M. AYLES  
ZAMBART Project  
Lusaka, Zambia  
e-mail: Helen@zambart.org.zm

### References

- 1 Maher D, Watt C J, Williams B G, Raviglione M, Dye C. Tuberculosis deaths in countries with high HIV prevalence: what is their use as an indicator in tuberculosis programme monitoring and epidemiological surveillance? *Int J Tuberc Lung Dis* 2005; 9: 123–127.
- 2 World Health Organization. Interim policy on collaborative TB/HIV activities. Geneva, Switzerland: WHO, 2004.
- 3 Zachariah R, Fitzgerald M, Massaquoi M, et al. Does antiretroviral treatment reduce case fatality among HIV-positive patients with tuberculosis in Malawi? *Int J Tuberc Lung Dis* 2007; 11: 848–853.
- 4 Harries A, Hargreaves N J, Kemp J, et al. Deaths from tuberculosis in sub-Saharan African countries with a high prevalence of HIV-1. *Lancet* 2001; 357: 1519–1523.
- 5 Greenaway C, Menzies D, Fanning A, Grewal R, Yuan L, Fitzgerald J M; Canadian Collaborative Group in Nosocomial Transmission of Tuberculosis. Delay in diagnosis among hospitalized patients with active tuberculosis—predictors and outcomes. *Am J Respir Crit Care Med* 2002; 165: 927–933.