

Reply to 'Addressing smoking cessation in tuberculosis control'

We welcome the commentary "Addressing Smoking Cessation in Tuberculosis Control" responding to the *Bulletin* theme issue on tuberculosis (May 2007), and thank the authors for raising this important issue.

If action is not taken to curb the spread of tobacco use, annual deaths are expected to reach 8.3 million by 2030, of which more than 80% will be in developing countries.¹ Smoking globally is about four times more common among men than women. However, trends are changing, with increasing levels among women, and girls are smoking almost as much as boys in many settings.² In addition, girls and boys use non-cigarette tobacco products such as chewing tobacco, bidis and water pipes at similar rates.

Many of the countries with increasing tobacco consumption are those with a high burden of TB.

Core TB control components, as advocated in the Stop TB Strategy, are intended to break the chain of mycobacterial transmission by ensuring early diagnosis and effective treatment of TB patients. However, over the past decades, global TB control strategies have paid less attention to the relative importance of different determinants and risk factors for TB, such as smoking, malnutrition, diabetes, crowding and indoor air pollution. There is a clear need to address these risk factors to reduce people's vulnerability to TB infection and disease. We are pursuing work on these risk factors in a project linked to the Commission on Social Determinants of Health. Such additional approaches to TB control are necessary to significantly curb the epidemic and will contribute to reaching the 2015 Millennium Development Goal related to TB control. Preventing smoking or encouraging people to quit can substantially reduce both the incidence of

clinical tuberculosis and tuberculosis deaths.³ At the same time, it is crucial to strengthen the role of health professionals in tobacco control as promoted in Articles 12 and 14 of the WHO Framework Convention on Tobacco Control.⁴ Physicians and public health workers should energetically apply anti-smoking interventions in populations with high levels of subclinical tuberculosis infection. Since exposure to environmental tobacco smoke at home or at work is also a risk for those with compromised respiratory systems, including TB patients, it is crucial to effectively implement the WHO Framework Convention's Article 8 on protection from exposure to tobacco smoke.

Since 2005, WHO has been exploring collaborative activities between TB control and tobacco control efforts. As a first step, the effects of smoking (active smoking and exposure to tobacco smoke) on TB were investigated in a systematic review of the literature jointly undertaken by WHO and the International Union Against Tuberculosis and Lung Diseases. The specific effects studied included those on TB infection and disease, recurrent TB, TB characteristics and case management (delay in seeking care, default, smear conversion, disease severity, acquired drug resistance) and mortality during and after TB treatment.

On the basis of strict and standardized criteria, 42 articles containing 50 studies for data extraction were selected for final inclusion in the meta-analysis. The meta-analysis showed that smoking and exposure to tobacco smoke have a significant impact on susceptibility to TB infection, progression to TB disease and treatment outcomes. The evidence was rated as strong for an association between exposure to tobacco smoke and TB disease, moderate for the association between tobacco use and recurrent TB disease, limited for the association between exposure to tobacco smoke and TB infection, and between tobacco use and TB mortality (both for TB mortality

and for TB and death during and after treatment). Limited data supported an association between tobacco use and patient delay in seeking care, default, slower smear conversion and greater severity of disease or drug-resistant tuberculosis. The effects appeared to be independent of the effects of alcohol use, socio-economic status and other potential confounders.

Furthermore, an analysis of the impact of smoking on the global TB epidemic is in progress. Preliminary analysis suggests that a significant proportion, probably more than 20%, of the global TB burden may be attributable to smoking, and this proportion will increase if smoking prevalence increases, thus undermining TB control efforts.

As a follow-up to the systematic review, in the fall of 2006 WHO developed a policy paper on the integration of TB and tobacco control activities into primary care services using the Practical Approach to Lung Health (PAL), a component of the Stop TB strategy. PAL was chosen because tobacco smoke has a negative impact on all patients with respiratory symptoms seeking care at primary care services, including those with TB. The policy paper calls upon primary care workers to: (i) identify smokers; (ii) provide behavioural therapy (counselling) for smoking cessation and where available pharmacological interventions, including nicotine replacement therapy and non-nicotine medications; (iii) refer smokers to specialist services for intensive cessation therapy when required and where possible; and (iv) deliver primary care services in smoke-free environments. To this extent, health ministries are encouraged to establish a coordination mechanism with representatives from both the national TB control programmes and the national tobacco control units. Such coordinating bodies have the responsibility of developing a national policy and action plan for the implementation of joint activities including developing health

education materials, training human resources, establishing a structure to supervise tobacco control activities among respiratory patients and establishing a mechanism to monitor and evaluate the impact of integrated services.

This collaborative approach is expected to (i) improve the outcome of TB treatment and reduce the infectivity period limiting TB transmission to contacts; (ii) prevent smoking and promote smoking cessation among all respiratory patients who seek primary care, including those with TB; and, (iii) demonstrate that tobacco control efforts can be expanded through activities related to the Stop TB strategy. If tobacco control activities are successfully implemented at primary care services through the Stop TB strategy and PAL, they can gradually be extended to other patients under other national programmes such as maternal health, cardiovascular diseases, cancer

and diabetes control until these activities reach all persons attending health units for curative or preventive care. WHO plans to scale up the implementation of activities as part of its medium-term strategic plan approved by the World Health Assembly in May 2007.

The policy paper is due to be published during 2007. In addition, WHO is implementing the collaborative approach through a pilot study in Nepal that started in June 2007. Nepal, a party to the Framework Convention, was invited to implement a pilot test because of its relatively high smoking prevalence and TB burden, and because PAL activities have already begun in its primary care services. Other countries will start similar pilot studies in the near future. WHO is encouraging countries to express interest in this approach, which targets two of the world's key public health priorities. ■

Competing interests: None declared.

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- 3 Esson KM, Leeder SR. *The Millennium Development Goals and tobacco control: an opportunity for global partnership*. Geneva: WHO; 2004.
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