

## New challenges for tuberculosis control in China



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Since the 1990s, China has implemented a nationwide WHO-recommended DOTS (directly observed treatment, short-course) strategy, which led to a successful 65% decline in smear-positive pulmonary tuberculosis and a 48% decline in bacteriologically positive tuberculosis between 1990 and 2010.<sup>1</sup> China achieved the tuberculosis control targets of the UN's Millennium Development Goals 5 years ahead of the target date, and has made a great contribution towards realising the global goal. However, huge challenges still exist. China still has the world's third largest tuberculosis epidemic, and an estimated national prevalence of 89 per 100 000 in 2014.<sup>2</sup> Regional equity is one of the challenges facing tuberculosis control in China. According to China's Fifth National TB Epidemiological Survey in 2010,<sup>1</sup> the prevalence of bacteriologically confirmed pulmonary tuberculosis in the western region was more than three times that in the eastern region, and twice of that in the central region.

The Article by Peierdun Mijiti and colleagues in this issue of *The Lancet Global Health*<sup>3</sup> further illustrates this inequity. In their population-based, cross-sectional study in 2010, Mijiti and colleagues found the weighted prevalence of bacteriologically confirmed pulmonary tuberculosis in the Xinjiang Uyghur Autonomous Region to be much higher (430 per 100 000) than the figures for the nation as a whole (116 per 100 000) and for the western region derived from the national survey (212 per 100 000).<sup>1</sup> Moreover, the study reveals the regional disparity within the province. The pulmonary tuberculosis prevalence was higher in rural areas than in urban areas, and highest in the southern region of Xinjiang. It should be noted that, although the pulmonary tuberculosis prevalence among the Uyghur ethnic group was substantially higher than that of the Han or other ethnic groups, this disparity could be an expression of regional inequity, since 78.0% of the Uyghur ethnic group live in rural areas and 73.4% live in the southern region of Xinjiang.<sup>4</sup>

The study by Mijiti and colleagues also illustrates that, besides medical factors, social determinants of health—poverty, education, geography, customs, etc—also play an important role in tuberculosis control. Owing to the low socioeconomic status and poor social health environment, tuberculosis mainly affects

poor and vulnerable populations, namely people who live in the western region, poor rural areas, the urban migrant population, and elderly people. Moreover, Mijiti and colleagues' finding that the lowest patient diagnosis rate was in the groups with the highest pulmonary tuberculosis prevalence indicates that poor access to health services is also an important factor influencing tuberculosis control. Populations in the ethnic minority areas face challenges such as language barriers, lack of health information, and living too far from medical institutions, which all affect or delay the detection and treatment of tuberculosis.<sup>5</sup> Thus, balancing socioeconomic development, improving the social health environment, promoting education, and changing unhealthy lifestyles are all beneficial for tuberculosis control. In addition, in the ethnic minority areas, specific health education materials and channels such as using story-telling and role-playing for education rather than just distributing brochures should be developed for health education on tuberculosis.

In terms of cost, tuberculosis is a catastrophic illness. Due to the continuous economic burden, many patients are unable to adhere to treatment. With the deepening of health reform, China's medical insurance initiative has almost reached full coverage: government subsidies for the scheme have reached CH¥420 per capita, and the basic annual per capita government subsidies for public health services has reached ¥45.<sup>6</sup> However, the high out-of-pocket payment is still a catastrophic expenditure for tuberculosis patients, especially for those from poor families. If the government does not provide more support, many patients will have to terminate treatment when they can no longer afford the payment. This will not only result in impoverishment, but will also lead to further spread of tuberculosis epidemics. Therefore, if completely free tuberculosis diagnostics and treatment can be provided, it will not only help solve the ongoing economic burden of tuberculosis, but also contribute to tuberculosis control, especially in poor populations.

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We declare no competing interests.

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