Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Health-system reforms to control tuberculosis in China

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In today's *Lancet*, Longde Wang and colleagues report on many remarkable recent improvements in the control of tuberculosis in China.[1] The progress is good news in view of the size and global importance of the tuberculosis burden in China and the faltering of control in the 1990s, as noted by Wang. The fruitful partnership with WHO, the World Bank, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and several governments and non-governmental organisations is also noteworthy, as is the commitment to transparent reporting and health-system reform in China today in the environment after the outbreak of severe acute respiratory syndrome. Better control of tuberculosis in China is also timely in view of the high rates of multidrug resistance, and the emergence of HIV infection in some population subgroups also at high risk of tuberculosis.[2]

One group of special concern are work migrants, most often poor young men, who leave the countryside to join the wage economy in towns and cities all over China.[3–6] Some come from areas such as Henan Province where huge numbers of peasants were infected with HIV from scandalous plasma-donor practices in the 1990s. Many male migrants are at risk of unprotected sex when away from home. And men are also at higher risk of tuberculosis than women in China because the male-to-female ratio of adults with pulmonary tuberculosis is about 2:1 or more, reflecting a real risk excess rather than differential detection or notification.[7,8] So several factors converge in young male migrant workers to put them at risk of both HIV and tuberculosis, and this convergence must be of great concern.

When over 10% of an entire population is on the move, and when these floating people are poorer and have more tuberculosis than average, public health has a big problem. When that happens in China, with a fifth of the global population and more than its share of tuberculosis, the world has a big problem. This problem is compounded because China's internal work migrants often live and work in circumstances that promote transmission of tuberculosis and impede its diagnosis and treatment.[3,4,6] They are usually so poor that the cost of adequate diagnosis and treatment is prohibitively expensive. Indeed, they may not be able to get treated at all unless they return to their home village in the poor interior, because subsidised management of tuberculosis (and other social welfare) is only available through facilities in the area where they were registered at birth.[5] Those born in rural zones are not allowed to switch registration to become urban residents. They have been allowed to leave their area (temporarily) for work since 1992 and now number more than 100 million. China's remarkable economic growth depends on them, but if they get tuberculosis, they have to return home for treatment.

Going home for rural health care in China is not ideal either. Over the past 30 years, that part of the health system has run down because government funding has fallen while everything else has become more expensive. Health facilities attempted to make up shortfalls by charging ever larger fees for diagnosis and treatment, especially for a difficult disease like tuberculosis. In China today, patients' payments keep the health services running and the medical staff have been encouraged to supply profitable health goods and services, especially drugs. Their own jobs depend on adequate operational funds, which are largely generated through user fees. Meanwhile, over the same 30 years, the socialist system of universal rural health-insurance collapsed and was not replaced apart from some pilot tests of an under-resourced community-based scheme in the 1990s.[9,10] Until recently, virtually all rural residents, 900 million in all, had no health insurance at all. This

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***Mycobacterium tuberculosis*, coloured transmission electron micrograph**

situation will change if the current experiments with community-based health-insurance succeed and are then adopted nationally, but in the meantime as many as 10% of rural households have catastrophic medical payments (exceeding 40% of their disposable income) every year.[10]

As Wang and colleagues note in their account of revitalised control of tuberculosis in China, the reforms need to go hand-in-hand with reform of the overall health system. In their figure 2, they show that finance for tuberculosis control was transformed by the infusion of additional funds on top of the stable levels of local government support. Similar multilevel financial support is needed for the entire health system, and the success with tuberculosis control shows what can be achieved in China when sound investments are made.

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I declare that I have no conflict of interest.

1 Wang L, Liu J, Chin DP. Progress in tuberculosis control and the evolving public-health system in China. *Lancet* 2007; **369:** 691–96.
2 Zignol M, Hosseini MS, Wright A, et al. Global incidence of multi-drug resistant tuberculosis. *J Infect Dis* 2006; **194:** 479–85.
3 Jackson S, Sleigh AC, Wang GJ, Liu XL. Household poverty, off-farm migration and pulmonary tuberculosis in rural Henan, China. In: Sleigh AC, Chee HL, Yeoh BSA, Phua KH, Safman R, eds. Population dynamics and infectious diseases in Asia. Singapore: World Scientific, 2006: 231–44.
4 Jackson S, Sleigh AC, Wang GJ, Liu XL. Poverty and the economic effects of TB in rural China. *Int J Tuberc Lung Dis* 2006; **10:** 1104–10.
5 Kelly D, Luo X. SARS and China's rural migrant labour: roots of a governance crisis. In: Sleigh AC, Chee HL, Yeoh BSA, Phua KH, Safman R, eds. Population dynamics and infectious diseases in Asia. Singapore: World Scientific, 2006: 389–408.
6 Zhang LX, Tu DH, An YS, Enarson DA. The impact of migrants on the epidemiology of tuberculosis in Beijing, China. *Int J Tuberc Lung Dis* 2006; **10:** 959–62.
7 China Tuberculosis Control Collaboration. The effect of tuberculosis control in China. *Lancet* 2004; **364:** 417–22.
8 Borgdoff MW, Nagelkerke NJD, Dye C, Nunn P. Gender and tuberculosis: comparision of prevalence surveys with notification data to explore sex differences in case detection. *Int J Tuberc Lung Dis* 2000; **4:** 123–33.
9 Jackson S, Sleigh AC, Li P, Liu XL. Health finance in rural Henan: low premium insurance compared to the out-of-pocket system. *China Q* 2005; **181:** 137–57.
10 Sun X, Jackson S, Carmichael G, Sleigh A. Catastrophic payment and health protection in rural China: evidence from the New Cooperative Medical Scheme in Shandong Province. Jan, 2007: http://www.uq.edu.au/economics/index.html?page=57000 (accessed Feb 15, 2007).

Medicalisation: a medical nemesis

Once upon a time, plenty of children were unruly, some adults were shy, and bald men wore hats. Now all of these descriptions might be attributed to diseases—entities with names, diagnostic criteria, and an increasing array of therapeutic options. Medicalisation is a phenomenon explored by Ivan Illich in his seminal 1975 book *Limits to medicine. Medical nemesis: the expropriation of health*. The term refers to the process by which certain events or characteristics of everyday life become medical issues, and thus come within the purview of doctors and other health professionals to engage with, study, and treat. The list of things that modern medicine lays claim to is a long one, potentially including sexuality, garden-variety unhappiness, childbirth, ageing, and dying. The medicalisation of these life experiences has brought with it benefits, but at a price. And those costs, which are not just financial, are not always clear.

One might rightly argue that the expansion of recognised diseases, with drugs and other treatments for them, represent advances, clear demonstrations of the progress of medicine and science. On the other

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Ivan Illich, 1926–2002

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