Shifting Gears to Control Drug-Resistant Tuberculosis

To the Editor—How does the global community gain more traction in an effort to combat multidrug-resistant (MDR) tuberculosis globally? We have considered whether it would be helpful to address MDR tuberculosis as a separate epidemic. We introduced the idea because the dominant strategy globally for the past 2 decades has been based on the premise that MDR tuberculosis could be controlled by strengthening treatment programs for drug-susceptible tuberculosis. This strategy was based on the belief that most cases of MDR tuberculosis result from lack of patient adherence to treatment and/or substandard drug quality, and it is failing because most new cases are actually caused by person-to-person spread [1]. The idea of addressing MDR as a separate epidemic was also put forward as a strategy that had been used with success to address other drug-resistant pathogens (eg, methicillin-resistant Staphylococcus aureus [MRSA]). Enthusiasm for the idea has been tempered by the thesis that tuberculosis, whether drug sensitive or drug resistant, is pathologically the same disease as well as by a concern that a focus on drug-resistant tuberculosis might come at the expense of treating drug-sensitive tuberculosis.

At least in part, it is a matter of semantics whether drug-resistant tuberculosis is considered a separate epidemic. What is not debatable is that a strategy to address prevention and control of drug-resistant tuberculosis would necessarily address both drug-sensitive and drug-resistant tuberculosis. In contrast, a strategy that focuses on drug-sensitive tuberculosis is not comprehensive and does not effectively address drug-resistant tuberculosis. Drug-resistant cases of tuberculosis arise both from inappropriate treatment of drug-sensitive strains and from transmission of drug-resistant strains. Indeed, a recent report suggests an increasing ease of spread for drug-resistant strains, carrying mutations for both drug resistance and more efficient spread [2].

Compared with a decade ago, much progress has been made. Today, however, most cases of MDR tuberculosis may remain undiagnosed and untreated, while those affected continue to spread disease to their families and communities or die. Regardless of the terminology used to describe tuberculosis, current data indicate that the number of “extremely drug-resistant” cases are increasing in the Russian Federation, China, South Africa, and India, and “totally drug-resistant” strains of tuberculosis also exist [3]. Almost 90% of new cases of MDR tuberculosis are treated with no drug susceptibility data [4]. Even among reported cases of tuberculosis, only one-third of MDR tuberculosis cases are diagnosed; fewer than half of those that are diagnosed are successfully treated [4]. It is urgent that drug-resistant tuberculosis not be seen as an afterthought to drug-sensitive tuberculosis.
The global community was charged with public health negligence in 2006 in relation to MDR tuberculosis [5]. Currently, patients in South Africa diagnosed with extremely drug-resistant tuberculosis are discharged after unsuccessful treatment, return to their families and communities, and spread disease [6]. In India, it is reported that those with extremely drug-resistant tuberculosis remain in the community for months after diagnosis before the correct treatment begins [7, 8]. It is estimated that there were 1.3 million deaths from tuberculosis and 1.6 million deaths from HIV infection in 2012.
If the resources are not currently available to treat both drug-sensitive and drug-resistant tuberculosis, then perhaps we should reexamine our public health priorities (Figure 1) [11]. Resources for this disease should be strengthened, not decreased (Figure 2) [11]. Whether we treat MDR tuberculosis as a separate epidemic is not important as long as a focus on drug-resistant tuberculosis as well as drug-sensitive tuberculosis is a high priority.

Note

Potential conflicts of interest. All authors: No reported conflicts.

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