

Tuberculosis care and control

Philip C Hopewell,^a GB Migliori,^b & Mario C Raviglione^c

Tuberculosis *care*, a clinical function consisting of diagnosis and treatment of persons with the disease, is the core of tuberculosis *control*, which is a public health function comprising preventive interventions, monitoring and surveillance, as well as incorporating diagnosis and treatment. Thus, for tuberculosis control to be successful in protecting the health of the public, tuberculosis care must be effective in preserving the health of individuals.

There are three broad mechanisms through which tuberculosis care is delivered: public sector tuberculosis control programmes, private sector practitioners having formal links to public sector programmes (the public–private mix), and private providers having no connection with formal activities. In most countries, programmes in both the public sector and the public–private mix are guided by international and national recommendations based on the DOTS tuberculosis control strategy — a systematic approach to diagnosis, standardized treatment regimens, regular review of outcomes, assessment of effectiveness and modification of approaches when problems are identified.^{1,2} As a consequence of this systematic approach, there is reasonable assurance that tuberculosis services are of acceptable quality in public sector and mixed public–private programmes. In contrast, though there are many published guidelines and recommendations for tuberculosis care, there are no formal mechanisms directed towards ensuring that private sector services for tuberculosis meet acceptable standards.

There is limited information about the adequacy of tuberculosis care delivered by practitioners outside formal programmes, but evidence suggests that the poor quality of care delivered by non-programme providers hampers global tuberculosis control efforts.³ For example, it is likely that under-diagnosis and underreporting by the private sector

accounted, in part, for the fact that only 53% of the estimated global number of sputum smear-positive cases were reported in 2004.⁴

A global situation assessment reported by WHO suggested that delays in establishing a diagnosis are common.^{1,5} This survey and other studies have also shown that clinicians who work in the private sector often deviate from standard, internationally recommended tuberculosis management practices.^{6–8} These deviations include underutilization of sputum smear microscopy and over-reliance on radiography for diagnosis, as well as inappropriate use of poorly validated diagnostic tests such as serological assays. In addition, many practitioners use non-recommended drug regimens with incorrect combinations of drugs and mistakes in both drug dosage and duration of treatment. For example, in a survey of 100 private practitioners in Mumbai, India, 80 different tuberculosis treatment regimens were used, many of which were inappropriate.⁶ Of equal importance, it is uncommon for private sector providers to be able to assess adherence to the treatment regimen and to correct poor adherence when it occurs.⁹ These findings highlight shortcomings that lead to substandard tuberculosis care for populations that, sadly, are most vulnerable to the disease and are least able to bear the consequences of such systemic failures.¹⁰

A recent document, *International standards for tuberculosis care (ISTC)*, provides a benchmark to tackle these shortcomings in tuberculosis care.¹¹ Care is emphasized in WHO's new Stop TB strategy, one of the six components of which calls for the “engagement of all care providers”.¹² The purpose of the *ISTC* is to describe a level of care that all practitioners should seek to achieve in delivering clinical services to patients and to facilitate their effective engagement in managing patients of all ages, including those with smear-positive,

smear-negative, and extrapulmonary tuberculosis, drug-resistant tuberculosis and tuberculosis associated with HIV infection. A high standard of care is essential to restore the health of individuals with tuberculosis, to prevent the disease in their families and others with whom they come into contact, and to protect the health of communities. Substandard care will result in poor patient outcomes, continued infectiousness with transmission of *Mycobacterium tuberculosis* to family and other community members, and generation and propagation of drug resistance. For these reasons substandard care cannot be accepted in any setting today.

It should be emphasized that the *ISTC* is only a tool, not an end in itself. For it to be useful in improving tuberculosis care, it must be given sufficient weight and credibility so that the individual standards are adhered to, and it must be disseminated to relevant providers. Efforts are currently underway to have the *ISTC* endorsed by influential international and national professional societies whose members are likely to provide tuberculosis care, as well as by public health organizations. The list of endorsing organizations, which include WHO, is available at <http://www.who.int/tb>. It is envisaged that endorsing organizations will also disseminate the *ISTC* to their members and will actively promote adoption of the standards into local practice through continuing education activities, sessions at scientific and clinical meetings, and publications. The intended result is the more effective engagement of all practitioners in providing effective, evidence-based care in support of global tuberculosis control. ■

References

Web version only, available at: <http://www.who.int/bulletin>

^a Francis J Curry National Tuberculosis Center, University of California, San Francisco, CA, USA. Correspondence to this author at: Division of Pulmonary and Critical Care Medicine, San Francisco General Hospital, San Francisco, CA 94110, USA (email: phopewell@medsfgh.ucsf.edu).

^b World Health Organization Collaborating Centre for Tuberculosis and Lung Diseases, Fondazione S. Maugeri Care and Research Institute, Tradate, Italy.

^c World Health Organization, Geneva, Switzerland.