

## The neglected global burden of tuberculosis in pregnancy



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Tuberculosis remains a global emergency and continues to present major public health challenges worldwide. The actual global burden of tuberculosis can only be estimated because no accurate data are available from national country programmes from of high tuberculosis endemic countries. The WHO 2014 annual tuberculosis report<sup>1</sup> estimates that 3.3 million women developed active tuberculosis in 2013, resulting in 510 000 deaths, 180 000 (35%) in those who were HIV-infected. Tuberculosis is one of the top causes of death in women of reproductive age and is a common non-obstetric cause of maternal mortality.<sup>2-6</sup> Untreated, tuberculosis in pregnancy can have a mortality of up to 40%.<sup>5,6</sup> Active tuberculosis disease in HIV-infected pregnant women increases the risk of maternal mortality by nearly 300%. The exact magnitude of the global prevalence of tuberculosis in pregnant women remains undefined and requires definition.

Accurate diagnosis of tuberculosis in pregnancy is difficult because the symptoms and signs of pregnancy overlap with those of tuberculosis and other infectious and non-communicable diseases.<sup>2-7</sup> Thus, unless there is a high degree of clinical awareness and availability of tuberculosis diagnostic tests, many cases of active tuberculosis in pregnancy are easily missed and remain undiagnosed and unreported. WHO estimates that 3 million active tuberculosis cases are missed annually and need to be found,<sup>8</sup> and it is probable that large numbers of pregnant women with active tuberculosis are being missed.

In this issue of *The Lancet Global Health*, Jordan Sugarman and colleagues<sup>9</sup> present their analyses of data lending further support in terms of further estimates to the growing consensus and international concern over the long-neglected issue of tuberculosis in pregnancy.<sup>1-6</sup> Using publicly accessible country level estimates of demographic and epidemiological parameters from 217 countries, they derived estimates of the number of pregnant women with active tuberculosis. Although they point out the inherent weaknesses of their approach, they used indicators of health system access and data for performance of diagnostic tests to estimate that, globally in 2011, there were 216 500 (95% uncertainty range 192 100–247 000) pregnant women with active tuberculosis, of which the Africa

(89 400 cases; 41%) and South-East Asia (67 500; 31%) WHO regions had the largest numbers. Sugarman and colleagues' assessment of the potential effect of several tuberculosis diagnostic tests used with different levels of health-care access adds further to previous calls<sup>2-7</sup> for the introduction of proactive screening for tuberculosis in pregnant women at whichever health-care facility they present, with rapid diagnostic tests to diagnose tuberculosis which would otherwise remain undetected and untreated. Several important scientific and operational issues of current health services relating to the specific issue of tuberculosis in pregnancy arise from Sugarman and colleagues' study, which need to be addressed by governments and funders to provide optimum tuberculosis care for pregnant women.

In most countries with high tuberculosis burden, the standard recommendations of care for screening and diagnosing tuberculosis in pregnant women is the same as that used to detect tuberculosis disease in the general population. More specific focus on tuberculosis in pregnancy is required if the undiagnosed tuberculosis load is to be reduced. Furthermore, the effect of the ominous growing global problem of multidrug-resistant tuberculosis (MDR-TB) in southern Africa, Asia, and eastern Europe on the health of pregnant women requires urgent definition because it carries a high mortality and second-line tuberculosis drugs are toxic and not recommended for use in pregnancy. Accurate country-specific demographic and epidemiological data estimates and statistical returns of drug-resistant tuberculosis from developing countries with high tuberculosis burden will not be available unless the existing clinical, laboratory, management, and data reporting deficiencies of health systems are corrected. Improving knowledge of tuberculosis and MDR-TB amongst antenatal care providers, more proactive screening for tuberculosis and MDR-TB, and availability and optimum use of new accurate rapid tuberculosis diagnostic tests must be coupled with accurate recording, collection, and reporting of disease-specific demographic and epidemiological data. Health-care workers providing antenatal care must have knowledge of the limitations in making a diagnosis of tuberculosis in pregnancy and of the safety profile of anti-tuberculosis drugs. The treatment and management of

HIV-infected pregnant women with active tuberculosis remains problematic because of pharmacokinetic interactions of tuberculosis drugs with antiretrovirals, enhanced drug toxicities and side-effects, development of immune reconstitution inflammatory syndrome, and high pill burden and adherence issues.

Several communicable and non-communicable diseases in pregnancy can adversely affect maternal and child health and are associated with increased morbidity and mortality.<sup>10</sup> Recent trends show that many health programmes do not deliver good quality tuberculosis and HIV services because of inadequately trained clinical and laboratory staff, and ill equipped health facilities.<sup>11,12</sup> Governmental commitment is urgently required to align maternal and child health services synergistically to the current silos of tuberculosis, HIV, malaria, and maternal child health programmes. Ideally this should focus on the scale-up and integration of health services that will generically address all maternal health concerns related to both communicable and non-communicable diseases, such as HIV, malaria, respiratory tract infections, parasitic infestations, diabetes, hypertension, anaemia, and vitamin deficiencies. Routine antenatal care presents a unique opportunity for detection, evaluation, and management of a range of communicable and non-communicable diseases in pregnant women.

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We declare no competing interests.

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