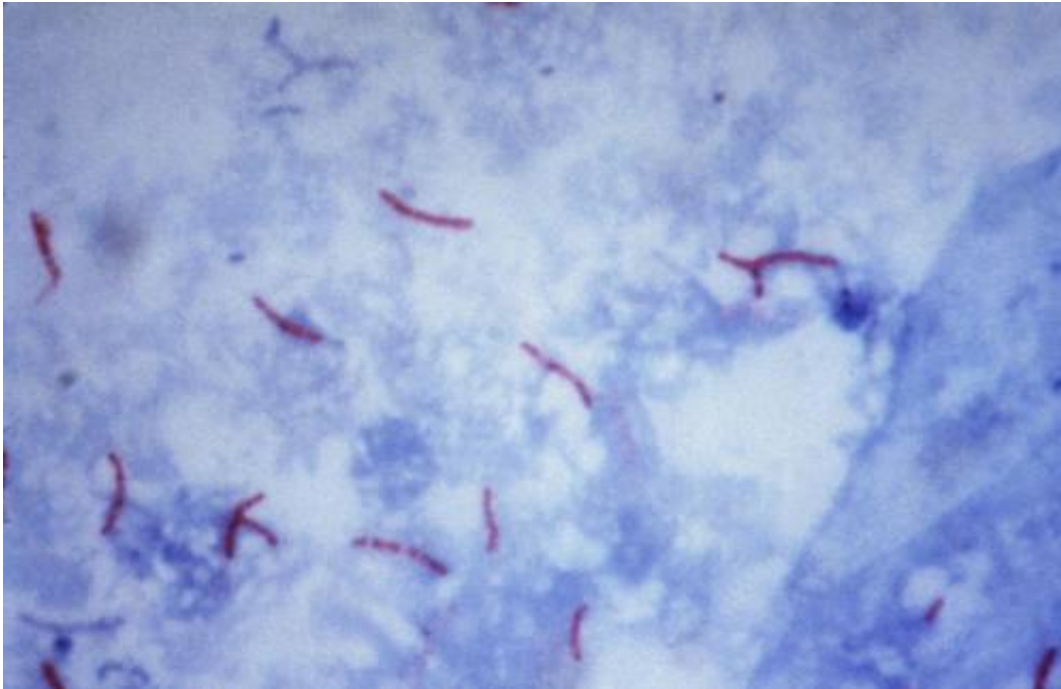


# Stopping tuberculosis requires new strategy

October 26 2015

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This photomicrograph reveals *Mycobacterium tuberculosis* bacteria using acid-fast Ziehl-Neelsen stain; Magnified 1000 X. The acid-fast stains depend on the ability of mycobacteria to retain dye when treated with mineral acid or an acid-alcohol solution such as the Ziehl-Neelsen, or the Kinyoun stains that are carbolfuchsin methods specific for *M. tuberculosis*. Credit: public domain

Unless there is a major shift in the way the world fights tuberculosis—from a reliance on biomedical solutions to an approach that combines biomedical interventions with social actions—the epidemic and drug resistance will worsen, say researchers at Harvard T.H. Chan School of Public Health. In a new study, they call for a

"biosocial" approach that incorporates interventions in areas such as nutrition, urban planning, occupational health, addiction recovery, and mental health services.

"Despite increased funding for tuberculosis programs over the past 15 years, progress has been woefully slow," said senior author Rifat Atun, professor of global [health](#) systems. "We strongly argue that more of the same will not stop tuberculosis. The time has come for comprehensive actions to confront the root causes of tuberculosis, which lie in poverty and deprivation."

The study will be published online October 26, 2015 in *The Lancet* as part of a special series led by Salmaan Keshavjee, Harvard Medical School associate professor of global health and social medicine. The series, which includes five papers detailing a comprehensive plan to stop TB deaths, along with three commentaries that place the epidemic in context, will also be published as a book. The strategies outlined in the papers will ultimately be put into action through the Zero TB Cities Project, an initiative aimed at creating "islands of elimination" of the disease.

Although it has been curable and preventable since the 1950s, tuberculosis still kills more than 1.5 million people each year and drug resistant strains are an increasing threat. Social conditions including malnutrition and overcrowded housing, HIV and diabetes, smoking, and excessive consumption of alcohol continue to drive the epidemic.

Biomedical approaches alone have not achieved substantial decreases in tuberculosis burden, the authors argue. In developing countries, the benefits of improved diagnostics and treatment are offset by susceptibility to tuberculosis in at-risk populations.

"A biosocial approach to stopping [tuberculosis](#) will not only reduce

morbidity and mortality from disease but would also alleviate poverty and help sustainable development," Atun said. "It will meet present needs for the poor and provide them and subsequent generations with an opportunity for a better future."

**More information:** "Stopping tuberculosis: a biosocial model for sustainable development," Katrina F. Ortblad, Joshua A. Salomon, Till Bärnighausen, Rifat Atun, The Lancet, online October 26, 2015, [DOI: 10.1016/S0140-6736\(15\)00324-4](https://doi.org/10.1016/S0140-6736(15)00324-4)

Provided by Harvard T.H. Chan School of Public Health

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