Call for a new approach to fighting tuberculosis

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Each year, nearly 2 million people die from tuberculosis – a treatable disease that has been brought under control in the United States, but continues to ravage other parts of the world. This health inequity should prompt a complete rethinking of the way tuberculosis is fought on a global level, argue Salmaan Keshavjee, MD, PhD, and Paul Farmer, MD, PhD, from Brigham and Women's Hospital (BWH). Their argument appears in an essay published September 6 in the *New England Journal of Medicine*.

"The global approach to fighting tuberculosis has been lacking," says Dr. Keshavjee, a physician in the Division Global Health Equity at BWH. "For too long we've accepted a divergence in the standard of care between people living in the rich world and those suffering from this disease elsewhere."

"The history of tuberculosis is in many ways the history of modern medicine; the history of drug-resistant tuberculosis is the history of most infectious diseases for which we've developed effective antibiotics," says Dr. Farmer, the chief of the Division of Global Health Equity at BWH. "As an airborne infection, tuberculosis has always challenged confident policy recommendations, and we seek to review these here."

Treatment protocols for multi-drug resistant tuberculosis have been known for decades; however, barely 0.5 percent of all newly diagnosed patients worldwide receive treatment that is the standard of care in the United States. Even among groups known to face a high risk of mortality

from tuberculosis—such as children and people living with HIV—few patients have received appropriate treatment. According to the authors, this lack of treatment only fuels the pandemic since tuberculosis is transmitted through the air.

The authors also cite a lack of resources to combat the disease, arguing that investments to cure infected patients and efforts to stem the spread of tuberculosis pale in comparison to the amount of resources and energy dedicated globally to the AIDS epidemic.

In this article, written in commemoration of the New England Journal of Medicine's 200th Anniversary, Drs. Keshavjee and Farmer explore the reasons why scientific knowledge about tuberculosis is not reflected in current global tuberculosis policy. For Dr. Keshavjee, understanding the construction of current policy is a critical part of moving forward. "We want to encourage the international tuberculosis community to redouble its efforts to battle this disease, including adopting a goal of zero tuberculosis deaths," said Dr. Keshavjee. "That means proactively looking for those who are already sick, ensuring they are rapidly diagnosed and putting them on appropriate treatment. It also means treating those with latent infection and implementing infection control measures that can stop the spread of the disease. This is the approach we've used in the United States and Western Europe, and it needs to become the global standard of care." The authors also note that an equity plan—one that addresses poverty, malnutrition, and over-crowded living and working conditions—has to be part of the solution.

"We've had the good fortune of working together on this problem, as clinicians and as policymakers and as researchers, for 15 years," said Dr. Farmer. "We hope this critical review will prove helpful in rethinking the history of this disease and of other chronic infections, including HIV disease, for which treatments have been developed. All such pathogens—bacterial, viral, parasitic—undergo mutations when

challenged with antibiotics; many are public health threats."

"This review is one step in understanding how efforts to combat tuberculosis arrived at its present state," adds Dr. Keshavjee. "Our hope is that it will contribute to the conversation about the ways in which our global community can better prevent deaths from this treatable disease."

Provided by Brigham and Women's Hospital