CASE STUDY

Modeling preventive therapy and risk to inform policy

TB Modelling and Analysis Consortium

WHY DID WE DO IT?

In 2018, new WHO guidelines allowed countries with high TB burdens to consider expanding preventive therapy to household contacts other than children <5 years old and people living with HIV; they also endorsed the use of shortened preventive therapy regimens in high-burden settings. The algorithm provided in the guidelines suggested infection testing as a prerequisite for preventive therapy, as is done in low-burden settings. However, stakeholders in high-burden settings questioned the utility of this recommendation given the barriers to testing and the high background TB infection prevalence.

WHO

✉Courtney Yuen*
Pete Dodd†
James Seddon‡
Salmaan Keshavjee*

WHERE

*Brigham and Women's Hospital
*Harvard Medical School
†Sheffield University
‡Imperial College London
‡Stellenbosch University

WHEN

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WHAT

Risk-benefit analysis of tuberculosis infection testing for household contact management in high-burden countries: a mathematical modelling study. *Lancet Global Health, in press* (2020)

✉courtney_yuen@hms.harvard.edu

HOW DID WE DO IT?

At a Zero TB Initiative-hosted meeting in 2018, the Stop TB Partnership asked decision-makers from national TB programs of high-burden countries and international technical assistance organizations what information would be useful when revising national guidelines for preventive therapy in light of the new WHO guidelines. One request was for an analysis that would help countries decide whether it was necessary to use TB infection testing before prescribing preventive therapy to contacts of TB patients in high TB incidence settings.

The researchers conducted a modelling study to assess this question, drawing conclusions about the implications for TB policies in high-burden settings. The results were shared with technical support agencies including the Stop TB Partnership, Interactive Research and Development (Pakistan), and Advanced Access and Delivery (USA), as well others at Harvard Medical School who work in high-burden settings such as South Africa and Peru. The researchers have developed a publicly–accessible webinar (https://www.zerotbinitiative.org/webinars), hosted by the Zero TB Initiative, to enable viewership from high-burden settings across different time zones.

WHAT DID WE LEARN?

One lesson learned from this experience was that decision-makers wanted specific numbers, not just general arguments or articulation of scientific principles. On the one hand, this underscores the need for good modeling studies to provide useful estimates that TB programs can use to develop new policies. However, this also highlights the responsibility that the researchers doing these studies have to be transparent about the assumptions, limitations, and uncertainty involved when communicating results.