Prevention and Treatment in the Global Tuberculosis Epidemic: Approaches and Strategies in Current Clinical Trials

EPH29

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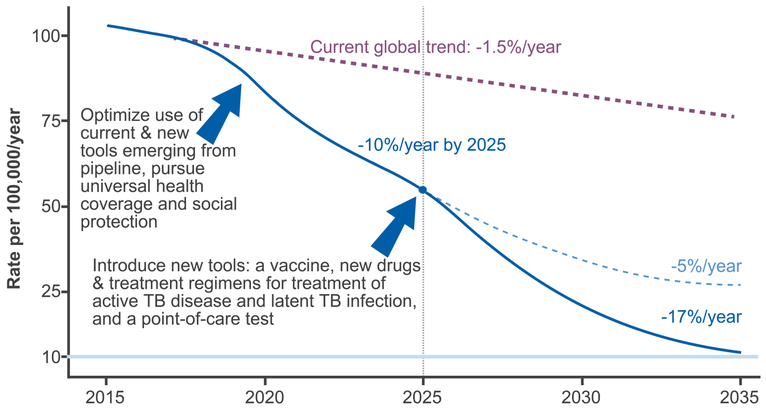
Making Real-World Impact

BACKGROUND

Introduction

- In 2015, the World Health Organization published its 20-year report on the global "battle against tuberculosis (TB)."[1] The report introduced a new era with a goal to end the TB epidemic globally.
- The report estimated there were 9.6 million new cases of TB in 2014 with 1.5 million deaths.
- The "End TB Strategy" sought to reduce the number of TB deaths by 90% and cut new cases by 80% by 2030, relying on a new vaccine, and new drugs and treatment regimens for active and latent TB (Figure 1).

Figure 1. The End Tuberculosis Strategy[1]



Objective

- Perform a landscape review of ongoing TB prevention and cure strategies using current clinical trial data to gain insight into how close we are to reaching the WHO 2015 End TB goals at the 8-year mark.

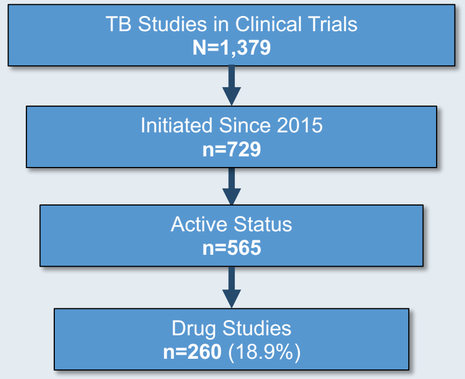
METHODS

- Active and completed clinical trial data were retrieved from www.clinicaltrials.gov.
- TB-related clinical trial listings were reviewed for the period January 2015 to January 2023.
- Clinical trials were assessed, categorized, and summarized by study intervention; and for drug trials, by study status and phase of development.
- Results were summarized to identify trends and the current state of TB treatment and prevention landscape.

RESULTS

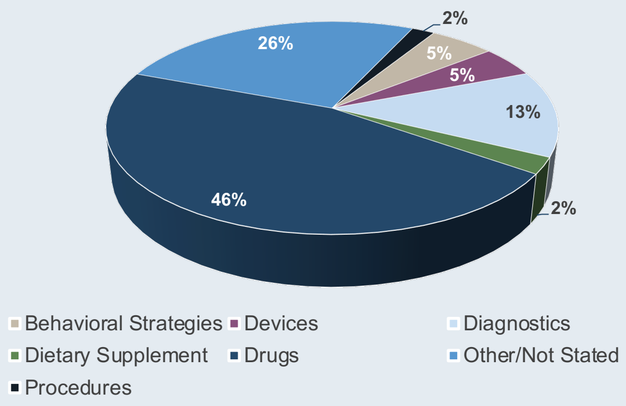
- There were a total of **1,379** global studies identified in under the heading "Tuberculosis". Of these, 565 (41%) were active and initiated since 2015 (Figure 2).

Figure 2. Study Attrition Table



- Interventions included procedures (2%), dietary supplements (3%), devices (5%), behavioral strategies (6%), diagnostic tests (13%), and other (26%) (Figure 3).

***Figure 3. Study Interventions* (n=565)**

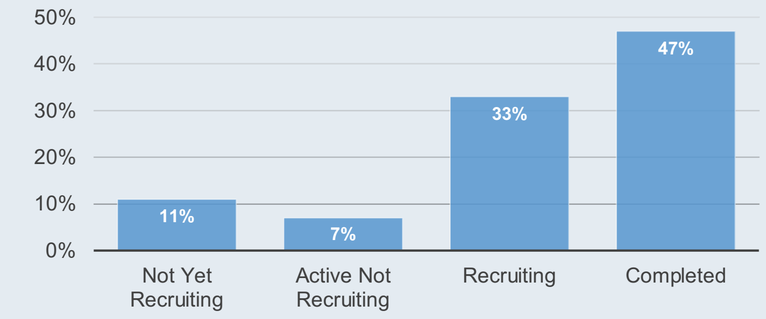


- Drug studies (n=260) represented **46%** of all trials, **21%** preventative, and **79%** treatment trials (Figure 4).
- Of the drug studies, nearly half have already been completed (**47%**).

CONCLUSIONS

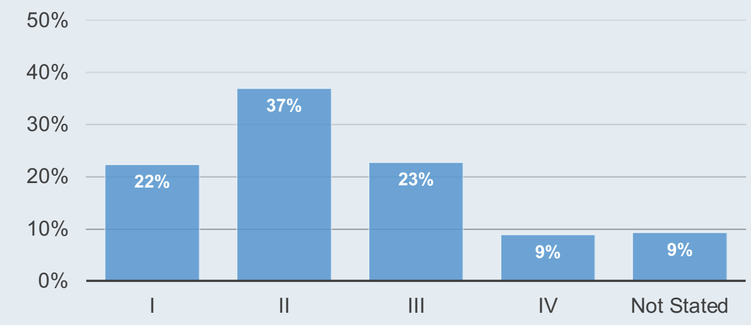
- Results epitomize the evolving TB prevention and treatment landscape for the next 5-10 years.
- While interventions such as behavioral strategies, devices, and diagnostics are still being investigated, nearly half of all studies reviewed were drug studies.
- Results demonstrate that while new vaccines and other drug treatments to combat TB are under investigation, they are largely in the middle phase of development.
- While some headway has been made toward achieving the 2015 End TB goal, progress has been slow.

***Figure 4. Drug Study Status* (n=260)**



- For phase in drug studies, **59%** were in the early Phase I or Phase II of development (Figure 5).
- Advancements of note include a live attenuated Mycobacterium vaccine (in Phase I/II), a recombinant TB vaccine (Phase III), and several new combinations targeting drug-resistant TB (Phase I-III).

***Figure 5. Drug Study by Phase of Research* (n=260)**



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REFERENCES, SUPPLEMENTAL INFO, & CONTACT