Optimising the delivery cascade for tuberculosis preventive treatment among people living with HIV

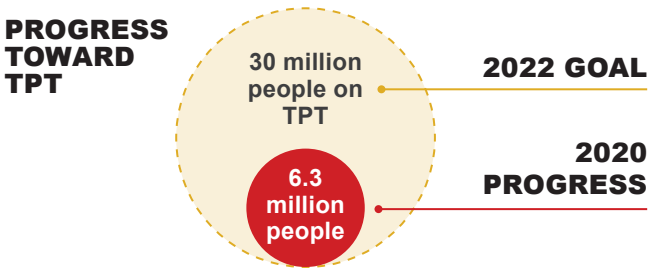
A multi-country program evaluation (Opt4TPT)

THE AURUM INSTITUTE

Background

Tuberculosis (TB) remains a major cause of illness around the world, and in 2019 more than 1.4 million people died from the disease. People living with HIV (PLHIV) are more likely than others to become sick with TB, and TB is one of the leading causes of death among PLHIV.

TB preventive therapy (TPT), which involves giving anti-TB drugs to people with dormant TB infections, can reduce the risk of individuals developing active TB disease. But despite being recommended for PLHIV and household contacts of confirmed pulmonary TB cases, delivery and uptake of TPT have been slow and remain suboptimal globally. At the United Nations High-Level Meeting (UNHLM) on TB held in September 2018, world leaders committed to putting 30 million people on TPT by 2022—to date, that figure stands at 6.3 million, only 21% of the 5-year target.



New innovations, such as a shorter regimen that combines two antibiotics used to treat TB—Isoniazid and Rifapentine—taken once a week for 12 weeks (known as 3HP), provide an opportunity to scale up TPT and are becoming available worldwide. Shorter regimens have potential advantages over the previous standard of care, Isoniazid preventive therapy (IPT), including once weekly dosing, as well as better adherence and completion. However, to effectively scale these new TPT regimens, it is critical that we understand the barriers and facilitators to implementation. Achieving global targets, including those set at the September 2018 UNHLM on TB, not only requires scaling up affordable and safe TPT regimens, but also collecting evidence to guide future implementation and policies.

About Opt4TPT

The Opt4TPT study is a three-year programmatic assessment of TPT delivery across three countries, namely Ethiopia, South Africa and Zimbabwe, to generate critical knowledge to improve TPT uptake, implementation and outcomes. Specifically, the objectives of the study are to:

- Quantify the TPT continuum of care—from treatment initiation to completion—among PLHIV eligible for TPT and describe reasons for TPT refusal, discontinuation and completion, including patient perceptions, adverse events, drug tolerability, incident TB and death.
- Identify key system and provider characteristics, including models of care present in a clinic contributing to TPT prescribing, including clinic structures, clinician attitudes, and knowledge of and adherence to local TPT prescribing guidelines.
- Conduct a cost-effectiveness analysis.

Collaboration

The Opt4TPT project will build on existing projects and global investments. This includes the Aurum Institute's IMPAACT4TB project, which is catalysing the initiation of 3HP among approximately 2 million people, focusing on PLHIV and children under five, and subsequently all those in close contact with TB patients in 12 high-burden countries.[1] IMPAACT4TB is seeking to inform the feasibility of introducing 3HP from global pricing, national policy and clinic roll-out perspectives. The project's monitoring and evaluation is not, however, designed to assess clinic level processes, provider attitudes, the patient journey (including costs) or TB drug resistance in 3HP clinics. Therefore, Opt4TPT will build on the IMPAACT4TB infrastructure to gain deeper insights into patient-level and clinic-level processes, experiences and preferences for TPT regimens.

How will data be collected?

Patient level: A prospective observational study will be conducted at three health facilities per country—two implementing 3HP and one still implementing IPT. Adult patients receiving HIV care will be offered an opportunity to take part in the study at the time of antiretroviral therapy (ART) initiation or refill, until 200 eligible and consenting participants are enrolled at each participating facility. All clinical care and management of patients will be provided by health facility staff as part of routine programme. Study participants will be followed for 24 months, with clinical record abstraction, interviews, and TB investigations at months 12 and 24.

Separate subsets of participants will have a) TPT adherence electronically monitored, b) consultations with providers analysed through qualitative and quantitative analysis of audio recordings, and c) in-depth interviews. Data on costs to patients for seeking care for symptoms suggestive of TB, as well as any TB-related illness will be collected through interviews with patients.

Clinic level: To understand structures and processes in the delivery of TPT, data will be collected across 10 clinics in each of the project countries by observing and analysing all steps involved for individual patients. This will include reviewing patient records, audio recordings of clinician and patient encounters, pharmacy records and interviews with pharmacy managers to assess the drug stock management and provider barriers and facilitators to prescribing TPT.

Significance

By following a cohort of PLHIV prospectively and directly observing service delivery in health facilities, Opt4TPT's approach will provide valuable new knowledge regarding routine use of TPT, as well as outcomes during, and following, TPT. This study will create an important understanding of TPT uptake and completion from the patient perspective and delivery from the health system perspective. These results will provide actionable information for improving service delivery and the scale-up of TPT.

1 **I**ncreasing **M**arket and **P**ublic health outcomes through scaling up **A**ffordable **A**ccess models of short **C**ourse preventive **T**herapy for **TB** (IMPAACT4TB) is a six-year project funded by Unitaid: https://impaact4tb.org/

For more information, please contact: info@auruminstitute.org

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