



Providing 3HP to People Living with HIV in Zimbabwe's Fast Track Model is Feasible and Acceptable: Results from a Pilot Project

BACKGROUND

Tuberculosis (TB) is the leading cause of death for people living with HIV (PLHIV), affecting 10 million people worldwide and resulting in more than 1.5 million deaths in 2020. Despite global scale-up of antiretroviral therapy (ART), PLHIV are 19 times more likely to develop TB than those without HIV, and TB accounts for a third of HIV-related deaths worldwide. Zimbabwe has one of the highest TB incidence rates in the world, estimated at 193/100,000 in 2020, and 54% of TB patients are HIV-positive. TB preventive treatment (TPT) has been shown to reduce TB incidence when combined with ART and independently improves survival. However, TPT coverage among PLHIV is suboptimal, in part due to misperceptions about safety, fear of drug resistance, and concerns about treatment duration, leading to preventable illness and death.

In Zimbabwe, more than 85% of PLHIV are now on ART, and the percentage of newly enrolled ART patients receiving TPT was only 49% in 2020. People who have been enrolled in HIV care for years have not had the same TPT access as PLHIV newly initiating ART and extending TPT “catch up” services to this cohort is now a priority. Importantly, many long-term ART users are enrolled in less-intensive differentiated service delivery (DSD) models. By December 2020, 39% of Zimbabwe's 1.1 million PLHIV on ART were enrolled in less-intensive DSD treatment models.

In 2018, the WHO endorsed the use of shorter TPT regimens in high burden settings, including three months of once weekly rifapentine and isoniazid (3HP). Rigorous studies have shown that 3HP is as safe and efficacious as other TPT regimens, can be

co-administered with dolutegravir- and efavirenz-based ART, and in low TB burden countries, is associated with higher completion rates. In Zimbabwe, 3HP was adopted as a preferred TPT regimen in 2019 together with the new DTG-based ART regimens and incorporated in the addendum to the 2016 ART guidelines. Currently, 40 health facilities are implementing 3HP.

Zimbabwe's Ministry of Health and Child Care (MoHCC) has scaled up multiple DSD treatment models including facility-based individual models such as fast-track (FT). FT visits generally occur quarterly and involve ART pickup and brief screening questions about adherence and new symptoms or issues, which reduces time spent at the facility. Approximately 15% of PLHIV on ART in Zimbabwe are enrolled in the FT model.

Integrating TPT into the FT model, could ensure PLHIV enrolled in FT are included in the rollout of 3HP and leverage the convenience of multi-month dispensing of both ART and TPT. This may increase demand for TPT among recipients of care, leading to enhanced coverage and completion of TPT. ICAP at Columbia University (ICAP) partnered with MoHCC and the Zimbabwe National Network for People Living with HIV (ZNNP+) to assess the feasibility and acceptability of the integration of 3HP into the FT model.





“What helped me most is Fast Track... because I could collect my medication fast; I got my ARVs and 3HP at the same time. I did not collect the medication at different serving points.”

Female Participant
30 years old

ASSESSMENT DESIGN & METHODS

To explore the feasibility and acceptability of administering 3HP through the FT model, the project included:

- Adapting and implementing national 3HP algorithms, training, counselling, and tools for the FT setting (Box 1)
- Piloting the use of 3HP for 50 adults enrolled in FT at a high-volume urban hospital in Harare
- Assessing 3HP initiation and completion rates
- Surveying patient participants about their experience with the integration of 3HP into the FT model, including adherence, tolerability, side effects, perceived quality of counselling and care, convenience, and acceptability
- Surveying healthcare providers about their experience providing 3HP and their assessment of feasibility and acceptability

The pilot project was approved by the Columbia University IRB and the Medical Research Council of Zimbabwe (MRCZ). Quantitative data was analyzed using descriptive statistics. Interviews were transcribed, anonymized, and translated before thematic coding and content analysis were performed.

BOX 1

Implementation tools and services to support 3HP delivery

- Provider training and mentorship
- Patient counseling and education
- Provider/patient check-ins and SMS reminders
- Job aids: clinical algorithm, pocket card, illustrated flip chart, dosing charts
- M&E tools: 3HP patient management tool, SMS logs

KEY FINDINGS

“What helped me was the fact that I knew the benefits of taking 3HP and I also knew that it prevents against TB so that encouraged me to take it.”

Male Participant
20 years old

“What I think is helpful is the way health care providers talk to the patient as they will be giving education on 3HP... they take time to explain the use of the pill... Then they follow up on you trying to understand if you are taking your medication well.”

Female Participant
32 years old

“What I found most helpful is that... you will realize that your body will become much stronger and also the adherence support you get from healthcare providers motivates you to want to stay healthy.”

Female Participant
38 years old

“The medication tracker was most helpful because I would tick it soon after taking my medication... It worked as a reminder so I would take my medication.”

Male Participant
18 years old

Fifty 3HP-eligible adults 18 years or older who were in FT for at least 3 months were enrolled into the pilot between April-June 2021 and followed up through September 2021. Participants had been in FT for a median of 1.83 years (IQR 0.75,2.67) and their median age was 32 years (IQR 24,41). All but one participant (n=49; 98%) completed the full 3HP regimen and most (n=44; 88%) within the desired 12 weeks (Figure 1). One participant had to stop taking 3HP due to jaundice. Most participants (n=46; 94%) reported ‘always’ or ‘almost always’ taking 3HP correctly.

Overall, participants were highly satisfied with receiving 3HP through FT. All participants reported they were very satisfied with the counselling, education, support, and quality of care they received from providers. All participants, except the participant who had to stop taking 3HP due to jaundice, agreed they would take 3HP through FT in the future if needed and all participants said they would recommend it to other patients (Figure 2).

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FIGURE 1

Timing of completion of full 3HP regimen

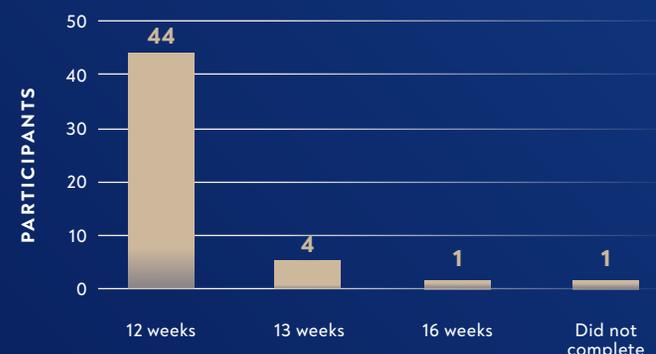
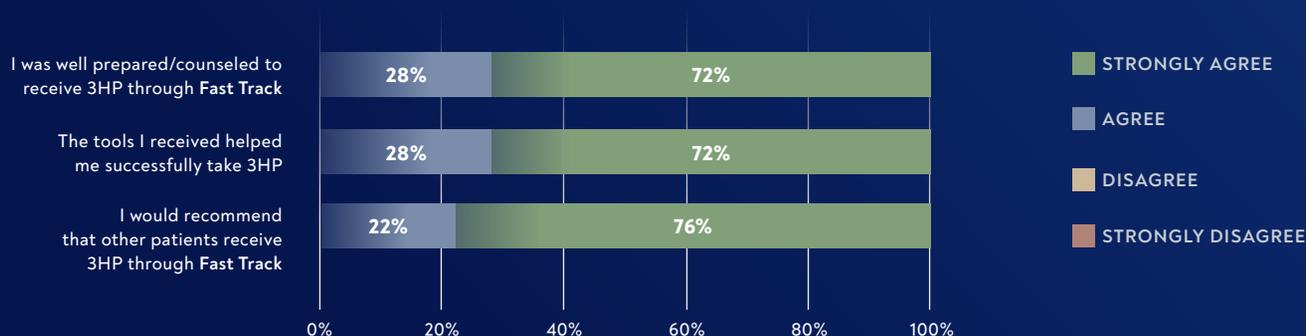


FIGURE 2

Patient participant attitudes of integrating 3HP into FT





Key Findings Continued

At the end of the study, almost all participants strongly agreed (62%) or agreed (36%) that by taking 3HP they reduced their risk for TB. Participants voiced the need to raise awareness of TPT/3HP in their communities and the desire for scaling up the pilot, especially for other people on ART.

Some participants reported challenges including pill burden (n=6; 12%) and tolerability (n=12; 24%), but none had difficulty with phone-based counselling or wished for additional health facility-based visits. The study was conducted during COVID-19, but no participants reported missing their end of treatment visits.

Eleven interviews were conducted with healthcare providers. The median age for healthcare providers was 43 years (IQR 37,51) and over half (N=7; 64%) had been providing FT services as well as TPT services at the facility for over 12 months. All providers reported that it is very important (n=9; 82%) or important (n=2; 18%) to scale up TPT for HIV-positive people in Zimbabwe and that the shorter 3HP regimen led to high rates of adherence. Additionally, all providers acknowledged that the integration of 3HP into the FT model was a success, and mentioned benefits, including reducing provider workload and decongesting the health facility.

“...since we are continuing with the DSD models and the Fast Track I think this will actually blend very well because... it will be easy to introduce 3HP to our clients.”

Female
Healthcare Provider

“when someone on Fast Track comes for their ART drug pick-up we then also give him 3HP to take for three months, that way the patient doesn't keep visiting the clinic like someone on IPT. So for 3HP, someone on Fast Track gets ART for three months and also 3HP for three months... It de-congests the clinic. It also reduces workload.”

Female
Healthcare Provider

CONCLUSIONS

Using the FT model to deliver 3HP was feasible and acceptable to adults on ART. Some toxicity and tolerability challenges were reported but 98% of participants completed 3HP, none wished for additional health facility visits, and all appreciated the efficiency of phone-based counseling. Scaling up 3HP for PLHIV in the FT model has the potential to expand TPT coverage in Zimbabwe.



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