KNOCK OUT TB IN PLHIV: REINFORCING TB PREVENTION THERAPY COMPLETION IN ZAMBIA

Policy Brief

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Key Messages

• WHO estimates that 2-3 billion people have latent TB. Even though latent TB has no signs and symptoms of TB, people are at risk of progressing to Active TB

• The risk is 21 times higher among PLHIV than in the HIV Negative population

• Tuberculosis remains the leading cause of death among people living with HIV

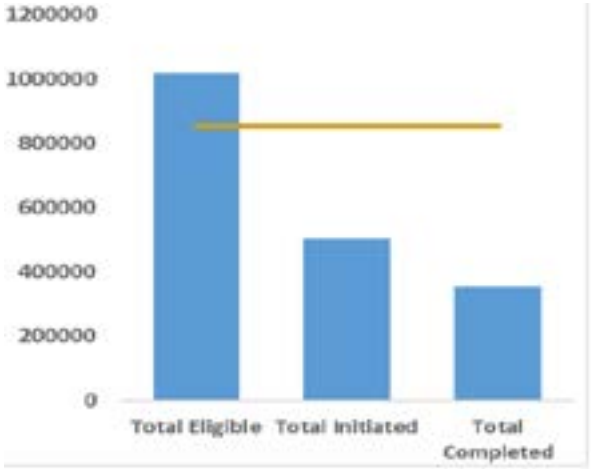
• TB Prevention Therapy (TPT) is critical to ending disease and death among PLHIV

Problem Statement

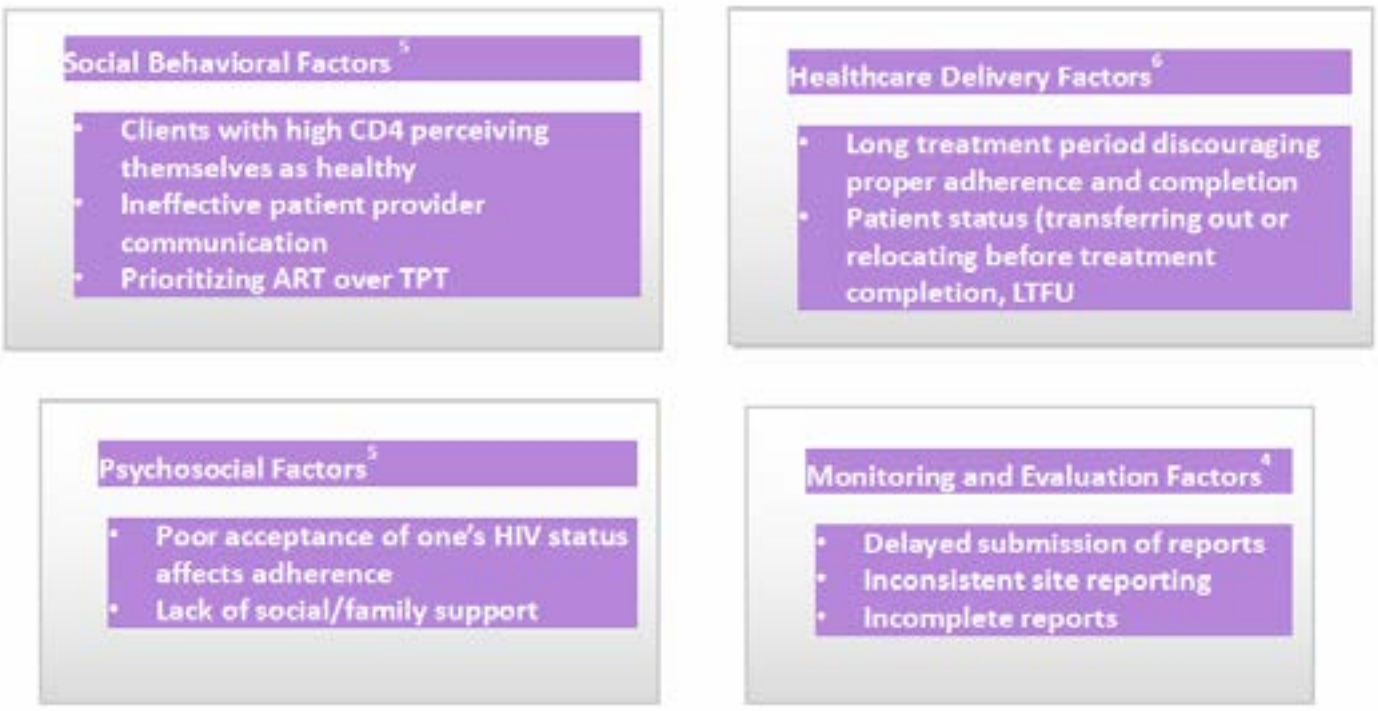
•Globally,10 million people developed TB, 8.2% were PLHIV. 14.8% of TB deaths were HIV positive deaths. In Zambia, 333 out of 100 000 people develop TB. 154 out of 100 000 people that develop TB are also HIV infected. 53 out of 100 000 people that die of TB are HIV infected.

•Anti-Retro Viral Therapy (ART) alone, does not prevent TB. In 2017, the MOH introduced TB Preventive therapy (TPT) in PLHIV. TPT in combination with ART is 60% to 90% effective in reducing risk of progression to active TB, offering immunity for 3-5 years after completion of treatment.

Globally, 30 million PLHIV are to be enrolled on TPT by 2022. So far, 21% of this target has been achieved. Zambia targets to enroll 95% of eligible population on TPT and ensure that 95% of those enrolled complete treatment. Recent statistics show that TPT enrolment reached 82.5% of intended target with a 70% completion rate.



Factors Affecting Completion of TB Preventive Therapy



Studies have shown significant difference on risk of progression to active TB on efficacious TB prevention treatment regimens between the time a client starts treatment to the time they complete treatment. The findings are summarised in the table below.

Risk of Progression to Active at Different Levels of Completion

Regimen	Before Completion	Completed Treatment
INH6	0.21 (3-5 months)	0.69 (6 months)
3HP	0.48 (2 months)	0.98 (3 months)
3HR	0.47 (2 months)	0.96 (3 months)

-Findings in the table above show that clients who complete TB preventive treatment, have a much reduced chance of developing active TB.

4 National TB and Leprosy Program Data-2020.

5 Jacobson K. B., et. Al

6 Robert M., et. Al

Policy Options

1.INH 6 + Communication Strategy + M&E

•Current standard of TB preventive therapy in Zambia
•Reduces risk for TB by 69% in PLHIV
•75% treatment completion rate
•Safe for pregnant & breastfeeding mothers, and children
•Limited by low treatment completion rates and adverse events when compared to other regimens

2. 3HP + Communication Strategy + M&E

•Better drug tolerability/lowest side effect profile
•Compatible with most ART Regimens used in Zambia
•Much higher treatment completion rate-78%
•Reduced risk to TB by 98% in PLHIV
•Easier to administer on a fixed dose combination
•Not proven safe in pregnant & breastfeeding mothers and children <2 years
•Requires barrier contraceptive in women of reproductive age

3. 3HR + Communication Strategy + M&E

•Alternative short course TPT regimen that combines INH and RIF
•Proven safe to be taken by pregnant & breastfeeding mothers and children
•Dosing adjustments required for Lopinar, Ritonavir and DTG
•Has the lowest completion rate-72% when compared to other policy options

Cost Effectiveness Results (Per 1000)

Drug Regimen	Costs	Incremental Costs	Effectiveness (Cases)	Incremental Effects	ICER
INH6	$384,130	-	510	-	
3HP	$357,230	($26,900)	330	180	$151.49
3HR	$372,780	($11,750)	360	150	$79.11

The economic analysis demonstrates that 3HR is likely to be most cost effective relative to the Standard of Care (IHN). Specifically, 3HR would cost an additional $79.1 per patient treated compared to 3HP that costs $151.5 to treat an additional patient.

Note: The calculations in the above table were based on the Zambia Tuberculosis National Operational Plan 2017-2021 Costing document and the MOH Data Quality Management System Budget. Included in the calculations are drug costs and all elements (freight, clearance, point of distribution to the health facility)

Economic Evaluation Analysis

•Migrate to 3HP with better drug tolerability, and higher completion rates for the eligible population
•Pregnant and breastfeeding mothers, and children to migrate from INH6 to 3HR which is proven safe with a much higher completion rate compared to INH6
•Recommendations above to be implemented along aside strengthened monitoring and evaluation systems and a robust communication strategy emphasizing the benefits of TB Prevention Therapy.

Required Actions

•Identify and work with relevant stakeholders to engage pharmaceutical companies to address the high drug (Rifapentine) costs
•Conduct research on the safety of 3HP for pregnant and breastfeeding women and children
•Update TB treatment guidelines to reflect proposed regimen change (from INH6 to 3HP)
•3HP treatment roll out plan developed and shared with relevant stakeholders
•Strengthen monitoring and evaluation systems to improve data quality for TPT indicators
•Develop a communication strategy on TB prevention targeting health workers, PLHIV and the general population

Note: These recommendations are based on the studies conducted in South Africa, Tanzania, and Uganda and the WHO Guidelines., consultations with CDC Zambia, USAID and MOH National TB Program and expert opinion.

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