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Leveraging Short-Course Regimen to Improve Tuberculosis Preventive Treatment

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SUMMARY

The Uganda Episcopal Conference (UEC) collaborated with Nsambya Hospital to enhance the uptake and decrease refusal rates of tuberculosis (TB) preventive treatment (TPT) during the national "TPT Last Mile" campaign. This study focuses on the implementation of a three-month once-weekly regimen, specifically targeting people living with HIV (PLHIV).

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Introduction

Tuberculosis (TB) continues to pose a significant global health threat, particularly among people living with HIV (PLHIV) [1]. TB preventive treatment (TPT) has been proven effective in reducing TB morbidity and mortality in this population [2]. Despite its efficacy, TPT uptake remained suboptimal across facilities supported by the Uganda Episcopal Conference (UEC) until April 2022, despite support from the President's Emergency Plan for AIDS Relief (PEPFAR) [3]. This paper delves into the successful strategies employed at Nsambya Hospital, the largest supported facility, to enhance TPT uptake, with a focus on the introduction of a short-course TPT regimen.

Background

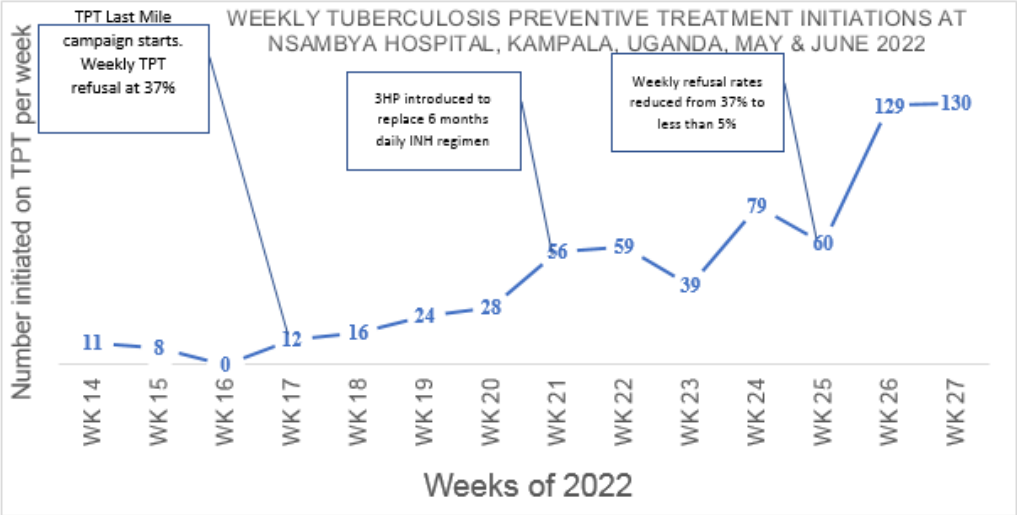
Tuberculosis remains a leading cause of death among PLHIV, and preventive measures are crucial in curbing the impact of TB in this vulnerable population. The UEC, in partnership with Nsambya Hospital, initiated the "TPT Last Mile" campaign to address the persistently low TPT uptake. The campaign aimed to bridge TPT enrolment gaps, with a specific focus on PLHIV, by introducing innovative strategies and a shortened TPT regimen [4].

Methods

The "TPT Last Mile" campaign, implemented at Nsambya Hospital during May and June 2022, involved a multifaceted approach. Collaborating with health workers, UEC introduced continuing medical education sessions, client health education programs, and daily chart reviews to identify TPT-eligible clients. Direct TPT dispensation by clinicians, community delivery, and daily monitoring of initiation and refusal data were integral components of the campaign. Notably, from Week 21 onwards, a novel three-month once-weekly TPT regimen (3HP) was introduced to replace the conventional six-month isoniazid regimen. Data on weekly TPT initiations and refusal rates were collected using routine facility registers.

Results

Analysis of chart reviews revealed that among 8,204 total clients, 1,560 (19%) were identified as TPT-eligible. The implementation of the TPT Last Mile campaign resulted in 2.3 times increase in weekly TPT uptake, rising from 12 initiations in Week 17 to 28 initiations in Week 20. The introduction of the 3HP regimen further amplified the impact, with 4.6 times increase, reaching 130 initiations by Week 27. TPT refusal rates witnessed a substantial decrease from 36% (40 of 110 eligible) in Week 17 to 4.4% (3/68) in Week 25. Challenges associated with multi-month antiretroviral therapy dispensation, leading to fewer eligible clients in some weeks, were effectively addressed through community TPT delivery and client outreach.



Discussion

The significant improvement in TPT uptake observed at Nsambya Hospital can be attributed to the comprehensive approach adopted during the TPT Last Mile campaign. The incorporation of continuing medical education and client health education fostered awareness and understanding among both healthcare providers and PLHIV. The introduction of the 3HP regimen played a pivotal role in enhancing client willingness to initiate TPT, as evidenced by the notable increase in weekly initiations and the substantial reduction in refusal rates.

Conclusion

The success of the TPT Last Mile campaign at Nsambya Hospital highlights the effectiveness of a targeted, multifaceted strategy in improving TPT uptake among PLHIV. The introduction of the shorter 3HP regimen emerged as a key factor in enhancing client acceptance of TPT. These findings hold implications for scaling up TPT programs nationally and globally, emphasizing the importance of tailored approaches and innovative regimens to optimize preventive treatment outcomes.

Recommendations

Building on the success of the TPT Last Mile campaign, it is recommended that similar strategies be considered for implementation in other healthcare facilities. Additionally, ongoing monitoring and evaluation of TPT programs, coupled with further research on the long-term effectiveness of the 3HP regimen, will contribute valuable insights to guide future interventions aimed at reducing TB morbidity and mortality among PLHIV.

Future Directions

Continued collaboration between healthcare organizations, government entities, and international partners is essential to sustain and expand the gains achieved in TPT uptake. Future research should explore the scalability of the strategies employed at Nsambya Hospital to diverse healthcare settings and populations, with a focus on adapting interventions to address specific contextual factors influencing TPT acceptance. This case study provides a foundation for ongoing efforts to advance TB preventive measures and improve health outcomes for PLHIV.

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