

Early Results of Universal Test and Treat Implementation in a Large Zambian Correctional Facility

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Background

High HIV prevalence is an ongoing challenge in Zambian correctional facilities, with published estimates ranging from 23% to 27%. We launched an observational implementation research study **introducing Universal Test and Treat (UTT)** at Lusaka Central, one of Zambia's largest correctional facilities to:

- Provide inmates with the benefits of Treatment as Prevention (TasP)
- Generate evidence to tailor UTT implementation in correctional settings
- Coordinate tuberculosis (TB) screening among HIV-infected inmates

We present **interim study findings** for the period of **June - December 2016**.



Figure 1: Entrance of Lusaka Central Correctional Facility © ZCS

Methods

We offered **immediate ART** to inmates with newly diagnosed HIV or previously diagnosed HIV infection not yet on ART, **regardless of CD4 count or WHO stage** prior to UTT adoption in national guidelines.

To enable UTT, we strengthened the Lusaka Central health system by: training corrections officers and health workers; hiring a dedicated study nurse and clinician; and supporting routine HIV testing services (HTS) and viral load (VL) testing.

To **evaluate impact**, we:

- Strengthened **routine MOH data collection systems** at Lusaka Central
- Prospectively collected data along the HIV care continuum for a cohort of inmates meeting the following **eligibility criteria**:
 - ≥18 years, incarcerated at Lusaka Central, HIV-infected, not on ART (defined as no ART exposure in last 3 months), able to provide written informed consent in a local study language, and without a documented release date within 30 days of enrolment

We calculated summary statistics to describe baseline characteristics of study participants. We tested for a gender difference in study retention using a two-sample test of proportions.

Results

Baseline Cohort Characteristics

- Mean age: 33.2 years (sd: 7.8 years)
- Median baseline CD4: 284 cells/mm³ (IQR:191–401)

HIV Care Continuum

- 1,662 inmates were offered and 1,413 (85.0%) accepted HTS
- 198 (14.0%) were found to be HIV-positive: 177 men (89.4%), 21 women (10.6%)
- 172 HIV-positive inmates referred for immediate ART (86.9%)
 - 149 (86.6%) meeting study eligibility criteria
- 149 (100%) enrolled and 149 (100%) started ART: 135 men (90.6%), 14 women (9.4%)
- Participants started ART within a median of 1 day (IQR: 1–5 days)
- After 5 months, 88 inmates (59.1%) receiving immediate ART remained in study follow-up and 61 (40.9%) had been released or transferred
- Non-significantly more women (n/N=9/14, 64.3%) than men (n/N= 79/135, 58.5%) were retained in the study at 5 months (p=0.68)
- Of 13 inmates with VL testing after ≥3 months on ART, 11 (84.6%) were suppressed (VL≤40 copies/ml)

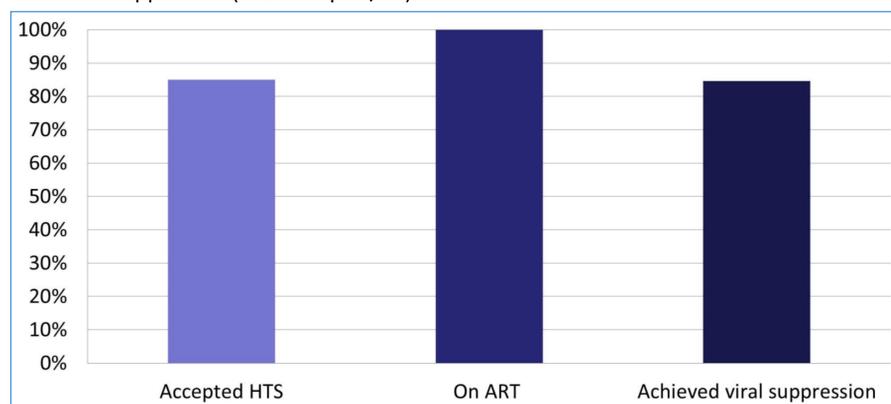


Figure 2: Proportion of participants accepting HTS, initiating ART, and achieving viral suppression

TB Care Continuum

- 144 (96.6%) inmates underwent TB screening by Xpert prior to ART initiation
- 7 were diagnosed with TB by Xpert and 3 clinically
 - All 10 (100%) started anti-TB therapy (ATT)

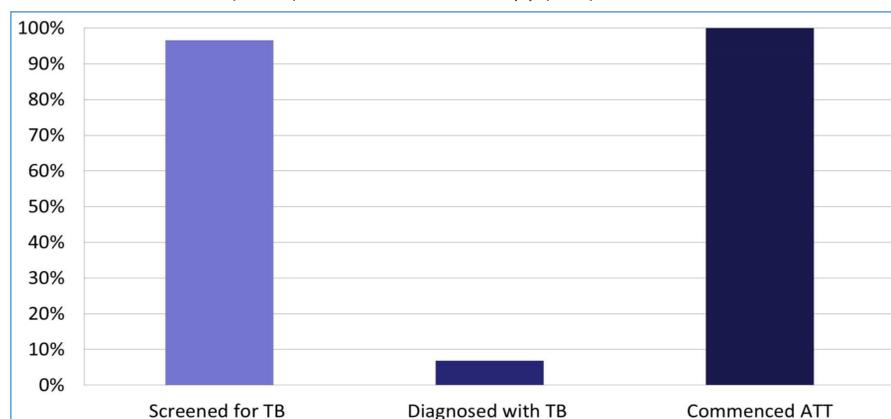


Figure 3: Proportion of participants receiving TB screening, diagnosed with TB and starting ATT

Conclusions

Implementing UTT within a large correctional facility resulted in high uptake of HTS and immediate ART for inmates with advanced immunosuppression, and facilitated TB screening, diagnosis and treatment. Logistical complexities posed by the Zambian correctional setting, including frequent inmate transfer and release, threaten to interrupt the HIV care continuum for HIV-positive inmates.

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