HIV Prevention and the role of Treatment as Prevention (TasP) in correctional facilities in Southern Africa
HIV PREVENTION

What are the tools available?
Condom & lubrication distribution

- Prevention impact at population level
  - Commercial sex workers in Asia
- Transmission protection
  - All sex
- Limitations in correctional facilities
  - Important policy but faces political challenges.
  - Limited efficacy in settings where power-imbalances influence sexual relations
Needle/syringe & medication-assisted treatment programmes

• Prevention impact at population level
  – 0-50% reduction among PWIDs

• Transmission protection
  – Blood-borne exposures via needles

• Limitations in correctional facilities
  – Data are lacking on prevalence of needle sharing in Southern Africa.
  – Faces political challenges in many countries.
Voluntary male medical circumcision

• Prevention impact at population level
  – 60% reduction in incidence among men having sex with women

• Transmission protection
  – Insertive vaginal sex

• Limitations in correctional facilities
  – Limited or no prevention of HIV transmission during MSM activities
Pre-Exposure Prophylaxis (PrEP)

• Prevention impact at population level
  – 0-95% depending on setting and population

• Transmission protection
  – All sex

• Limitations in correctional facilities
  – Limited evidence of efficacy except among educated MSM in higher income settings
Post-Exposure Prophylaxis (PEP)

• Prevention impact at population level
  – 50-90% depending on access to initiation and exposure

• Transmission protection
  – All sex & blood-borne exposures

• Limitations in correctional facilities
  – Requires timely disclosure of high-risk sexual or blood-borne behaviours
Sexual violence reduction

• Prevention impact at population level
  – Studies limited and fail to demonstrate substantial prevention benefit

• Transmission protection
  – Forced sex

• Limitations in correctional facilities
  – Important, but unclear impact on HIV transmission
Treatment as prevention (TasP)

• Prevention impact at population level
  – Marked (up to 96%) risk reduction among heterosexual & men who have sex with men (MSM) sero-discordant couples

• Transmission protection
  – All sex acts & blood-borne exposures

• Feasibility in correctional facilities
  – Builds on existing provision of HCT and ART in correctional facilities.
  – Requires strong systems to ensure consistent access to health services & ART
Overview of TasP

• TasP (Treatment as Prevention) Or Test and Treat

• ART treatment in HIV+ persons irrespective of CD4 count
  – Prevents illness and disease
  – Averts new infections
  – Saves money
## Evidence for TasP

<table>
<thead>
<tr>
<th>Study</th>
<th>Study patients</th>
<th>Region</th>
<th>Design</th>
<th>Results</th>
<th>relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>START</td>
<td>HIV + CD4 &gt;500</td>
<td>Africa, Europe, N &amp; S. America, Asia, Mexico, Israel</td>
<td>Differed ART vs immediate ART</td>
<td>53% reduction in serious illness and death</td>
<td>Reduction in serious AIDS related events and non-AIDS related events</td>
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<tr>
<td>HPTN 052</td>
<td>HIV 1 sero-discardant couples</td>
<td>13 site (9 countries) in Africa</td>
<td>immediate ART vs delayed ART</td>
<td>96% reduction in transmission</td>
<td>Improved health outcomes for patients (drive by EPTB in the immediate group)</td>
</tr>
<tr>
<td>PARTNER</td>
<td>Heterosexual &amp; MSM sero-discordant couples</td>
<td>75 European sites</td>
<td>Condomless sex, virally suppressed, No PrEP or PEP</td>
<td>No transmission if virally suppressed</td>
<td>Viral load suppression reduces transmission</td>
</tr>
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UNAIDS 90-90-90

• TasP is crucial to UNAIDS post 2015 agenda
• Paradigm shift focusing on human rights & equity to end the AIDS epidemic by 2030
• Close treatment gap in key populations
• Reduce stigma and social exclusion
• New treatment targets

90% diagnosed
90% on treatment
90% virally suppressed
Treatment as Prevention (TasP) in correctional facilities in Southern Africa

Is treatment as prevention (TasP) a feasible HIV prevention strategy for correctional facilities in Southern Africa?

South Africa and Zambia
Justification

• High HIV prevalence among incarcerated populations: 25% South Africa, 27% Zambia
• Transmissions driven by: coerced and voluntary anal sex reported, razors, tattoos, sharing of needles, etc.
• Many HIV prevention measures such as condom use, post exposure prophylaxis, VMMC less accessible
• TasP has shown marked HIV risk reduction among heterosexual and MSM serodiscordant couples, and prevents both sexual & non-sexual transmission
• TasP can be implemented: builds on existing HCT & ART programmes
• TasP can prevent HIV transmission and improve health outcomes
• However, it must be implemented with greater than 90% uptake at each step of the HIV continuum of care
Research Question

Is treatment as prevention (TasP) a feasible HIV prevention strategy for correctional facilities in Southern Africa?

Primary Hypothesis: with appropriate investments in human resources for health, HIV commodities, and prison health system strengthening, TasP can be feasibly implemented in Southern African correctional facilities.
Research Outcomes

• I. *Can a priori goals at 90% implementation, across the entire TasP HIV care continuum, be achieved in selected correctional facilities?*

• II. *Does integration of TB services* within a TasP implementation model allow for high uptake of TB screening, diagnosis, and treatment along the TB care cascade?

• III. What are the **key enabling and constraining factors** for establishing and maintaining TasP in correctional settings in Africa?

• IV. Compared to the standard of care, what **resources** are needed for TasP implementation in Southern African correctional facilities?

• V. What key threats to and enablers of TasP **policy adoption** in correctional facilities currently exist in the Southern Africa policy environment?
Methods – TasP implementation

• TasP model in 3 regions: one in Zambia and two in South Africa.
• Using existing service delivery platforms:
  – Universal HIV testing within 2 months of facility entry and annually
  – Access to ART for all inmates testing HIV-positive
  – Accelerated ART initiation after diagnosis
  – Clear integration of TB screening and treatment
  – Scaling-up inmate peer supporters and support groups
  – Enhanced laboratory monitoring
  – Improved continuity of care for prisoners initiating ART
Evaluation Methodology

Serial cross-sectional assessments:
HCT delivery, TB screening, ART initiation, retention on ART, & virological suppression

First participant enrolled: 0 months

Last participant enrolled: 30 months

Participant Recruitment and Enrollment

Aim 1: Integrated TasP Implementation & Continuum of Care Characterization

Aim 2: Assess barriers to and facilitators of TasP

Aim 3: Characterize TasP resources

Aim 4: Evaluate TasP Policy Environment

Data analysis, synthesis, & results dissemination
Main Aim: Continuum of care for TB and HIV

Cross-sectional evaluations performed at baseline, 6, and 12 months after ART initiation for ART outcomes
Policy Implications

• To provide evidence for the feasibility and fidelity of TasP implementation in prisons in South Africa and Zambia.

• Recommendations would be made to include TasP as part of a package of interventions to prevent HIV transmission among inmates.

• We will leverage existing involvement of our team on key technical advisory bodies in South Africa and Zambia to engage government and local non-governmental stakeholders for prison-health policy change.
Progress to date

• Stakeholder engagements
• Regulatory approvals have been sought from the
  – Research Ethics Committees / Institutional Review Boards
    • Univ. of Witwatersrand & Univ. of the Western Cape
    • Univ. of Zambia
    • Univ. of N.Carolina at Chapel Hill & Univ. of Alabama at Birmingham
    • London School of Hygiene and Tropical Medicine
  – Correctional services
    • Department of Corrections in South Africa
    • The Zambian Prisons Service