HPTN 2019
State of the Network

Myron S. Cohen
Wafaa El-Sadr
on behalf of the HPTN
HPTN Mission

The HIV Prevention Trials Network (HPTN) advances HIV prevention through research:

– Integrated HIV prevention strategies
– Improve pre-exposure prophylaxis (PrEP)
– New strategies for key populations
What Does this Really Mean?

We are trying to develop tools/strategies
– That inform public health policy/practice
– That inform guidelines, care, and practice
– In a timely fashion (FAST)
The Year in Review: Metrics

- 5 studies completed !!!!!
- 5 studies ongoing
- 13 studies in development
- 69 active sites (22 HPTN assigned)
- 70 presentations
- 61 publications
HIV Treatment /S Prevention

- HPTN 052 (2011, 2016)
- Opposites Attract (Lancet HIV, 2017)
- Partner Study (JAMA, 2018)
- Partner 2 (Lancet, 2019)
Risk of HIV transmission through condomless sex in serodifferent gay couples with the HIV-positive partner taking suppressive antiretroviral therapy (PARTNER): final results of a multicentre, prospective, observational study


Lancet. 2019 May 2. pii: S0140-6736(19)30418-0
TASP at the Population Level?

- HPTN 071 (PopART)
- CDC Botswana
- ANRS Africa Center
- SEARCH Uganda
HPTN 071 (PopART)
Population Effects of Antiretroviral Therapy to Reduce HIV Transmission

IMPACT OF UNIVERSAL TESTING AND TREATMENT IN ZAMBIA AND SOUTH AFRICA:
RESULTS OF A COMMUNITY-RANDOMIZED TRIAL
CROI: SEATTLE
6 MARCH 2019
21 Communities
7 per arm (A, B & C)

12 in Zambia
9 in S Africa

Total population ~1M
CHiPs Door-To-Door Intervention

- Universal HIV counselling and testing
- VMMC referral
- PMTCT referral
- STI screening
- TB screening
- Condoms

CHiPs: Community HIV-care Providers

Repeat Visits to Clients Living with HIV

Door-to-Door Delivery of Intervention

Referral to Clinic

Including HIV Testing/Retesting
HIV Incidence by Community (PC12-PC36)

7% reduction

30% reduction !!
Ethical considerations in global HIV phylogenetic research

Cordelia E M Coltart, Anne Hoppe, Michael Parker, Liza Dawson, Joseph J Amon, Musonda Simwinga, Gail Geller, Gail Henderson, Oliver Laeyendecker, Joseph D Tucker, Patrick Eba, Vladimir Novitsky, Anne-Mieke Vandamme, Janet Seeley, Gina Dallabetta, Guy Harling, M Kate Grabowski, Peter Godfrey-Faussett, Christophe Fraser, Myron S Cohen, Deenan Pillay; on behalf of the Ethics in HIV Phylogenetics Working Group

Lancet HIV. 2018 Nov;5(11):e656-e666
PWID: HPTN 074

Integrated intervention including supported ART compared to the standard of care for PWID

• Vietnam, Ukraine, Indonesia
• 504 HIV infected PWID
• 810 PWID “partners”
• Results presented at CROI 2018
A scalable, integrated intervention to engage people who inject drugs in HIV care and medication-assisted treatment (HPTN 074): a randomized, controlled phase 3 feasibility and efficacy study

Implementation of ART for PWID in Vietnam
(Go, Hoffman, Miller et al NIH 1R01DA047876)

Specific Aims:

• Compare standard implementation mapping (IM) vs. tailored implementation mapping (TIM) for scaling-up the HPTN 074 systems navigation and psychosocial counseling (SNaP) intervention among HIV+ PWID in HIV test sites

• Measure cost-effectiveness of IM vs. TIM for SNaP implementation

Primary outcomes → Fidelity to the HPTN 074 intervention (site-level); ART uptake (PWID-level)
MSM: HPTN 075 and HPTN 078

Studies designed to better inform our ability to prevent HIV in MSM …worldwide
HPTN 075: Study Design

• One year feasibility and prospective cohort study
  – In preparation for future HIV prevention studies in SSA

• Four sites:
  – Soweto, South Africa
  – Cape Town, South Africa
  – Blantyre, Malawi
  – Kisumu, Kenya
HPTN 075 Results

RESEARCH ARTICLE

HIV testing and the HIV care continuum among sub-Saharan African men who have sex with men and transgender women screened for participation in HPTN 075


1 HIV Center for Clinical and Behavioral Studies, Columbia University, New York, NY, United States of America, 2 Desmond Tutu HIV Centre, UCT Medical School, Cape Town, South Africa, 3 Johns Hopkins Medical College, Malawi, Blantyre, Malawi, 4 Kenya Medical Research Institute (KEMRI) CDC, Kisumu, Kenya, 5 Perinatal HIV Research Unit, Univ. of the Witwatersrand, Soweto HPTN CRS, Soweto, South Africa, 6 Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle WA, United States of America, 7 National Institute of Allergy and Infectious Disease, National Institutes of Health (NIH), Bethesda MD, United States of America, 8 Department of Pathology, Johns Hopkins University School
**HPTN 078:** Enhancing Recruitment, Linkage to Care and Treatment for HIV-Infected Men Who Have Sex with Men (MSM) in the United States

**Original targets:**

<table>
<thead>
<tr>
<th>Screened population</th>
<th>Enrolled participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2700</td>
<td>356</td>
</tr>
<tr>
<td>MSM &gt;= 16 yo</td>
<td>MSM HIV+, Unsuppressed</td>
</tr>
</tbody>
</table>

**Study Duration:** 24 M Follow-up
1,305 MSM identified and screened in 4 US cities

Very high prevalence of HIV (69% overall) and syphilis (21%)
  - 78%, were virally suppressed

MSM living with HIV and not virally suppressed (N=154)
  - offered enrollment in a randomized comparative assessment of enhanced case management vs standard of care.

144 viremic men enrolled
  - Black (84%)
  - Latinx (7%)
  - 77% had history of past ART treatment, and had defaulted from care

Final Results at IAS 2019
Ending the HIV Epidemic: A Plan for the United States

Fauci AS, Redfield RR, Sigounas G, Weahkee MD, Giroir BP

HIV Diagnoses in the United States and Dependent Areas

38,739
New HIV diagnoses in 2017

1 in 5
of all new HIV diagnoses were among women

67%
of new HIV diagnoses were from male-to-male sexual contact
Building on lessons learned (HPTN 073, 078)…

- HPTN 096: MSM and End of AIDS 2030
- HPTN 091: Intervention for TGW
- HPTN 094: HIV and the Opioid Crisis
And NOW…New PrEP Tools
TDF/FTC was FDA Approved for use for Prevention on July 16, 2012

Success depends entirely on adherence
Alternatives to daily dosing are possible
Truvada PrEP uptake has been limited to date
Perhaps longer acting agents will prove more attractive?
HPTN 082: Evaluation of daily oral PrEP as a primary prevention strategy for young African women

**Study Population**
- Uninfected women
- Ages 16-25 yrs
- Johannesburg & Cape Town, South Africa
- Harare, Zimbabwe

**Target Enrollment**
- 400 women (who accept) PrEP at enrollment
- ≤200 women (who decline) PrEP at enrollment

**Primary Objectives**
- Assess the proportion and characteristics of women who accept versus decline PrEP
- Assess PrEP adherence using drug levels in young women

**Figure 1: PrEP uptake overall and by site**

- Overall: 95%
- Harare: 97%
- Cape Town: 99%
- Johannesburg: 88%

- PrEP accepted
- PrEP not accepted
HPTN 082: Results

Conference abstracts

– CROI 2019
  • Early adherence (poster)
  • STI incidence (poster)
  • Modeling (oral and poster)

– IAS 2019
  • Primary adherence results (oral) !!
  • Community engagement (poster)
  • Qualitative sexual risk timelines (poster)
New PrEP Agents and Approaches

- **New ARVs**
  - *Cabotegravir*
  - MK8591 (potent, long half-life)
  - Capsid inhibitors (potent, long half-life)

- **New Devices**
  - Rings (Regulatory Review)
  - Implants
  - Transdermal needles and patches
Cabotegravir-LA: The Process and the Product
Safety, tolerability, and pharmacokinetics of long-acting injectable
cabotegravir in low-risk HIV-uninfected individuals: HPTN 077, a phase
2a randomized controlled trial

Raphael J. Landovitz, Sue Li, Beatriz Grinsztejn, Halima Dawood, Albert Y. Liu, Manya Magnus, Mina C. Hosseinipour,
Ravindre Panchia, Leslie Cottle, Gordon Chau, Paul Richardson, Mark A. Marzinke, Craig W. Hendrix, Susan H. Eshleman,
Yinfeng Zhang, Elizabeth Tolley, Jeremy Sugarman, Ryan Kofron, Adeola Adeyeye, David Burns, Alex R. Rinehart, David
Margolis, William R. Spreen, Myron S. Cohen, Marybeth McCauley, Joseph J. Eron

Objective: To evaluate the safety and efficacy of CAB LA compared to TDF/FTC for PrEP in HIV uninfected MSM/TGW (083) and cisgender women (084)
Bridging to Adolescents: “Twin Studies”

HPTN 083-01 and 084-01 to move forward in adolescents
Tailored to youth
- different venues
- modified schedules
FIFTH INJECTION
#5thInjection #WEEK38
CONGRATULATIONS
Eso Sweet baffe,
You are so special,
Mwe abisinga!!
Many Broadly Reactive Neutralizing Antibodies Isolated 2009 - present

Broadly neutralizing mAb to 5 major regions of Env

Image by Stewart-Jones, Doria-Rose, Stuckey
Adapted from Stewart-Jones et al Cell 2016 and Pancera et al Nature 2014
Passive Antibody Prevention
Phase IIB Efficacy Studies

AMP = Antibody Mediated Prevention

Can a passively infused monoclonal antibody prevent HIV-1 infection in high risk adults:
MSM in Americas & Heterosexual Women in sub-Saharan Africa?

Chairs: Lawrence Corey, HVTN
Myron S. Cohen, HPTN

Co-chairs: Srilatha Edupuganti
Nyaradzo Mgodi
Enrollment and Retention Updates

703/081
African Women
- 1,924 enrolled
- 96% retention
- 32,596 visits
- 98% adherence

704/085
MSM + TG
- 2,701 enrolled
- 95% retention
- 47,078 visits
- 100% adherence
Acceptability of bNAbs

Michele Andrasik, PhD
Director Social and Behavioral Sciences and Community Engagement
HIV Vaccine Trials Network (HVTN)
AMP Success Summary

• Strength of relationships
• Altruism-being part of the solution:
  • Let’s make a vaccine
• Community support
• Responding to concerns
Next Generation BnAB Studies
Safety and PK/PD and Potential

- HVTN 127/HPTN 087: VRC01-523LS
- HVTN 129/HPTN 088: Sanofi trispecific antibody
- HVTN 130/HPTN 089 and HVTN 136/HPTN 092: Iterative combinations of 2-3 antibodies:

Evaluation of safety, PK, antiviral activity of combinations:

VRC07-LS
PLUS PGT121 and PGT121-LS
PLUS PDGM 1400 and PDGM 1400-LS
Which is the BEST bNab “triple threat”
HPTN is More than a Series of Studies
Community Engagement

Internal/External Capacity Building

• External Stakeholder Consultations
• CWG Capacity-Building sessions
• Education, recruitment, retention materials – study support
• Social marketing
• Cross Network collaboration (workplan and community engagement database)
• Strengthening evaluation
Results Dissemination

• 11 presentations across 8 international conferences

• 3 presentations at 2019 IAS

• Webinars

• Three publications – HPTN 073 and HPTN 074
HPTN Scholars: Status Update

• 2 components: Domestic and International
• 56 Scholars since 2010; 6 to start on 1 June 2019
• 56 Mentors have graciously provided expertise and time
• 15 study datasets: HPTN 037-HPTN 075
HPTN Scholars: Key Accomplishments

- HPTN involvement
  - Protocol Team Members (HPTN 073, HPTN 078)
  - Protocol Team Leadership (HPTN 091, HPTN 096)
  - Scientific Committees and Black Caucus
- Six K01 awards
- Individual research career progression
  - One PI on R03; One PI on U01
  - Two PIs on R01s
  - Three PIs on R21s
- 32 first-authored HPTN manuscripts so far (+1 in press)
2019-2020 Scholars

Rodman Turpin
Anita Marais
Derek Dangerfield
Elzette Rousseau-Jemwa
Rogers Sekabira
Raquel Ramos
2019…
>700 PTNers WORLDWIDE

Simultaneous translators:

Spanish
Portuguese
Vietnamese
Thai
071 Results Dissemination

HIV R4P

IAS

HPTN 082 CWG Writing Team
Cross Site Exchange Best Practices Expo June 2019
The Team

- Study participants and participating communities
- Site investigators, staff, and community representatives
- BMGF, USAID, PEPFAR/OGAC, ViiV, Gilead, VRC, PANGEA, and many other partners
- NIH Institutes (NIAID, NIMH, NIDA) and OAR
- HPTN Scientific Committees, Working Groups, Executive Committee, and Scientific Advisory Group