

HIV Prevention Trials Network State of the Network

Wafaa M. El-Sadr, MD, MPH, MPA

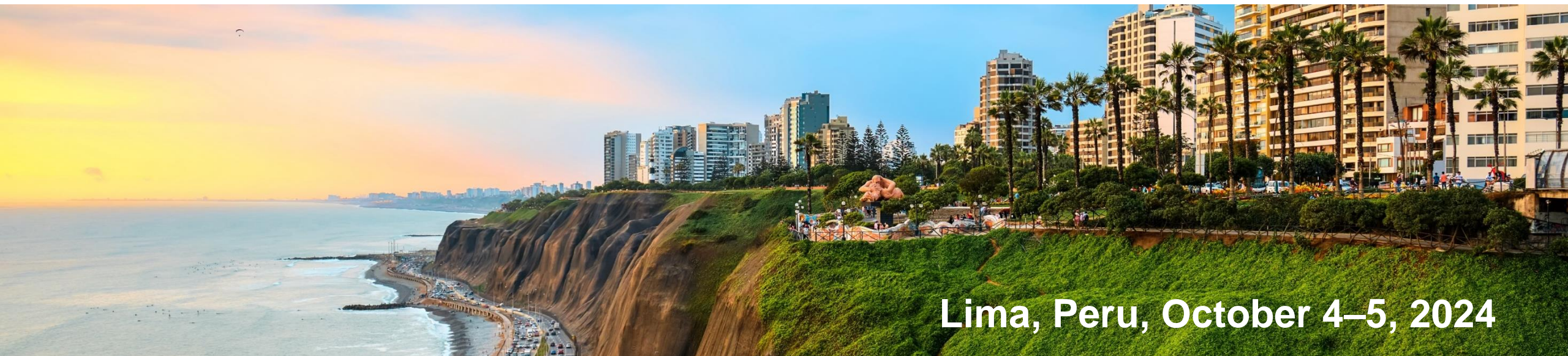
HPTN Regional Meeting 2024
Lima, Perú



Regional Meetings



Cape Town, South Africa, September 27–29, 2023



Lima, Peru, October 4–5, 2024



Outline of Presentation

- HPTN Leadership
- Sites and Research Participants
- Longitudinal Achievements
- HPTN Vision: The Way Forward
 - New Biomedical Tools and Modalities
 - Integrated Strategies
 - Expansion and Transitions

Network Structure – Leaders

Principal Investigators



Wafaa M.
El-Sadr



Myron S.
Cohen

Statistical and Data Management Center (SDMC) SCHARP



Deborah
Donnell



Elizabeth
Brown

Leadership and Operations Center (LOC) FHI 360



Nirupama
Sista

Laboratory Center (LC) Johns Hopkins University



Susan
Eshleman



Mark
Marzinke

Network Structure – Leaders

HPTN Executive Committee Members:

- HPTN LOC, SDMC and LC leadership
- Quarraisha Abdool Karim
- Chris Beyrer
- Sinead Delany-Moretlwe
- Sybil Hosek
- Raphael Landovitz
- Nyaradzo Mgodzi
- Sten Vermund
- Darrell Wheeler
- 2 NIH Representatives

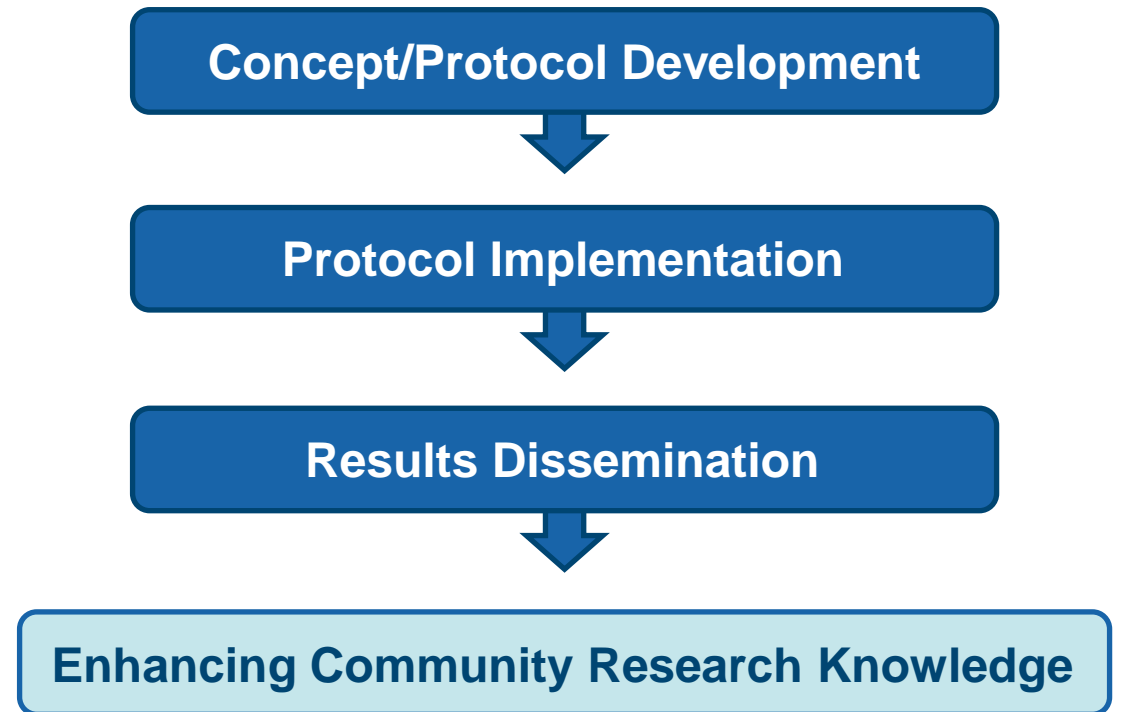
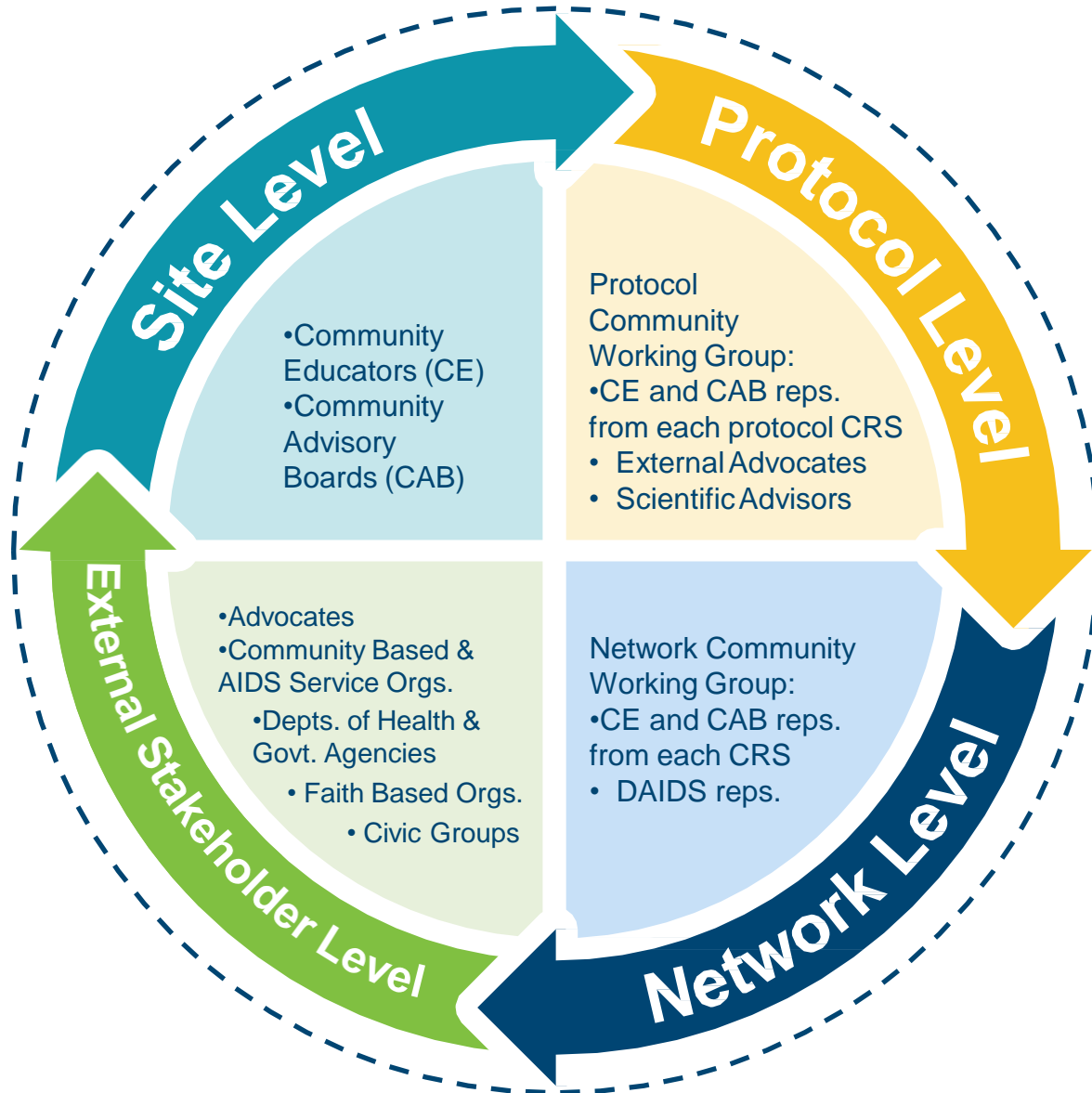
Science Committees (Population-Focused):

- **Adolescents** (Co-chairs: Audrey Pettifor and Linda-Gail Bekker)
- **Sexual and Gender Minority** (Co-chairs: Ken Mayer and Thiago Torres)
- **Substance Use** (Co-chairs: Steffanie Strathdee and Sunil Solomon)
- **Women** (Co-chairs: Jessica Justman and Philippa Musoke)

Working Groups (Cross-Cutting):

- **Biomedical Sciences** (Co-chairs: Joe Eron and Elaine Abrams)
- **Community** (Chair: Ntando Yola)
- **Ethics** (Chair: Jerome Singh)
- **Socio-Behavioral and Structural** (Co-chairs: Ariane van der Straten and Julie Pulerwitz)

Community Engagement Framework



Community Engagement and Benefits



Respect



Inclusion



Collaboration

1999 – 2023



78

Ongoing or completed trials



172,000+

Participants enrolled



800+

Publications



69

Sites



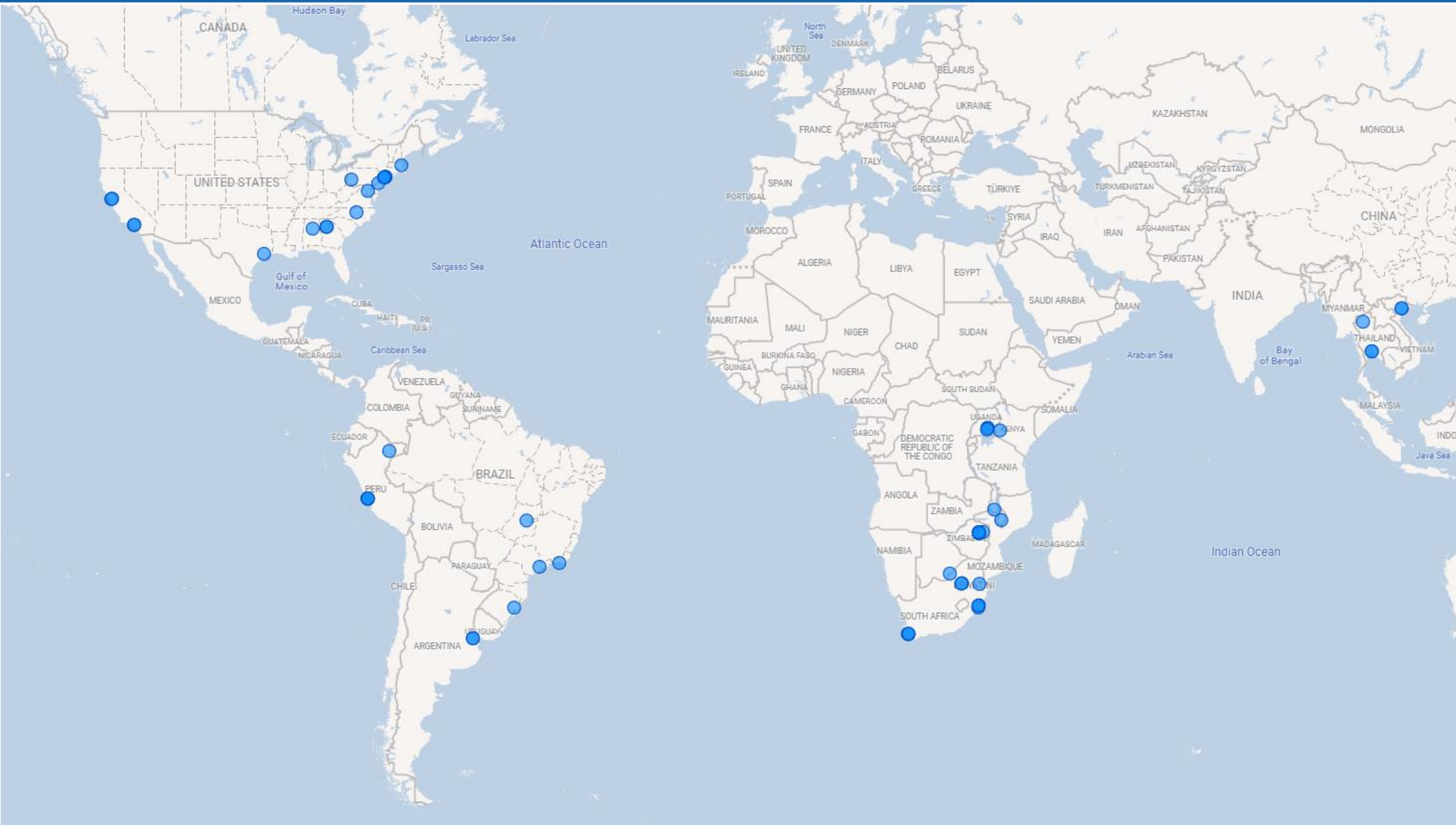
13

Countries

69 Research Sites



HPTN Clinical Research Sites



54

HPTN Sites

13

Countries

21

African Sites

5

Asian Sites

17

North American Sites

11

South American Sites

HPTN in South America

 HPTN 083

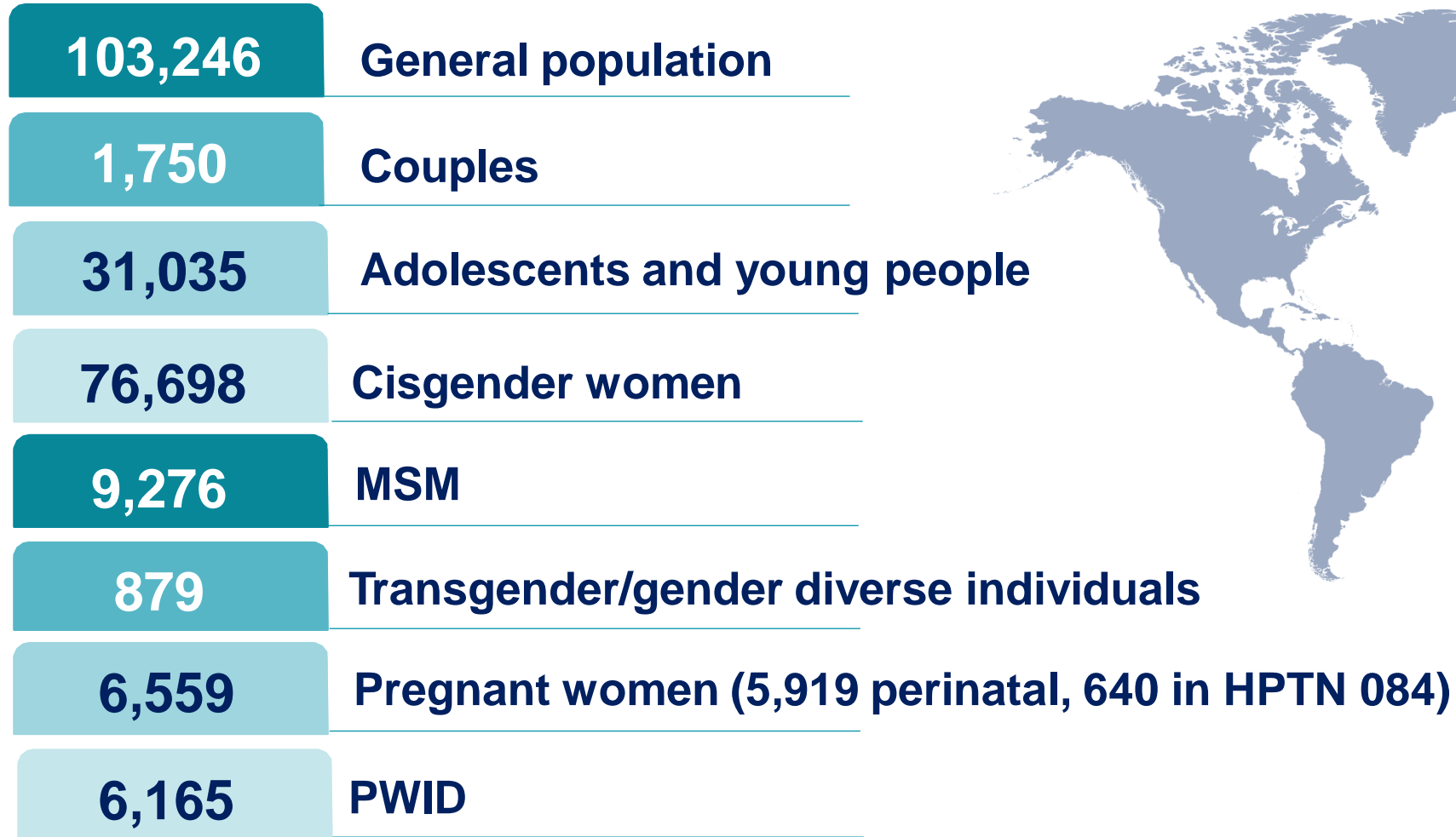
 HVTN 704/HPTN 085 (AMP)

 HPTN 091

 HPTN 113



Populations Enrolled in HPTN Studies – Global Snapshot



Populations Enrolled in HPTN Studies – South America Snapshot

>3,500*	HIV-negative individuals
3,278	MSM & transgender individuals
1,501*	Young people (<25 years)
276	Couples (568 participants)
588*	PLWH
110	Transgender women
50	Pregnant women and their infants



*Not exclusive – represented in other groups

HPTN Major Research Contributions: A Long View

1993 IMC/HIVNET → • **Nevirapine prevents MTCT (HIVNET 012)**

1999 HPTN I → • Testing as the cornerstone of prevention; "know your status" (HPTN 043)

2006 HPTN II → • **Treatment prevents HIV transmission in couples (HPTN 052)**
• Financial incentives to increase testing & viral load suppression (HPTN 065)

2013 HPTN III → • Successfully engaging black MSM (HPTN 061)
• Daily oral PrEP persistence low in young women (HPTN 082)
• Community HIV testing & treatment results in 30% decrease in HIV incidence (HPTN 071)
• Peer navigation increases engagement of Black MSM (HPTN 073)
• Treatment reduces HIV incidence in PWID (HPTN 074)

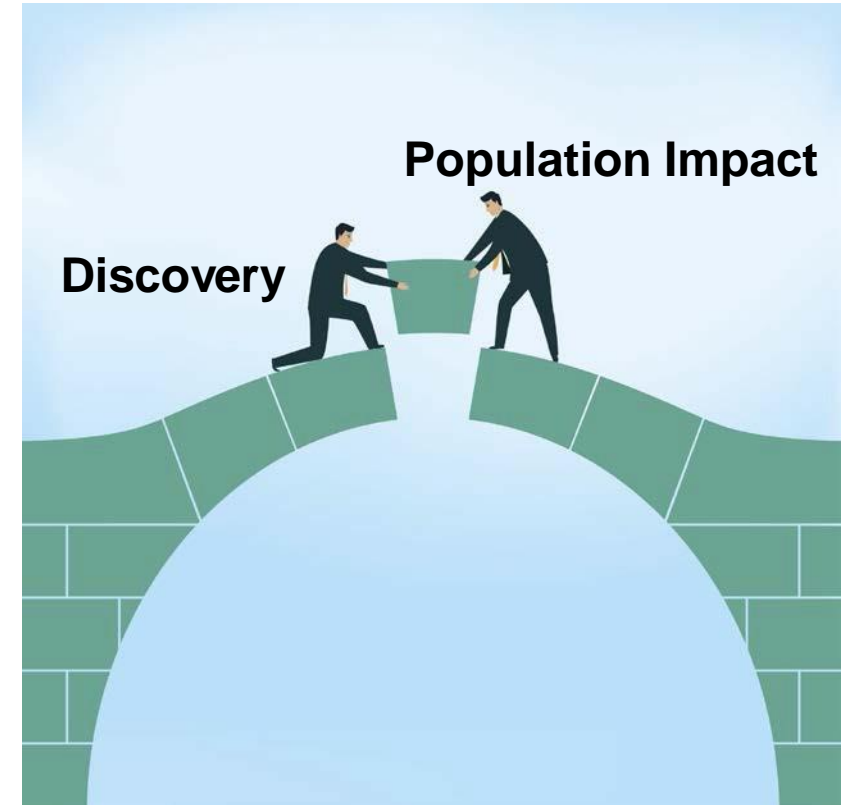
2020 HPTN IV → • **Long-acting cabotegravir (HPTN 083, HPTN 084, HPTN 083-01, HPTN 084-01)**
• VRC01 proof of concept (AMP studies)
• Integrated studies in specific populations: Black MSM in US South, PWIDs in US and transgender women in U.S. and Latin America

• **COVID-19 VACCINES AND mAbs (CoVPN)**

HPTN Vision

I. Expand the toolbox of biomedical prevention, both agents and modalities of use, prioritizing longer acting prevention

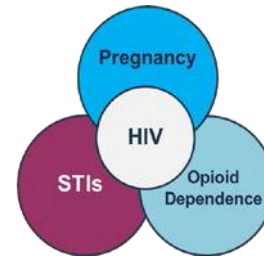
II. Develop integrated strategies studies to overcome barriers to HIV prevention faced by specific populations



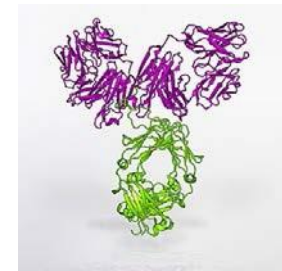
Development of New Methods and Modalities for HIV Prevention



Novel Long-Acting ARV Methods and Delivery Systems



Multi-Purpose Prevention Technologies (MPTs)



Broadly Neutralizing Antibodies (bNabs)

The Way Forward for CAB-LA

- Open label studies are evaluating continued safety and protection, PK, resistance, including adolescent sub-studies
- **As of mid-March 2024, 357 CAB-exposed and active dosing pregnant/postpartum women with 251 live-born infants**
- New studies are in development to examine effectiveness of CAB-LA among adolescents and PWIDs
- New studies to evaluate even longer-acting CAB-LA

Ultra Long-acting PrEP – Lenacapavir

- Lenacapavir is a first-in-class selective HIV capsid inhibitor, with sub-cutaneous injections every 6 months
- Two pivotal efficacy studies in cisgender women in SSA and MSM/TGW showed efficacy and safety of this new method for prevention
- HPTN is pursuing two studies in special populations (in collaboration with Gilead):
- **HPTN 102/Purpose 3: Lenacapavir Phase 2 PK, safety, acceptability in cis-gender women in the U.S.**
- **HPTN 103/Purpose 4: Lenacapavir Phase 2 PK, safety, acceptability in people who inject drugs (PWID) in the U.S.**

Offering Choice: On-Demand PrEP for Men



ON-DEMAND PrEP

On-demand oral PrEP (2-1-1 F/TDF) is recommended by WHO and CDC for cisgender men who have sex with men

Can we develop an event-driven and behaviorally congruent product?



HPTN 106 will evaluate the extended safety, acceptability, and pharmacology of a TFV rectal douche versus on-demand oral F/TDF in a randomized crossover study

- 150 cisgender men and transgender women who have experience using rectal douches

Offering Choice: On-Demand PrEP For Women

Modeling suggests alternative F/TDF regimens might be appropriate in women, e.g. 2:1:1 on demand dosing for MSM

HPTN is exploring study designs to seek less frequent dosing of TDF-FTC in women

Model-based predictions of protective HIV pre-exposure prophylaxis adherence levels in cisgender women

Received: 3 April 2023

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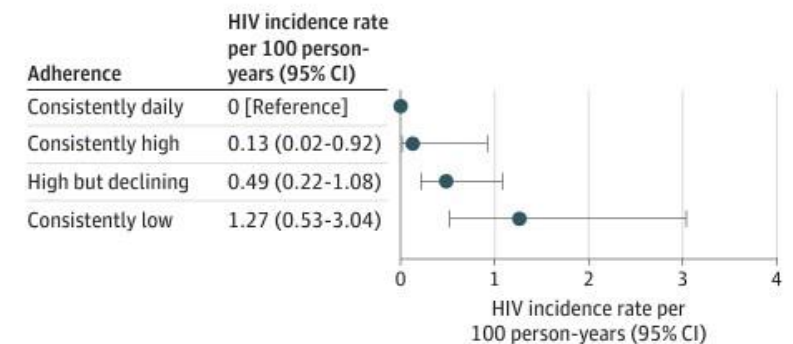
Lanxin Zhang^{1,9}, Sara Iannuzzi^{1,2,9}, Ayyappa Chaturvedula³, Elizabeth Irungu⁴, Jessica E. Haberer^{5,6}, Craig W. Hendrix⁷ & Max von Kleist^{1,8}✉

JAMA | Original Investigation

HIV Preexposure Prophylaxis With Emtricitabine and Tenofovir Disoproxil Fumarate Among Cisgender Women

Jeanne Marrazzo, MD; Li Tao, PhD; Marissa Becker, PhD; Ashley A. Leech, PhD, MS; Allan W. Taylor, MD, MPH; Faith Ussery, MPH; Michael Kiragu, MBBS; Sushena Reza-Paul, MBBS, MPH, PhD; Janet Myers, PhD, MPH; Linda-Gail Bekker, PhD; Juan Yang, PhD; Christoph Carter, MD, PhD; Melanie de Boer, PhD; Moupali Das, MD; Jared M. Baeten, MD; Connie Calum, MD, MPH

Figure 4. HIV Incidence Rates Among Cisgender Women by Adherence Trajectory (n = 2954)



MPT for PrEP and Prevention of Pregnancy

HPTN 104: Adherence of one dual prevention pill (co-formulated F/TDF+ ethynyl estradiol/levonorgestrel) compared with a two-pill regimen



Alternate agents in development

- F/TAF-MPT DPP
- Injectable CAB-LA-levonorgestrel (Conrad)
 - 3- & 6-month duration

Antibody-Mediated Prevention

- **Collaboration between HPTN, HVTN, and NIH VRC**
- Two randomized (AMP) trials of neutralizing antibodies using VRC01 have been completed (NEJM, 2021)

Lessons learned:

VRC01 neutralized highly sensitive viruses

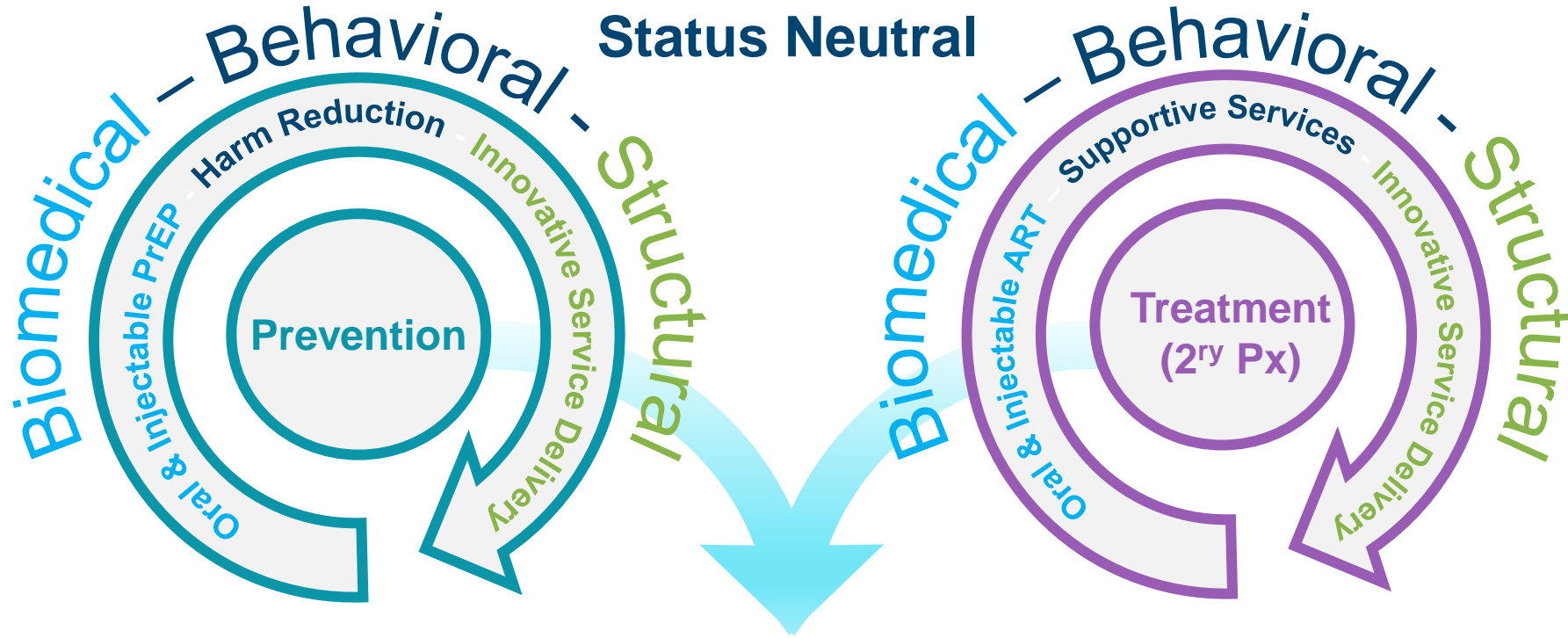
A single bnAb is not sufficient, two or more are needed

Phase 1 bnAb combination trials have been completed

A Phase 2a safety/dose exploration study with 3 mAbs 2025!



Taking Efficacy to Effectiveness



Integrated Strategy Study with Population-Specific Interventions

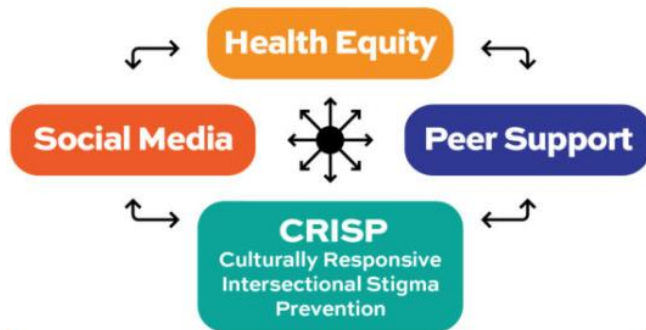
Reduce HIV Incidence

PUBLIC HEALTH IMPACT

Integrated Strategies to Reach Diverse Populations: Setting the Stage for the Future

Black MSM

- HIV **status-neutral** interventions at the **community, organizational, and interpersonal level** (HPTN 096)



Transgender Women

- Co-located HIV prevention and **gender-affirming interventions** (HPTN 091)

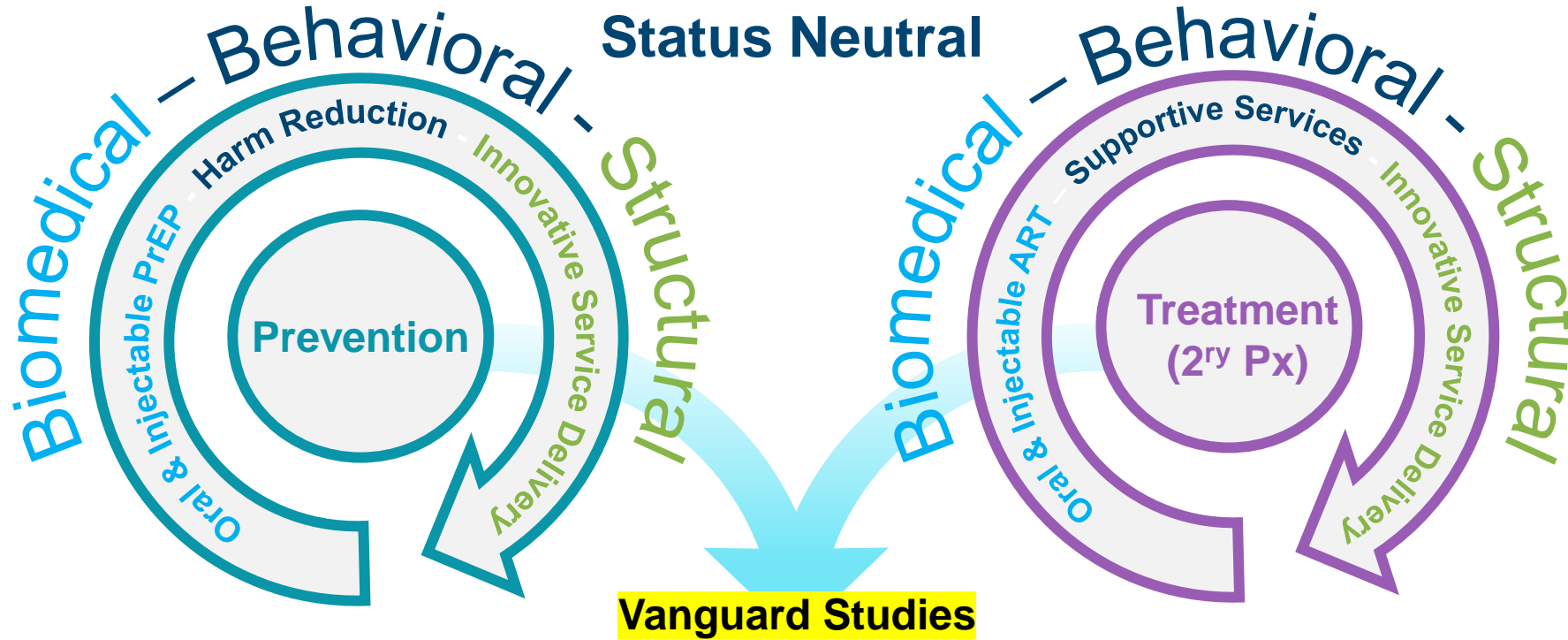


People Who Inject Drugs

- “One stop model” for **HIV/STI and MOUD** interventions (HPTN 094)



Taking Efficacy to Effectiveness

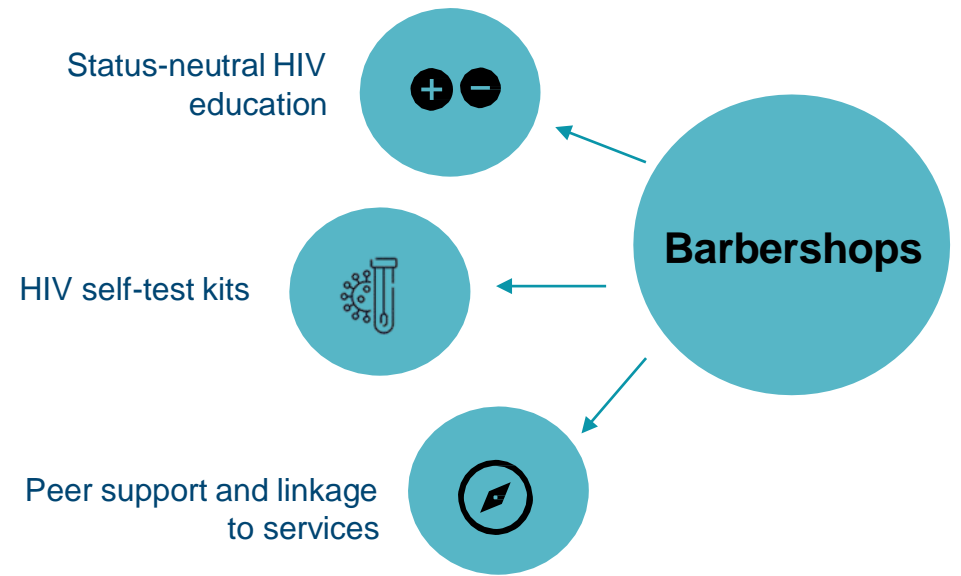


Integrated Strategy Study with Population-Specific Interventions

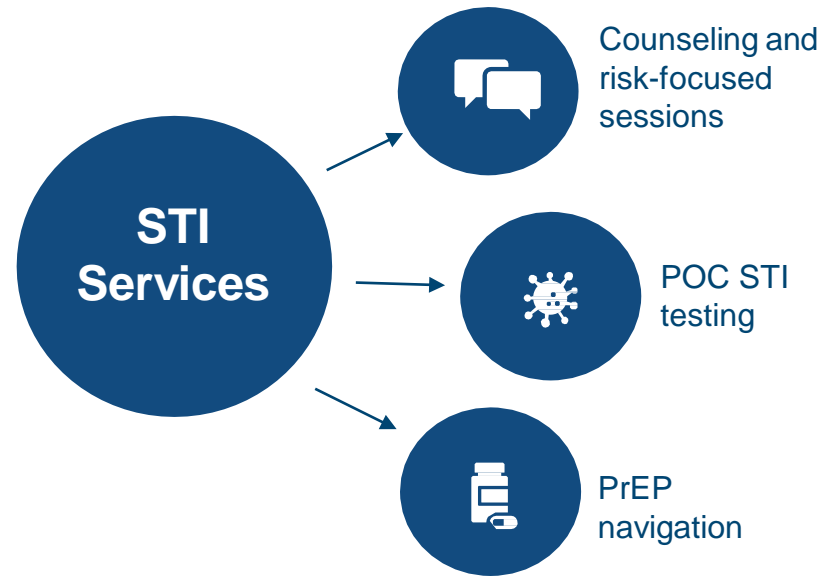
Reduce HIV Incidence

PUBLIC HEALTH IMPACT

Vanguard Studies: Reaching Heterosexual Men



(HPTN 111)



(HPTN 112)

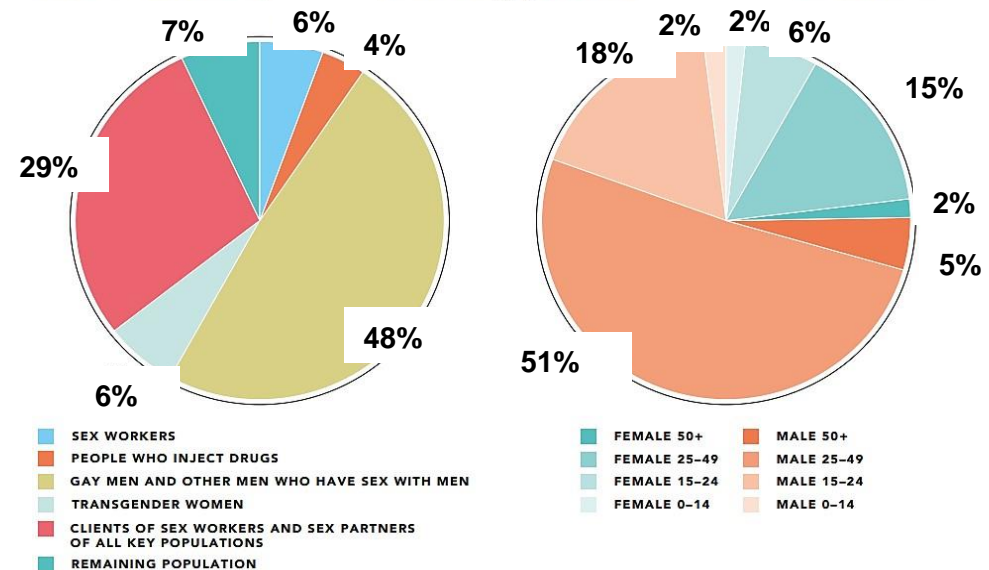


Double Prevention

A Vanguard Study of an Integrated Strategy of HIV PrEP and STI PEP for Young Latino Sexual Minority Men (SMM) in the Americas

- Adapt and test a suite of mHealth tools to increase HIV PrEP (choice of oral TDF/FTC or CAB-LA) uptake and adherence among young Latino gay, bisexual, and other cis-gender MSM
- Evaluate the uptake, adherence, and acceptability of DoxyPEP

New HIV infections by population and sex (aged 15–49 years), Latin America, 2021





HPTN Scholars Program

HPTN Scholars Program

Develop the next generation of HIV prevention scientists, from underrepresented racial and ethnic communities in the U.S. and international settings



HPTN Scholars Program

- **Demographics**

- **48 U.S. Scholars since 2010:**

- 34% men; 66% women
 - 59% Black, 17% Hispanic

- **15 International Scholars since 2015:**

- 29% men; 71% women

- **Accomplishments**

- Awards: R01s (12+), K23s (5+) plus R21s, R34s, U01s, CFAR supplements and leadership
 - Invited speakers/experts at NIH meetings and journal editors
 - Faculty position progression, etc.
 - Protocol Team Leadership: HPTN 091 and HPTN 096
 - Progression to Mentor/Co-Mentor role: 4+
 - Published-first authored: 43 (15+ in development or under review)
 - Engaged 55 HPTN mentors





Transition

Transition in HPTN Leadership - 2025



Raphy Landovitz



Sinead Delaney-Moretlwe

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Thank



You

