

# Home HIV Self-Testing for Young Black and Latinx MSM

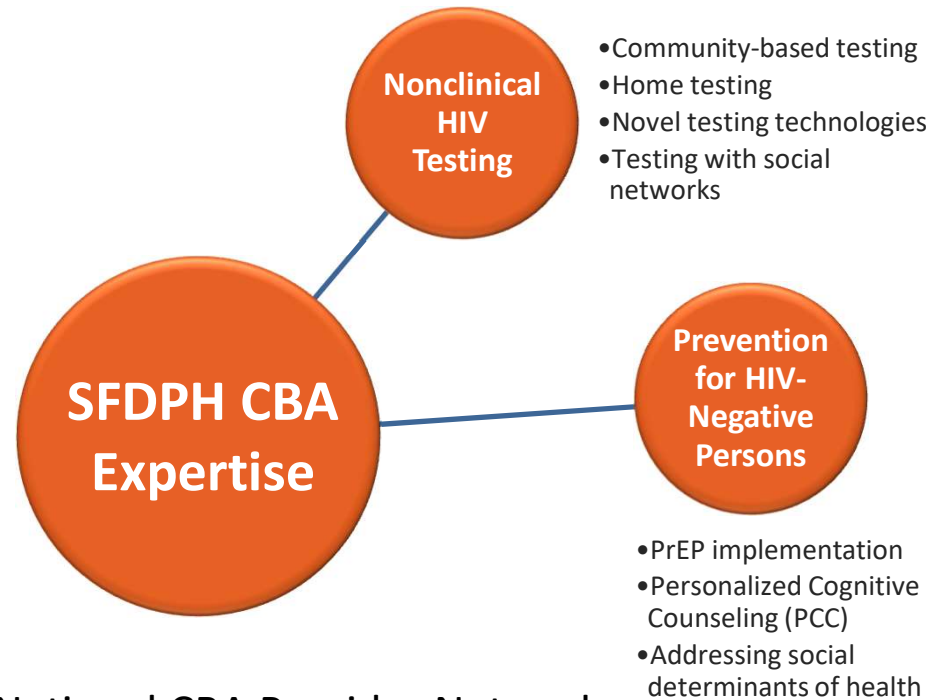
Dr. Hyman Scott, SFDPH  
Raj Gill, Santa Clara PHD

Center for Learning and Innovation

San Francisco Department of Public Health



# SFDPH CBA Program



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# Today's Speakers

- **Dr. Hyman Scott, SF DPH**

Presentation of the HOME HIV testing study



- **Raj Gill, MPH, Santa Clara PHD**

Overview of Santa Clara home HIV testing program



- **Moderator: Dr. Jessica Bloome, SF DPH**

Discussion on building capacity for home HIV testing



# Hyman Scott, MD, MPH



Bridge HIV, San Francisco Department of Health  
UCSF Division of HIV, Infectious Diseases, and Global Health



# HOME: A mHealth combination HIV prevention intervention for young Black and Latinx men who have sex with men

Hyman M. Scott<sup>1</sup>, Kenneth Coleman<sup>1</sup>, Rafael Gonzalez<sup>1</sup>, Nicole Walker<sup>1</sup>,  
Nicole Laborde<sup>2</sup>, Albert Liu<sup>1</sup>, Eric Vittinghoff<sup>3</sup>, Susan Buchbinder<sup>1</sup>

<sup>1</sup>Bridge HIV, San Francisco Department of Public Health; <sup>2</sup>Consultant;

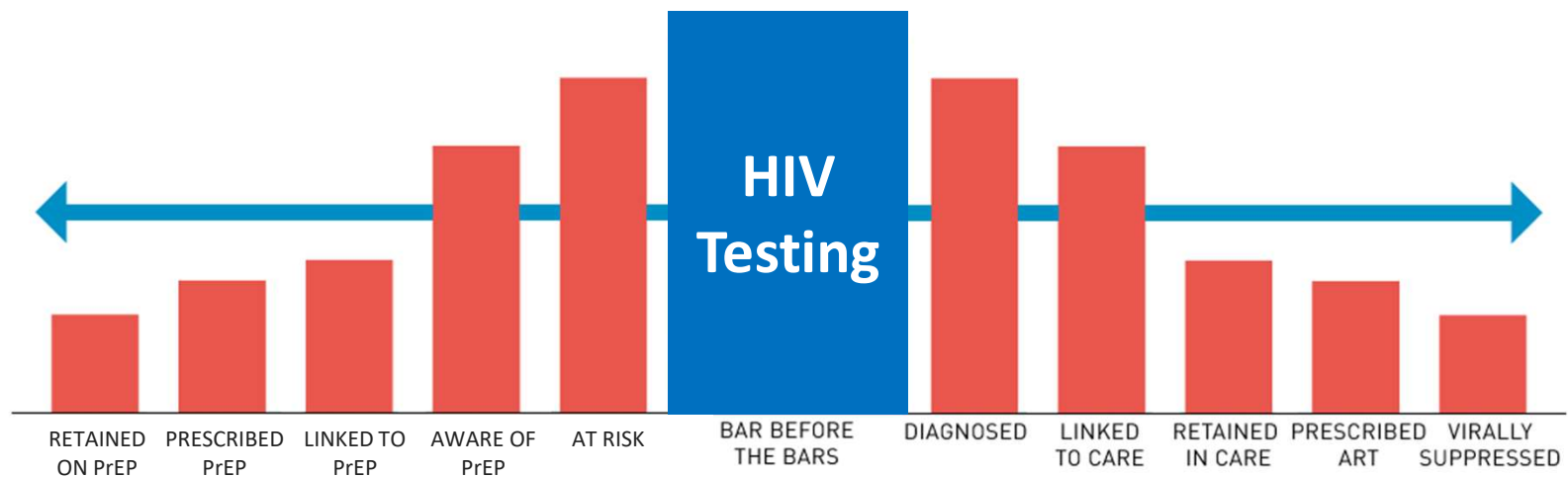
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## Disclosures

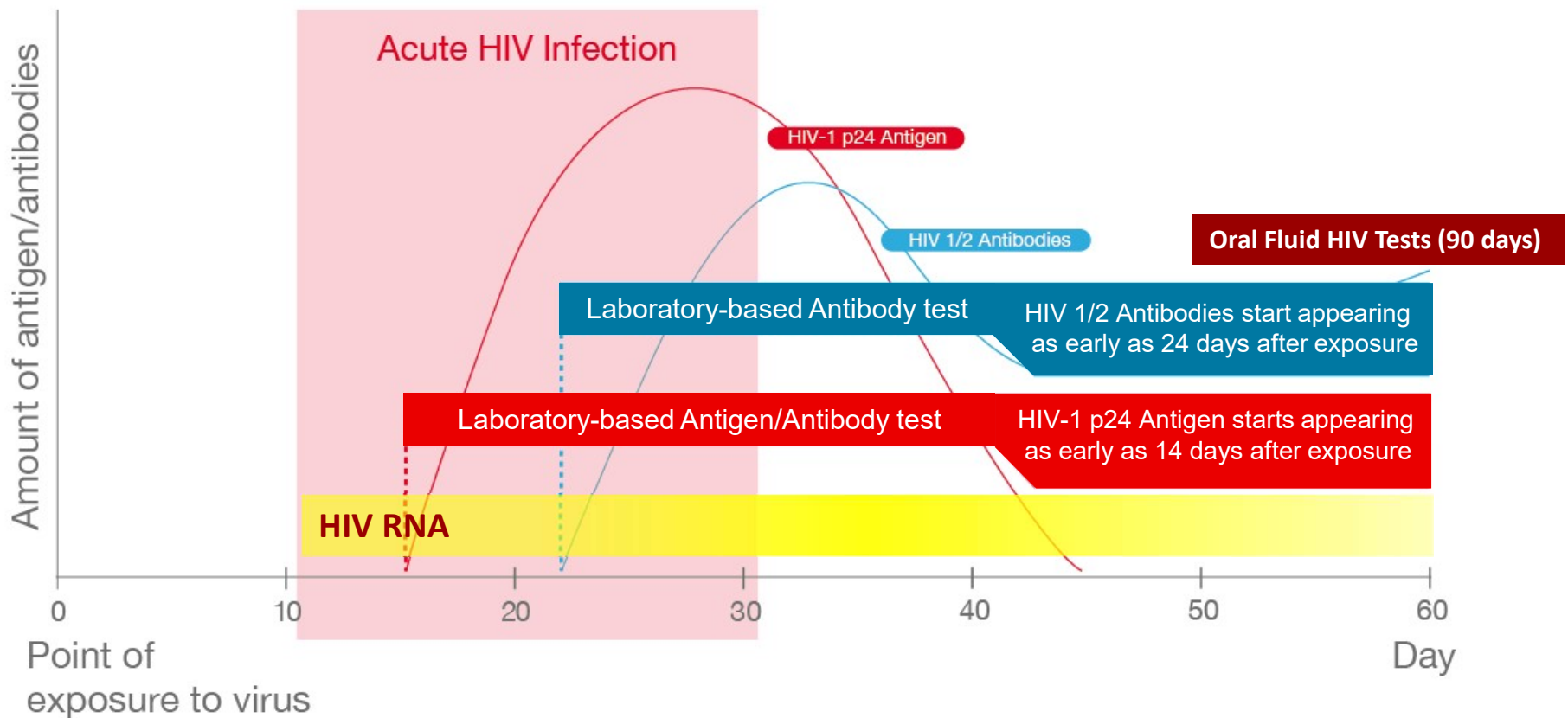
- I have no disclosures or conflicts of interest.

# The Status Neutral Continuum

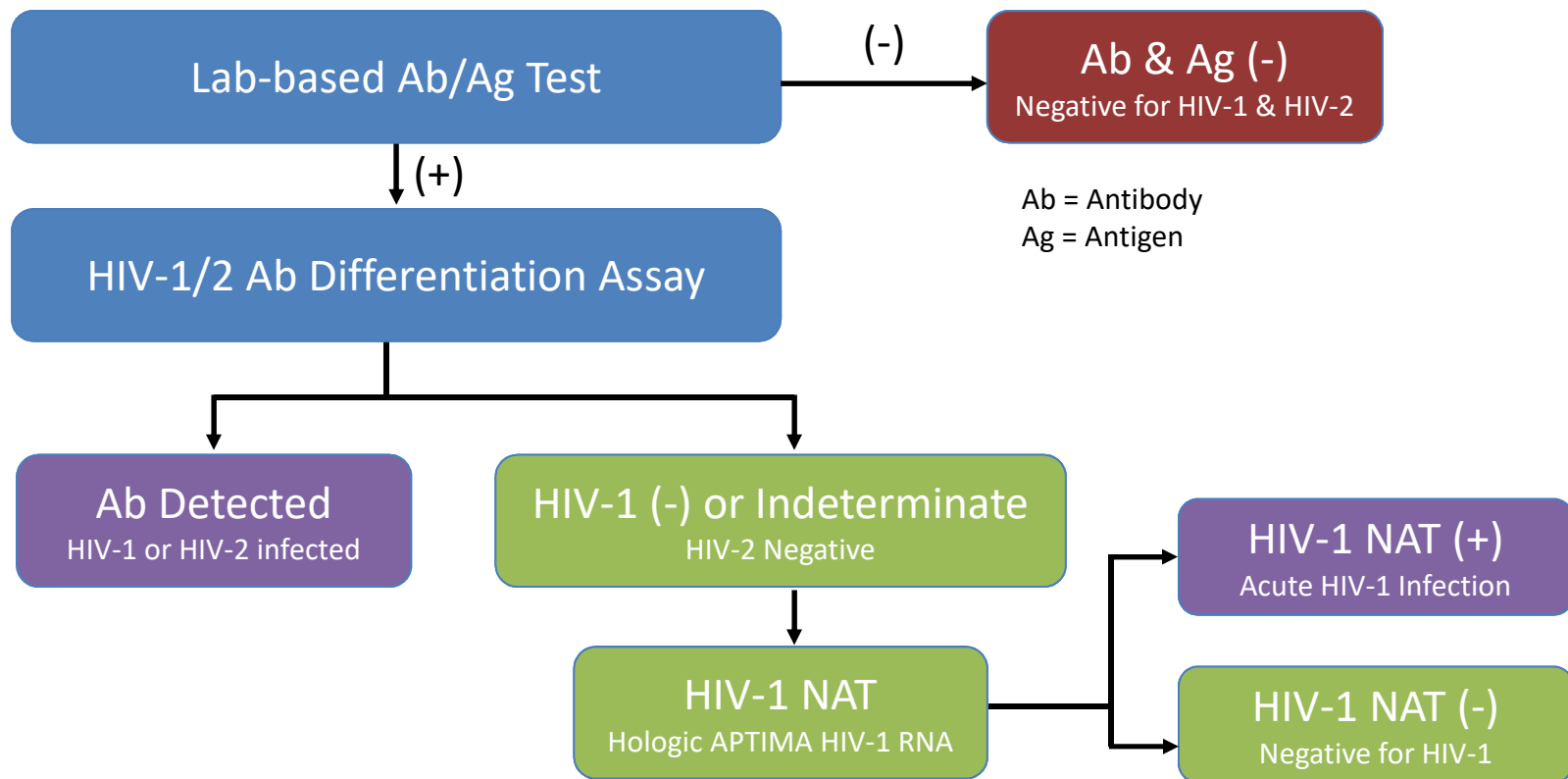




# Timeline Following HIV Infection



# HIV Testing Algorithm



Branson et al Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations 2014.  
[https://www.cdc.gov/hiv/pdf/testing/hiv-tests-advantages-disadvantages\\_1.pdf](https://www.cdc.gov/hiv/pdf/testing/hiv-tests-advantages-disadvantages_1.pdf)  
<https://stacks.cdc.gov/view/cdc/50872>

## Never Testers Among MSM

- Internet survey of 1,170 MSM.
- Recruitment on social media and MSM networking sites.
- 13% reported never testing.

TABLE 2. MULTIVARIABLE ANALYSIS OF FACTORS ASSOCIATED WITH NEVER TESTING FOR HIV AMONG 1170 MEN WHO HAVE SEX WITH MEN IN THE UNITED STATES

	<i>Never tested for HIV</i>	
	<i>Crude OR (95% CI)</i>	<i>AOR (95% CI)</i>
<b>Sociodemographics</b>		
Recruitment source		
Men-seeking-men websites	Ref	Ref
Facebook/other	2.25 (1.57–3.22)	1.70 (1.07–2.68)
Age <sup>a</sup>	0.93 (0.91–0.94)	0.95 (0.93–0.97)
<Associates degree	2.98 (2.10–4.24)	1.56 (1.03–2.34)
Nonpermanent housing	4.11 (2.88–5.86)	1.96 (1.29–2.96)
Rural residence	2.16 (1.36–3.46)	2.34 (1.37–4.02)
Non-gay sexual orientation		
Not fully “out”	1.58 (1.12–2.23)	—
No primary partner	2.41 (1.64–3.56)	1.70 (1.10–2.60)
<b>Sexual behaviors (past 3 months)</b>		
No. of partners <sup>a</sup>	0.91 (0.85–0.96)	—
Condomless anal sex	0.53 (0.38–0.75)	0.56 (0.38–0.82)

# Strategies to Increase HIV Testing

## Individual

- Incentives may have a role among some populations.
- Home testing options.

## Social

- Social and sexual network-based testing strategies.
- Peer/social support (including family).
- Social marketing.

## Structural

- Increased access to healthcare services.
- Non-clinical testing sites.

# Home HIV-self Test (Oraquick)

July 3, 2012

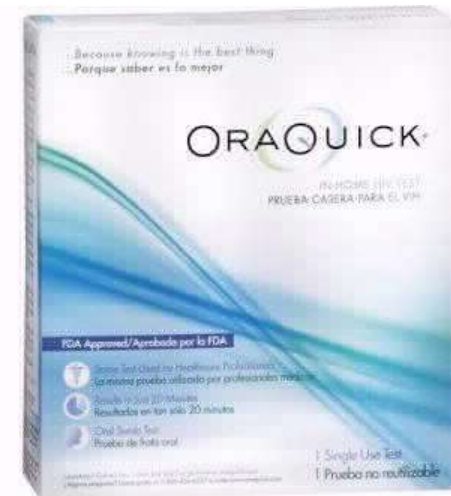
*The New York Times*

## Rapid H.I.V. Home Test Wins Federal Approval

By DONALD G. McNEIL Jr.

After decades of controversy, the Food and Drug Administration approved a new H.I.V. test on

- Approved in July 2012
- 20-40 minutes for result
- Comparable to older EIA (lab) tests (90 day window period)



## Home HIV Self-Testing (Oraquick)

- Advantages

- Privacy
- Control of testing
- Availability (pharmacy/online)
- Rapid result
- Ease of use

- Disadvantages

- Cost
- Sensitivity (vs. blood tests)
- Packaging (single use)
- Linkage?
- Lack of counseling?

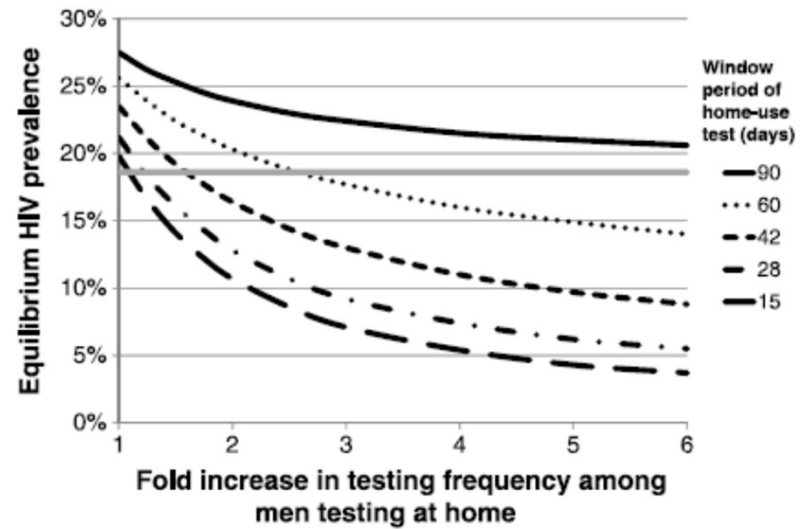
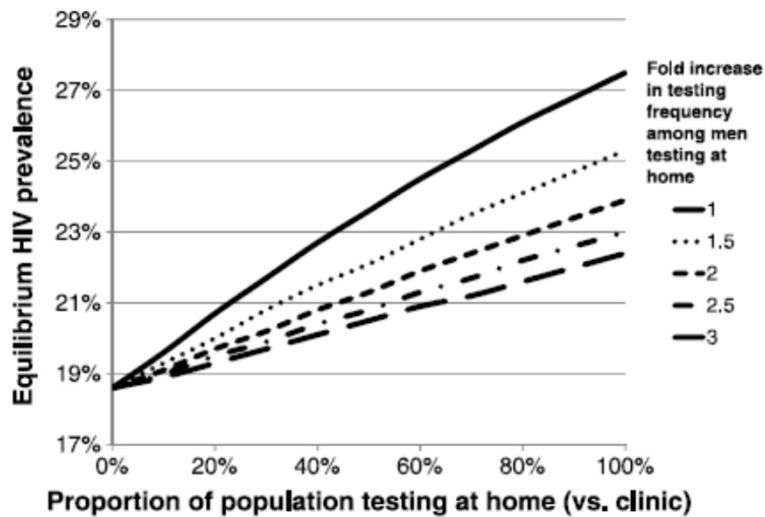
## Acceptable among YMSM

- Study of 425 YMSM randomized to receive home self-testing, home self-collection, or medical/CBO testing.
  - Self-testing and medical/CBO testing was higher than self-collection
  - No difference by race/ethnicity (Black, Latinx, White)

	<b>Self-test n=142</b>	<b>Self-collection n=141</b>	<b>Medical/CBO n=142</b>
% completing test	66.2 (58.4, 74.0)	40.1 (32.1, 48.2)	56.0 (47.8, 64.2)
Time to completion (days)	14.0 (11.0, 17.0)	17.0 (15.0, 22.0)	17.0 (11.0, 26.0)

# The Potential Impact of the Long Window

Stable 18.6% HIV prevalence among MSM in Seattle.





## Background

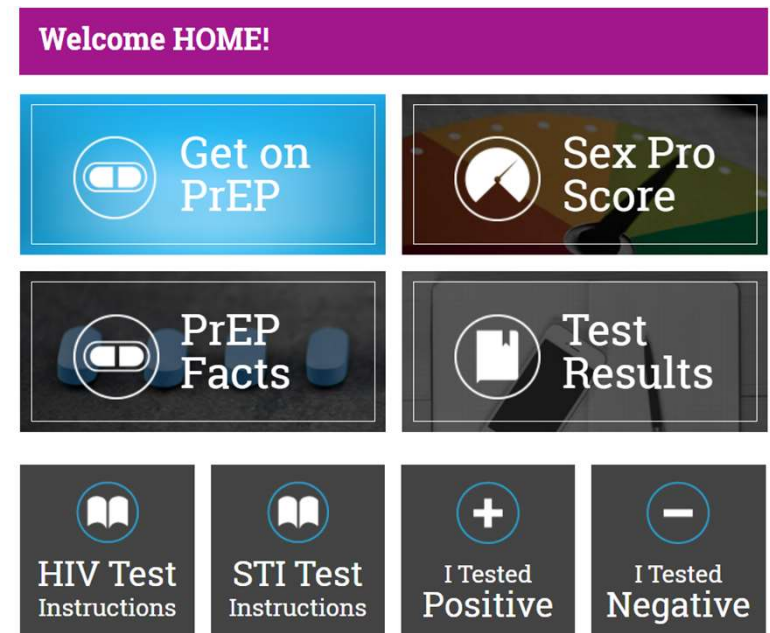
- Young Black and Latinx MSM have the highest proportion of undiagnosed HIV infections.
  - High rates of STIs among these populations, which is likely driving new infections.
- Home HIV self-testing is acceptable and may reach groups that don't access available community based organization or clinic testing locations.
- PrEP uptake has been slow among young Black and Latinx MSM in the US.
- Mobile health (mHealth)-based interventions have potential to reach young Black and Latinx MSM who may not access other HIV prevention and care services.

# HOME Intervention

- Developed and optimized through formative work using Information-Motivation-Behavioral Skills (IMB) model.
  - Focus groups and interviews
  - Pilot tested with 30 young MSM

## Intervention Components

1. Information and Linkage to PrEP and HIV care
2. HIV Risk Assessment – Sex Pro
3. SMS Testing Reminders
4. Home HIV/STI testing options
5. HIV/STI testing log
6. Support to test with a “buddy”



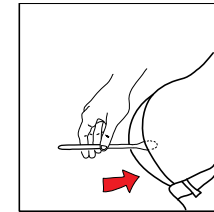
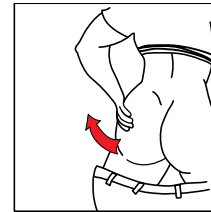
# Home HIV and STI Testing Options

## Home HIV self-testing

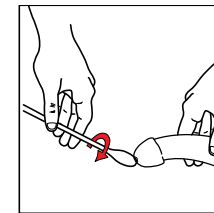
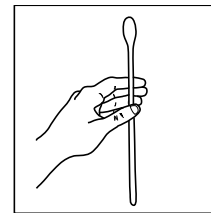


## Home STI self-collection

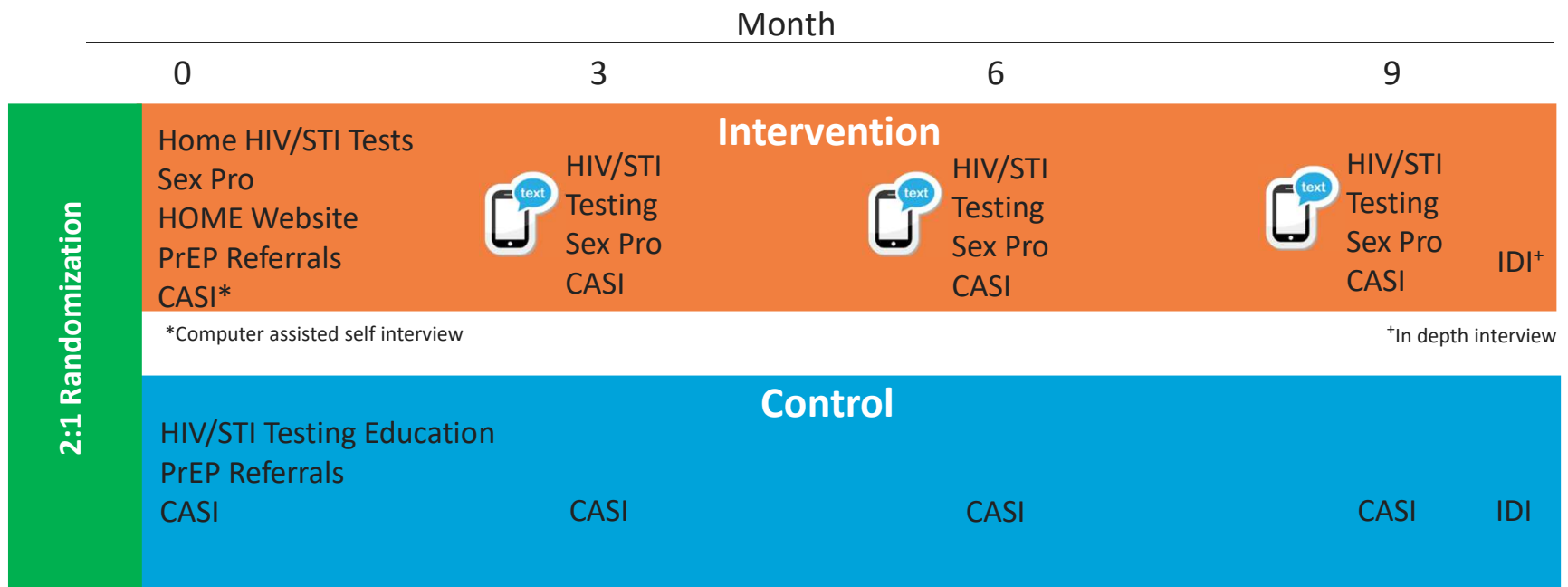
Rectal Swabs



Penile Swabs (meatal)



# Study Design



In person baseline visit; follow-up assessments completed online. IDI was only in a subset of participants.

## Study Objectives

- *Primary Objectives*

- To evaluate the efficacy of the HOME mHealth intervention to increase HIV and STI testing frequency.
- To evaluate efficacy of the HOME mHealth intervention package to support linkage to PrEP (for HIV-negative men) or HIV care (for HIV-positive men).

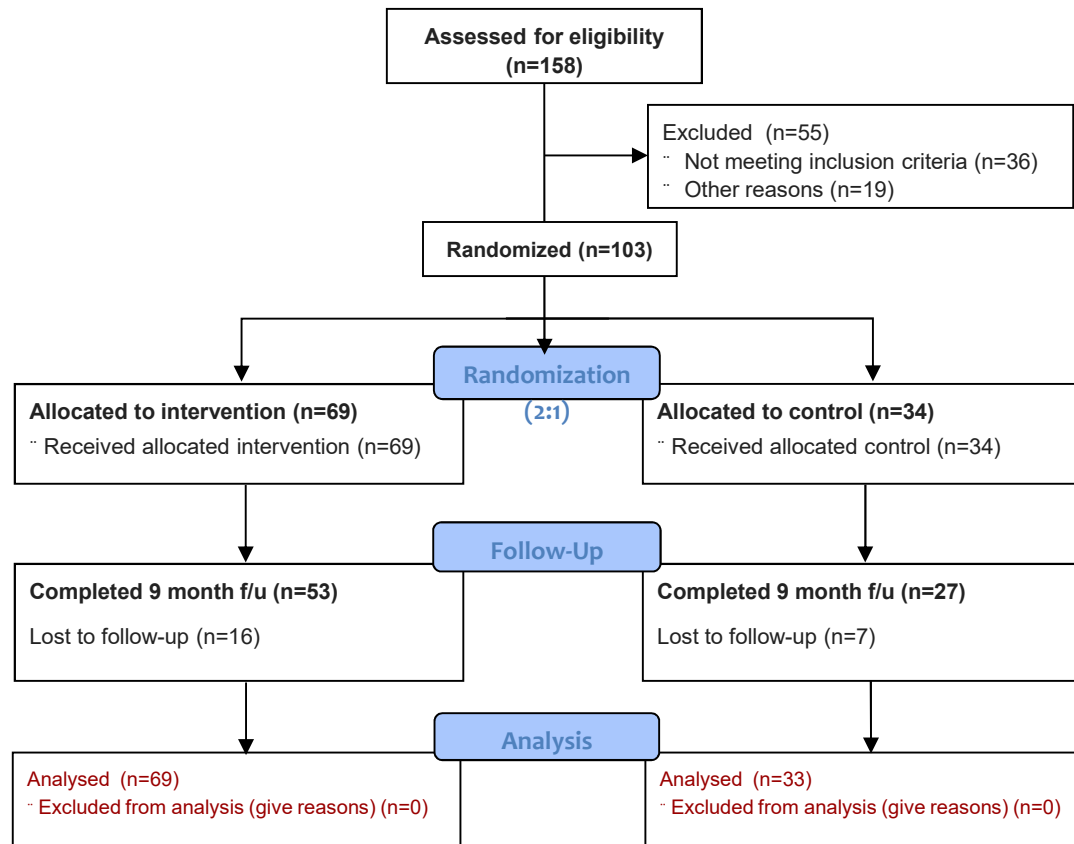
- *Secondary Objective*

- Feasibility and acceptability of the individual components.

## Methods

- Inclusion Criteria
  - Age 18-35.
  - Self-identify as a man and male sex at birth.
  - Self-identify as Black or Latinx.
  - Report anal sex with at least one male sex partner in the prior 12 months.
  - HIV negative by self-report.
  - Currently own a cell phone.
  - Willing and able to provide written informed consent.
- Recruitment on Social Media Sites and venues:
  - 
  - 
  - 
- Statistical Analysis
  - Logistic regression to evaluate the primary outcomes assessed via computer assisted self interview (CASI).

# Enrollment and Retention



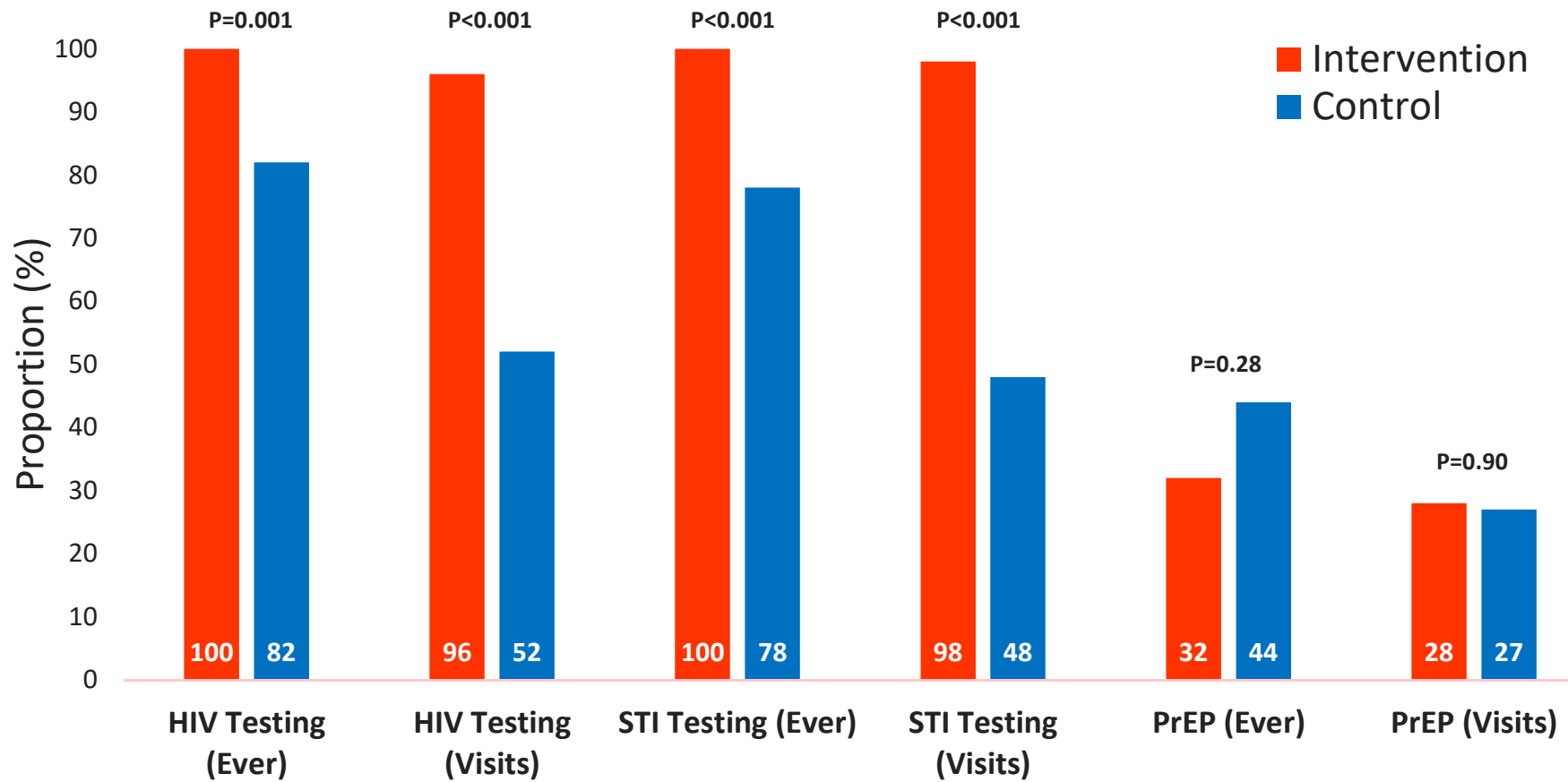
## Baseline Characteristics

Variable	Control (N=34)	Intervention (N=69)	P value
Age (median, IQR)	26 (23-29)	27 (23-31)	0.80
Latinx	67%	64%	0.70
Black	35%	41%	0.43
Lives in San Francisco County	50%	35%	0.14
Annual Income < \$30,000	41%	62%	0.052
Ever incarcerated	5.9%	22%	0.04
Education - Some college or more	82%	82%	0.76
Number of male partners* (median, IQR)	3.0 (1-4.5)	3.5 (1-5)	0.62
Exchange sex (Ever)	31%	26%	0.62
Recreational Drug Use*	49%	34%	0.17
Previously on PrEP	23%	15%	0.33
Very/Extremely Interested in PrEP	53%	32%	0.045

\* Past 3 months.



## HIV/STI Testing and PrEP Uptake



# HIV/STI Testing and PrEP Uptake

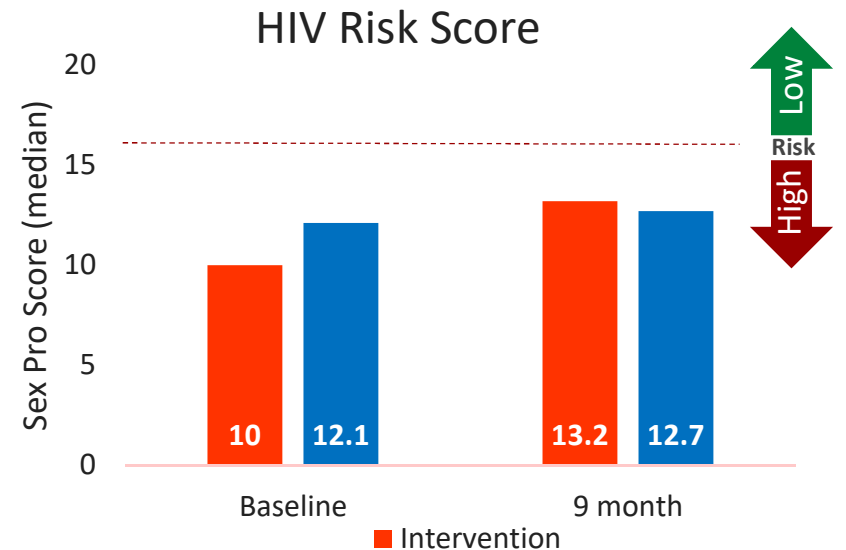
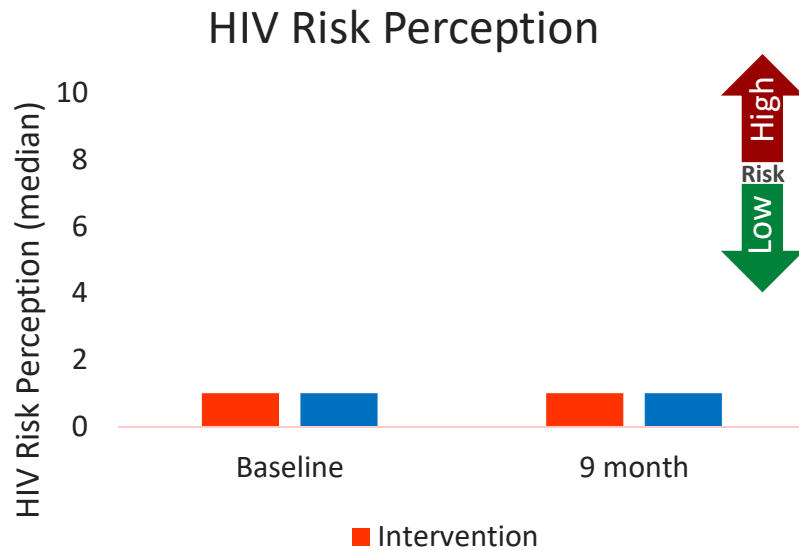
Outcome Variable*	Odds Ratio	95% Confidence Interval	P-value
HIV Testing	5.89	3.23 - 10.74	<0.001
STI Testing	5.95	3.05 - 11.62	<0.001
PrEP Uptake	0.51	0.21 - 1.24	0.14

\* Assessed via quarterly CASI

# Home HIV and STI testing

- Home HIV self-testing
  - 60% used and disclosed home HIV test results on the HOME website testing log
  - 26% tested with a “buddy”
  - 3 participants reported positive home HIV tests (1 false positive; 1 confirmed and linked to care; 1 unable to link to confirmation/care despite multiple linkage attempts)
- Home STI self-collection
  - 48% of swabs were returned for testing
  - 5% of rectal swabs were positive for Gonorrhea and 5% for Chlamydia
  - 2% of penile swabs were positive for Gonorrhea and 3% for Chlamydia

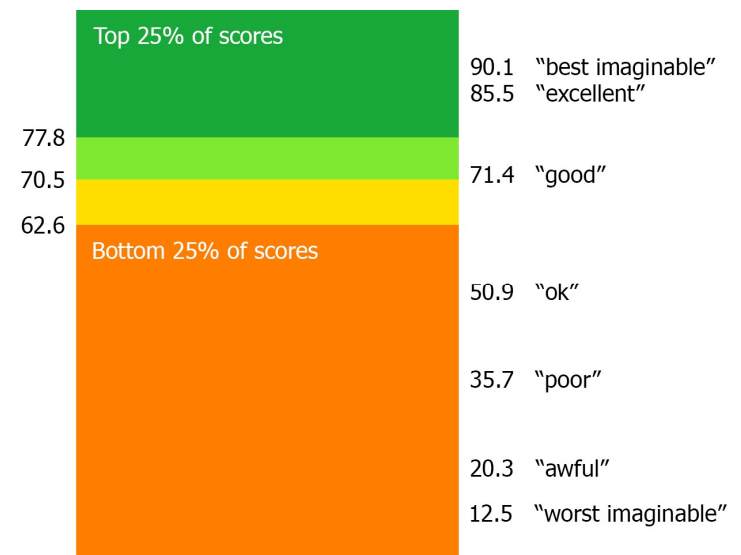
# Low HIV Risk Perception



# Acceptability

- HOME Website
  - System Usability Score (SUS): median score 82.5/100 (IQR: 70-95)
- Home HIV self-testing
  - 92% reported testing was easy
  - 90% reported testing would be very convenient to use in the future
- Home STI self-collection
  - Penile Swabs – 93% reported collection was easy
  - Anal Swabs – 86% reported collection was easy

## System Usability Score (SUS)



## Limitations

- No syphilis or pharyngeal STI screening
- HIV & STI testing and PrEP uptake assessed by self-report
- Retention challenges with online follow-up

## Summary

- HOME mHealth intervention led to significant increase in HIV and STI testing.
- Participants were willing to disclose HIV test results online, including positive test results.
- Intervention components were highly acceptable and scalable.
- There was no impact on PrEP uptake, indicating more counseling/support is likely needed.
  - Exploring through individual interviews

# Implications

- HOME study results in the context of HIV testing program implementation
- Considerations in efforts to reach young Black and Latinx men who have sex with men for HIV testing



## References

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11. CDC STD Surveillance 2017, 2018
12. Sullivan, et al. Potential Impact of HIV Preexposure Prophylaxis Among Black and White Adolescent Sexual Minority Males, *Am J Public Health*, 2018.

## Thank You

- Susan Buchbinder
- Al Liu
- Eric Vittinghoff
- Marguerita Lightfoot
- Nicolas Sheon
- Nicole Laborde
- Kenneth Coleman
- Nicole Walker
- Janie Vinson
- Rafael Gonzalez

## Our Study Participants!



Funding: R01AI104309 (PI Buchbinder),  
K23MH104116 (PI: Scott)

# Raj Gill, MPH



Health Program Specialist  
Santa Clara County Public Health Department



# Santa Clara County Home HIV Testing Pilot Program

- Goal: distribute OraQuick home HIV testing kits to MSM who reside in Santa Clara County
  - Focus on confidentiality
- Recruitment: online ads through dating/hook up apps and in-person outreach at events
- Initial roll out: email voucher for Walgreens
  - 42 test kits distributed in 6 months
- Follow up: in-person distribution at events and venues
  - 382 tests distributed in 6 months
- Two individuals were diagnosed as HIV positive and linked to care



# Santa Clara County Reflections

## Challenges

- Confidentiality
- Redemption Process
- County Processes

## Successes

- Partnerships
- Reach/Raising Awareness
- Reduction of Stigma



# Home HIV Testing Health Department Programs

## NYC HIV Self-Test Giveaway Program

- Online HIV self-testing program targeting MSM and transgender persons, conducted through advertisements on social media and dating apps
- From 2015 through 2018, >12,000 test kits mailed, 16% reported no prior testing
- Additional Community Home Test Giveaway program through CBO partnerships

Edelstein E., et al. Five waves of an online HIV self-test giveaway in New York City, 2015-18. Presentation at the National HIV Prevention Conference 2019. <https://www1.nyc.gov/assets/doh/downloads/pdf/dires/five-waves-of-an-online-hiv-self-test-giveaway.pdf>

Johnson M, et al. Using surveillance data, community input, and reported naloxone administrations to guide programmatic decision-making in implementing the New York State (NYS) HIV Home Test Giveaway (HHTG). Abstract 5364, <https://www.cdc.gov/nhpc/pdf/NHPC-2019-Abstract-Book.pdf>

Hubbard S, et al. #testathome: Implementing HIV self-testing through CBO partnerships in New York City. Presentation at the National HIV Prevention Conference 2019. <https://www1.nyc.gov/assets/doh/downloads/pdf/dires/testathome-implementing-hiv-self-testing-cbo-partnerships.pdf>

## Virginia Home HIV Testing Program

- Online HIV self-testing program administered through the state Health Department, focused on MSM
- From 2016 through 2018, 819 test kits were mailed, 45% reported no testing in the prior 12 months

Collins B. "Discreet": characteristics of MSM in a Virginia home testing program and reasons for requesting a home test kit. Abstract 5872, <https://www.cdc.gov/nhpc/pdf/NHPC-2019-Abstract-Book.pdf>

## Arizona Department of Health Services Home Test Kit Program

- Online HIV self-test program for all residents, with option for mailed kit or pharmacy voucher
- <https://hivaz.org/dont-know-your-status/free-home-test-kit>

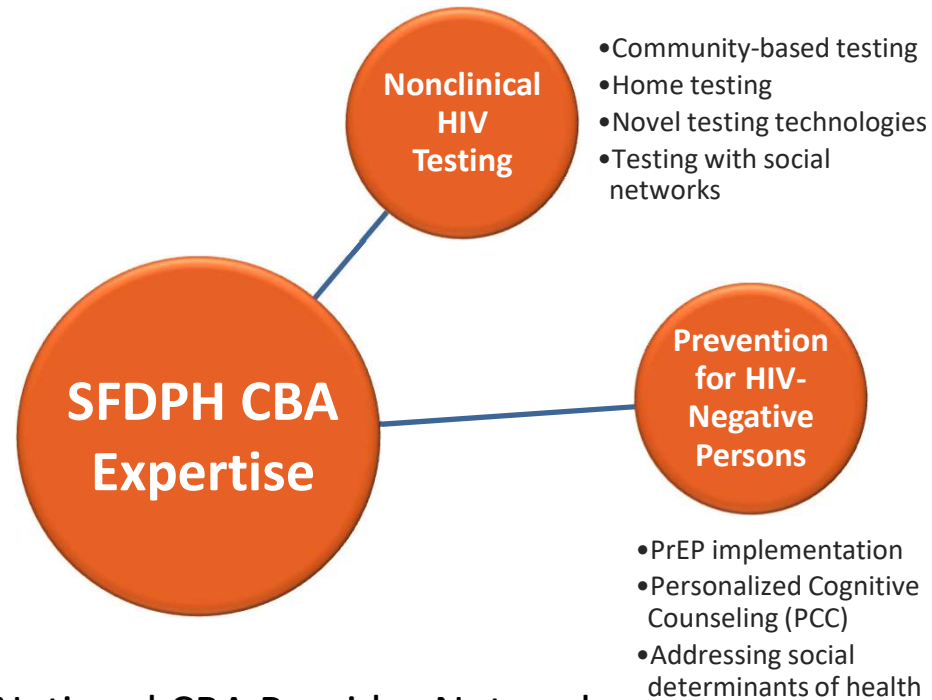
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