The More We Know

Evolving Our Understanding of PrEP for Cisgender Women

Friday, April 5, 2024
9am ET – 10:30am ET

Welcome.

Thank you for joining us.

THE CHOICE AGENDA

AVAC

Advocacy. Access. Equity.

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HIV prevention research – a new forum for advocacy on the latest

avac.org/project/choice-agenda

Today's playlist

DJ Jimberly

Better Be Good to Me
Tina Turner

Woman
Doja Cat

A Natural Woman
Aretha Franklin

BODYGUARD
Beyoncé

More Than You Know
Axwell Ingrosso

THE CHOICE AGENDA

The More We Know

Evolving Our Understanding of PrEP for Cisgender Women

Today's speakers:

Dr. Jeanne Marrazzo, NIAID

Joyce Ng'ang'a, WACI Health

Moderator:

Raniyah Copeland,
Equity & Impact Solutions

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

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Background

- Emtricitabine and tenofovir disoproxil fumarate (F/TDF) for PrEP was approved for adults in 2012 and extended to adolescents in 2018[1,2]
- Real-world effectiveness and adherence with F/TDF for PrEP in cisgender women remain concerns
- We pooled data from 11 F/TDF demonstration projects in 6 countries conducted over eight years (11/2012–12/2020) with 6,296 participants to better understand the overall efficacy of F/TDF in cisgender women in real-world settings
- We explored adherence in a subset of 2,954 women with available objective and subjective data and used innovative methods to describe longitudinal patterns of adherence

1. Food and Drug Administration (FDA): FDA approves first drug for reducing the risk of sexually acquired HIV infection. Washington, DC, 2012. 2. National Institutes of Health. Item of Interest: FDA Approves PrEP Therapy for Adolescents at Risk for HIV. https://www.nichd.nih.gov/newsroom/releases/051618-PrEP. Published May 16, 2018.

Eleven Demonstration Projects of F/TDF for PrEP in Cisgender Women (N = 6296)

Study
Lead investigator
n/N: available adherence/ Total

PrEPception[1]
Sullivan
n / N = 16 / 24

CRUSH–PrEP for Women[2]
Myers
n / N = 7 / 25

Ashodaya PrEP (India)[3]
Moses
n / N = 646 / 647

Kolkata PrEP Demo[4]
Jana
n / N = 678 / 678

Kenya PrEP[5]
Kiragu
n / N = 507 / 1347

MPYA (Kenya)[6,7]
Baeten
n / N = 348 / 348

Safer Contraception (Kenya)[8]
Baeten
n / N = 40 / 40

Partners Demo (Kenya, Uganda)[9]
Baeten
n / N = 330 / 334

TDF2 OLE[10]
Taylor, Ussery
n / N = 45 /102

Power (Kenya, South Africa)[11]
Celum
n / N = 152 / 2551

3P (South Africa)[12]
Bekker
n / N = 186 / 200

1. Leech AIDS Patient Care STDS 2020; 2. Koester IAPAC 2019; 3. Reza-Paul Glob Public Health 2020; 4. Jana Int J STD AIDS 2021;32:638-47; 5. Masyuko Sex Health 2018; 6. Haberer Lancet HIV 2021 (MPYA); 7. Haberer J Acquir Immune Defic Syndr 2022; 8. Heffron Gates Open Res 2018; 9. Baeten PLOS Medicine 2016; 10Henderson FL, et al. IAS 2015; https://www.natap.org/2015/IAS/IAS_92.htm; 11. Celum J Int AIDS Soc. 2022; 12.Celum J Int AIDS Soc 2020.

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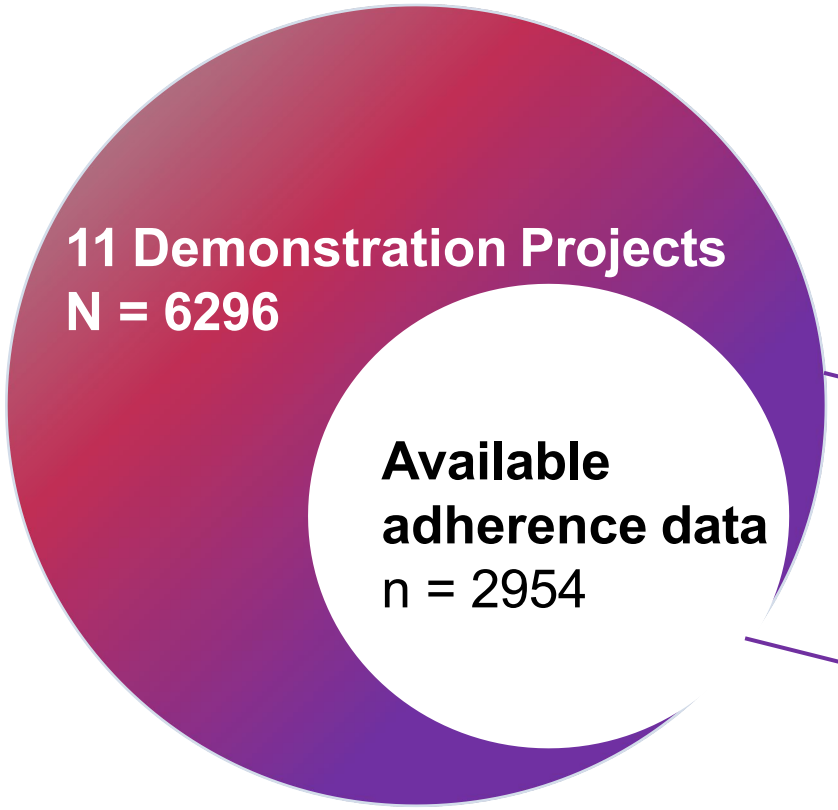
Methods: Incidence and Adherence



Between November 2012 and December 2020, 6,296 cisgender women initiated F/TDF for PrEP*

We calculated overall efficacy (HIV incidence per 100 PY) by Poisson regression

We evaluated adherence in a subset (n=2955) who had either objective or self-reported data

*Study medication (F/TDF) was provided by Gilead.

Methods: Adherence Metrics

- Objective adherence measured by TFV-DP in dried blood spots (reflecting adherence over the past 12 weeks) or plasma TFV (reflecting adherence over the past 2-7 days)
- Subjective adherence measures included electronic pill cap-monitoring (ECM), pill counts (PC), self-report (SR) or study-reported adherence scale (SS)
- All measures categorized by corresponding estimated tablets per week

Overall Adherence Scale	Objective Adherence* n = 237 (DBS, fmol/punch)		Subjective Adherence, n = 2887					
			 ECM	 PC	 SR		 SS	
≥7 Tablets	≥1250		≥7 Tablets				Excellent	
4–6 Tablets	700 – <1250		4–6 Tablets				Very Good / Good	
2–3 Tablets	350 – <700	*or*	2–3 Tablets			or	Fair	
<2 Tablets	<350		<2 Tablets				Poor / Very Poor	

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*51 participants had only TFV plasma level data; those with TFV ≥40 ng/mL were assigned to the 4–6 Tablets group, and those with TFV <40 ng/mL to the <2 Tablets group DBS, dried blood spot

Brooks K, Anderson, P. Clin Pharmacol Ther. 2018;104:1056-9

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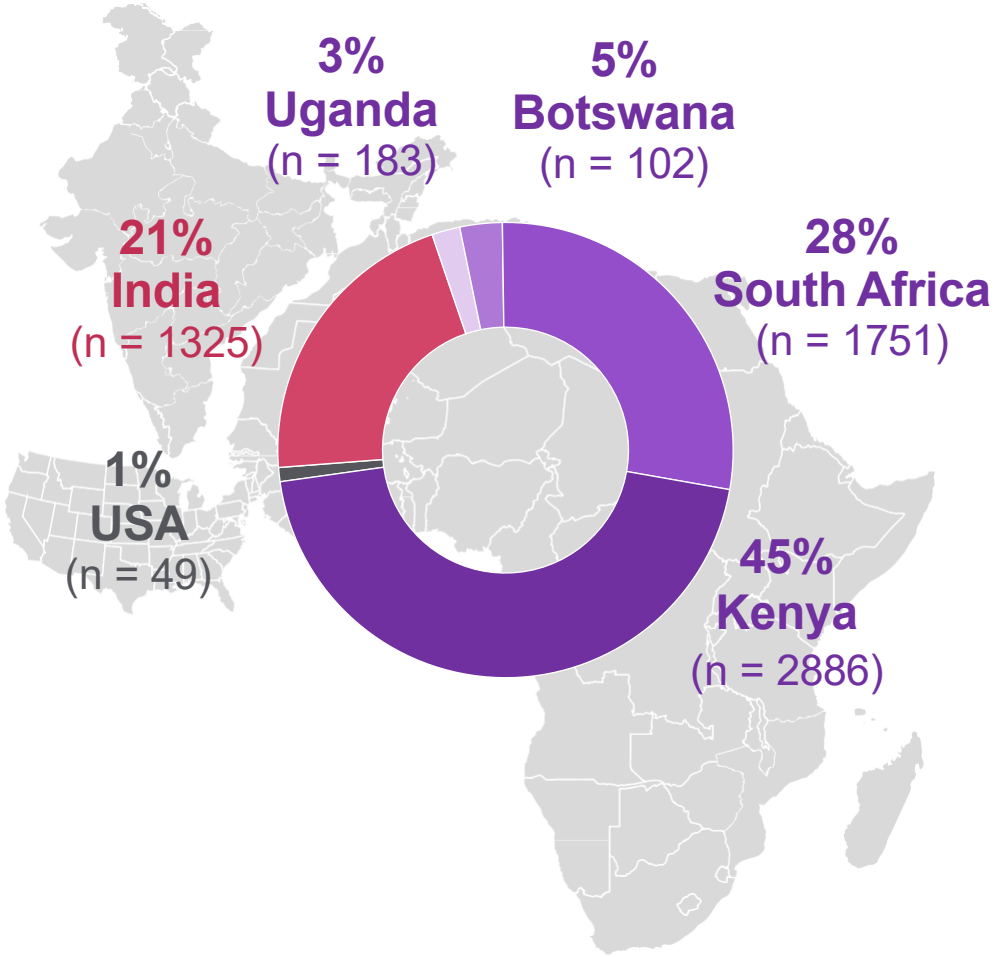
Methods: Longitudinal Patterns of Adherence by Group-based Trajectory

- Adherence measures assessed at an individual visit reflect cross-sectional adherence at that single time point
- In this analysis, we used group-based trajectory modeling to identify patterns of adherence over 96 weeks
- Linear, quadratic, or cubic models employed to allow data to cluster into 2-6 groups based on ordinal adherence metrics
- Using Bayes and Akaike information criterion (BIC, AIC), the final models were selected and groups defined

Baseline Characteristics



	N = 6296 n (%)
Age at PrEP initiation	
Mean age	25 years (7 [SD])
<25 years	1629 (26)
Primary education or less	1675 (27)
Married	3256 (51)
≥1 Children	2775 (44)
Sexually transmitted infections	781 (12)
BMI ≥30 kg/m^2	776 (12)
Commercial sex worker	1294 (21)

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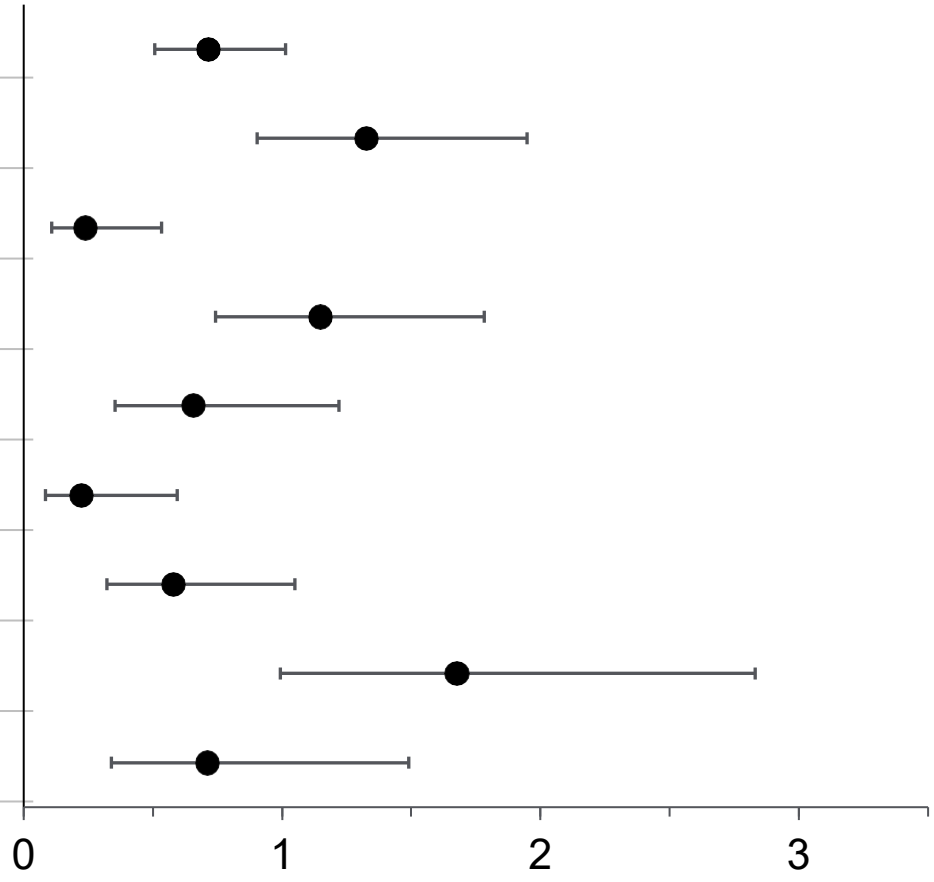
HIV Incidence (N = 6296)

Characteristic		HIV Diagnoses / n	HIV Incidence per 100 PY (95% CI)
		32 / 6296	**0.72** (0.51-1.01)
Age at Enrollment	<25	26 / 3832	**1.33** (0.90-1.95)
	≥25	6 / 2464	**0.24** (0.11-0.53)
Marital Status	Married	20 / 3256	**1.15** (0.74-1.78)
	Single	10 / 1791	**0.66** (0.35-1.22)
Education	≤Primary	4 / 1675	**0.22** (0.08-0.59)
	≥Secondary	11 / 1899	**0.58** (0.32-1.05)
Parity	Nulliparous	14 / 1816	**1.68** (0.99-2.83)
	≥1 Child	7 / 1506	**0.71** (0.34-1.49)



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- Characteristics associated with higher incidence are consistent with those previously described

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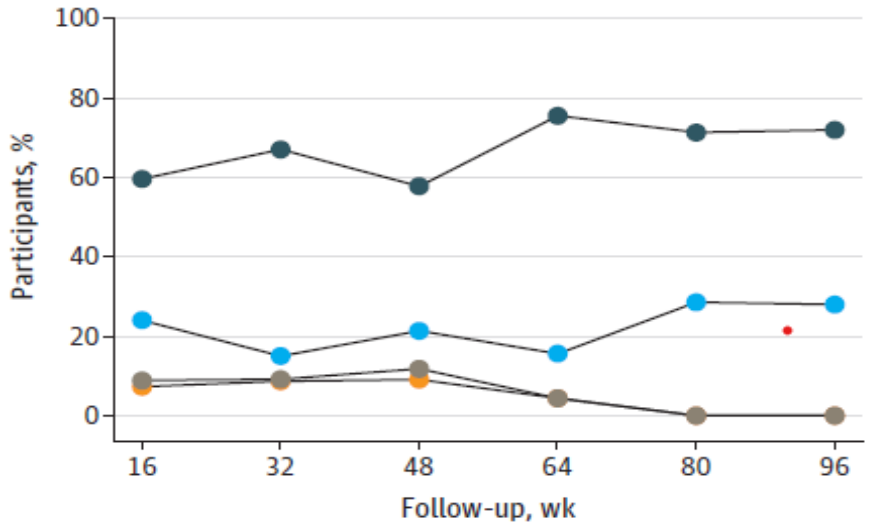
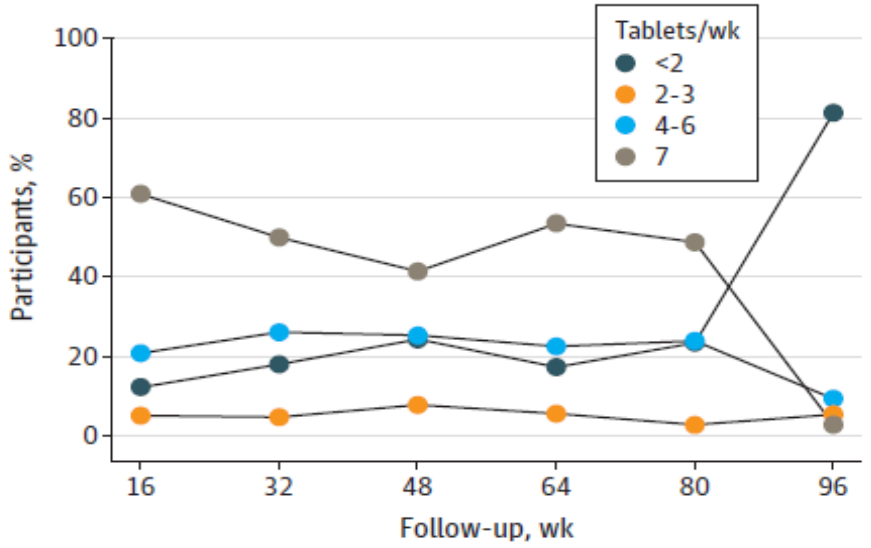
Cross-sectional Objective and Subjective Adherence by Visit (n = 2922)

Objective (DBS), n=147



No. of participants	147	116	72	28	14	22

Subjective (ECM, PC, SR, SS), n=2775



No. of participants	2775	2187	1945	1645	1199	318

- By both measures, overall adherence declined over time
- Higher adherence reported with subjective vs objective measures

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DBS, dried blood spot; ECM, electronic pill cap-monitoring; PC, pill-counts; SR, self-report; SS, study-reported adherence scale.

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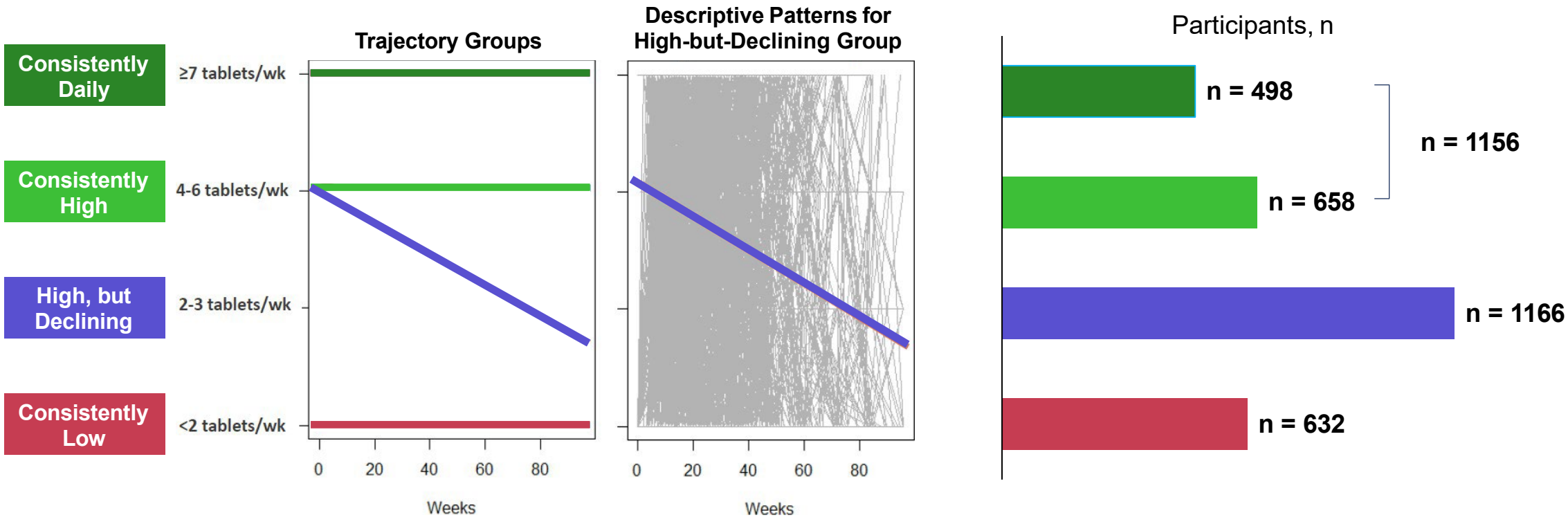
Longitudinal Patterns of Adherence By Group-based Trajectory



- Group-based trajectory modeling shows four groups with distinct patterns of adherence
- Three groups had stable adherence over time, regardless of model used
- One group had dynamic adherence over time – initially high then declined

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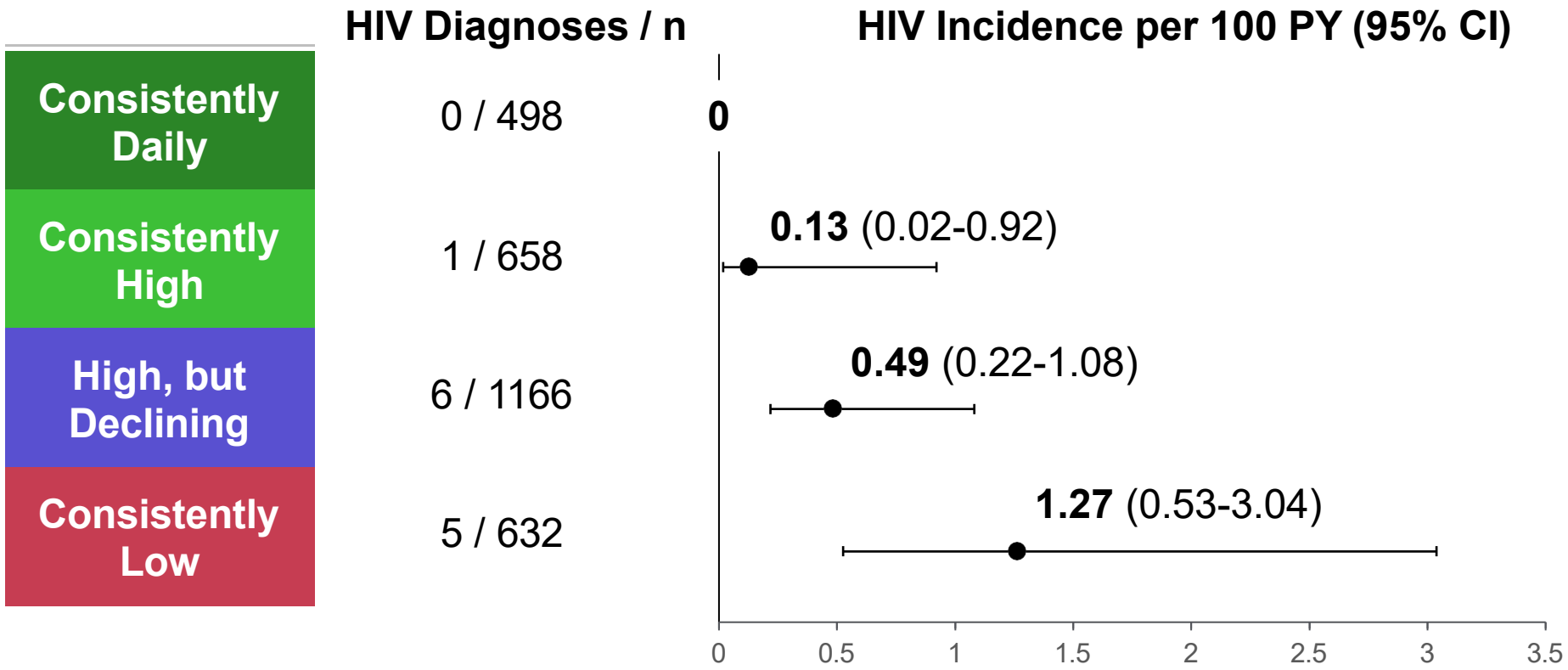
HIV Incidence Rates Among Women with Available Adherence Data (n = 2954)



- Even with low incidence overall, higher patterns of adherence were directly associated with lower risk of HIV acquisition

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Calculated by Poisson regression.

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Limitations

- Pooled analysis of heterogeneous demonstration projects
- Differential follow-up (higher adherence associated with higher retention)
- Objective adherence data was available for limited number of women
- Group-based trajectory methodology depends on sample size & duration of follow-up

Conclusions

- This pooled analysis of >6000 cisgender women is the largest assessment of effectiveness and adherence of F/TDF in diverse, global, real-world settings
- Effectiveness of F/TDF was similar in cisgender women who demonstrated consistently high (>4 tablets/week) or high (7 tablets/week) adherence
  - Comparable to the adherence-efficacy relationship for cisgender MSM
- Broader context surrounding individuals' HIV prevention needs should be integrated into decisions about PrEP use and that cisgender women need not be restricted to a rigid daily regimen.
  - Similar to the adherence forgiveness that has been reported in cisgender MSM.
- However, over half of all participants did not use F/TDF consistently, highlighting the urgent need for additional prevention options such as long- acting modalities

Acknowledgements

We extend our thanks to all who participated in the original Demonstration Projects who made these additional analyses possible.

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HIV Incidence Rate by Country

	Total N	HIV Diagnoses	Incidence Rate (95% CI)
Botswana	102	0	
India	1325	0	
Kenya	2886	15	0.70 (0.42, 1.17)
South Africa	1751	12	2.67 (1.52, 4.72)
USA	49	0	
Uganda	183	5	2.91 (1.21, 7.00)

The more we know: evolving our understanding of PrEP for Cisgender women

5th April 2024,

Joyce Nganga, WACI Health

AWPCAB Member


AFRICAN WOMEN
Prevention Community
Accountability Board

AWPCAB Members:

11 Women, 7 Countries

Kenya, South Africa, Uganda, Tanzania, Zambia, Zimbabwe, Malawi











How we are organized and What we do

Geography:

Eastern & Southern Africa

Choice Agenda:

Introduction of options

Age:

Intergenerational intentional AGYW

Focus:

Policy change

Access and roll out

Financing for choice

Engagements: National, Regional, and Global Levels


The HIV Prevention Choice Manifesto For Women and Girls In Africa

Introductions

Options vs. Choice

Goals

A future free of HIV for our daughters and women in Africa

People Living with HIV in 2022

The HIV Prevention Choice Manifesto for women and Girls in Africa

Goal:

A future free of HIV for our daughters and women in Africa

Call to Action

Center People & Communities

- **Prioritize key and marginalized populations** and scale interventions Ensure that R&D and delivery are informed by communities in alignment with the Good Participatory Practice Guidelines –communities must inform the ongoing and future pipeline from the onset, design, and formulation, as well as the introduction of proven interventions.

Choice Is Key

- Ensure **massive scale-up and increased access** to all safe and effective HIV prevention methods
- Ensure women have control over their health and their bodies and access to the full range of safe and effective options so that they can choose what works best for them at different times of their lives

Call to Action

Programs That Deliver

- **Integrate HIV prevention** into existing information and service packages such as family planning, cervical cancer prevention, antenatal care, and postnatal care to ensure easy access and availability of prevention methods

Finance choice

- Strategize, staff, budget, and procure for choice-based HIV prevention

The Future

- **The current options are good, but not sufficient** – prioritise R&D of additional systemic and non-systemic options

Adopt a Human Rights based approach to choice

- Address stigma, discrimination, and criminalization

Launched: September 8th,2023

Reflections on the paper: PrEP use in cisgender women

Prevention Vs treatment

- We have unacceptably high rates of new HIV infections among cisgender women, particularly in regions where rates of PrEP use remain low. We are out of track to meeting global goals of ending AIDS by 2030.
- Many cisgender women may **perceive themselves to be at low risk of acquiring HIV,** especially if they are in monogamous relationships or do not engage in behaviors traditionally associated with higher risk, such as injection drug use or having multiple sexual partners.
- Purposeful inclusion of cisgender women in PrEP studies and robust data collection to address gender-specific gaps in HIV prevention and treatment
- How we communicate about the studies will have an impact on who will demand the products. Who are we designing the products for?

Reflections: PrEP use in cisgender women

Adherence

- Support PrEP adherence and **expand options** for HIV prevention among cisgender women.
- **Barriers to adherence:** low perception of HIV risk, stigma, and poor social support, highlighting the need for tailored adherence support measures. Long-acting PrEP options, such as injectable cabotegravir, offer promise in alleviating adherence challenges.
- **Strategies to improve adherence**: Tailored counseling and support services, destigmatizing PrEP use, improving access to healthcare, addressing privacy concerns, and providing financial assistance or incentives for medication adherence.
- **Address concerns:** Pregnancy and Reproductive Concerns, Side Effects, and Concerns about Long-Term Effects: Partner consent

Reflections: PrEP use in cisgender women

Service delivery

- Friendly settings for women
- Provider attitude determines uptake.
- Communication should be clear and should allow cisgender women make a choice
- Adherence counseling: acknowledge that high, but less-than-perfect adherence still offers significant HIV protection to alleviate anxiety around missed doses and refocus conversations on individual motivations and challenges.