### HPTN **HIV Prevention** Trials Network

## Risk Behavior, Perception, and Reasons for PrEP Among Young African Women in HPTN 082

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### BACKGROUND

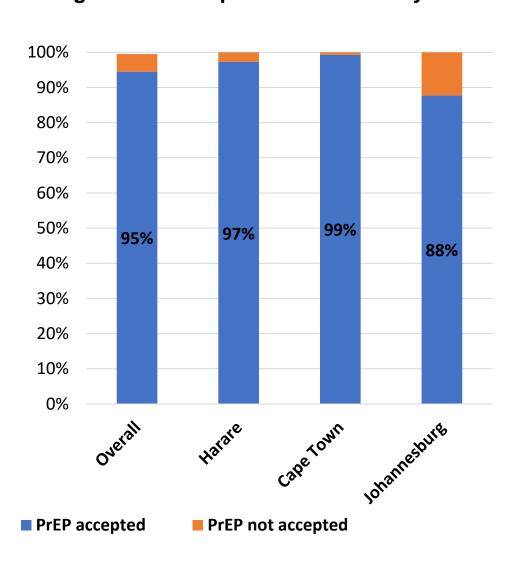
- Oral pre-exposure prophylaxis (PrEP) is highly effective when used consistently, and recommended for people at substantial risk of HIV infection.
- Young women in sub-Saharan Africa are an important population who could benefit from PrEP, but may experience barriers to consistent use.
- Strategies are needed to support PrEP uptake and adherence in this population.
- HPTN 082 was designed to address these critical information gaps about effective PrEP delivery and use among young women in southern Africa, among whom HIV incidence is very high (5-10% per year).





"Get PrEPared: What African women need to know!" (updated June 2017) is a 5-minute film with easy-to-understand information for young African women interested in using oral Pre-exposure prophylaxis (PrEP) as part of an overall HIV prevention package. www.youtube.com/watch?v=rHkQq--anmo

### RESULTS: PREP UPTAKE: RISK BEHAVIORS AND STI PREVALENCE; DEPRESSION & INTIMATE PARTNER VIOLENCE; PERCEIVED RISK AND PREP MOTIVATIONS



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

### Table 2: VOICE risk score and STD prevalence among PrEP accontors at basoling

acceptors at baseline				acceptors at baseline										
	Overall	Harare	Cape Town	Johannesburg		Overall	Harare	Cape Town	Johannesburg		Overall	Harare	Cape Town	Johannesburg
Married or lives with primary partner	81 (20%)	64 (46%)	3 (2%)	14 (10%)		171 (42%)	56 (40%)	50 (37%)	65 (47%)	Chances of getting HIV in next year No risk at all Small chance	193 (47%) 127 (31%)	70 (50%) 21 (15%)	57 (42%) 55 (41%)	66 (49%) 51 (38%)
Husband or primary partner provides material support	237 (58%)	89 (64%)	81 (60%)	67 (49%)	<b>Depression</b> CES-D score > =11					Moderate chance Great chance	33 (8%) 33 (8%)	16 (12%) 27 (19%)	55 (41%) 8 (6%) 5 (4%)	9 (7%) 1(1%)
Believes husband or primary partner has other sex partners Yes Don't know	102 (25%) 246 (60%)	82 (59%) 57 (41%)	14 (10%) 85 (63%)	6 (4%) 104 (76%)	> 1 episode of intimate partner violence, past year	200 (49%)	68 (49%)	68 (50%)	64 (47%)	Chances of getting pregnant in the next year No risk at all Small chance Moderate chance	174 (42%)60 (43%)132 (32%)31 (22%)42 (10%)13 (9%)	31 (22%) 13 (9%)	59 (44%) 51 (38%) 10 (7%)	55 (40%) 50 (37%) 19 (14%)
2 or more alcoholic drinks past 3 months	187 (45%)	53 (38%)	100 (74%)	34 (25%)	Any physical violence, past year	81 (20%)	23 (17%)	32 (24%)	26 (19%)	Great chance PrEP would give me side effects Strength diagares	35 (9%)	24 (17%)	6 (4%)	5 (4%)
Curable STI Gonorrhea Chlamydia Syphilis seropositivity Trichomonas vaginalis	161 (39%) 33 (8%) 120 (29%) 9 (2%) 27 (7%)	40 (29%) 8 (6%) 28 (20%) 3 (2%) 10 (7%)	69 (51%) 20 (15%) 52 (38%) 3 (2%) 7 (5%)	52 (38%) 5 (4%) 40 (29%) 3 (2%) 10 (7%)	Partner insulted, ignored or humiliated her, past year	149 (36%)	48 (35%)	44 (33%)	57 (42%)	Strongly disagree Disagree Neutral Agree Strongly agree	97 (24%)6885 (21%)6111 (27%)11	49 (35%) 68 (49%) 6 (4%) 11 (8%) 3 (2%)	4 (3%) 12 (9%) 29 (21%) 62 (46%) 23 (17%)	4 (3%) 17 (13%) 50 (37%) 38 (28%) 20 (15%)
<b>VOICE risk score</b> (median, IQR) Range 5-10	7 (6,8)	7 (5,7)	8 (7,9)	7 (6,8)       Sexual coercion, past year (Partner forced her to have sex or touched her sexually in way she did not want)       35 (9%)       16 (12%)       10 (7%)       9 (7%)	9 (7%)	Taking PrEP would keep me from getting HIV Strongly disagree Disagree Neutral	10 (2%)       1 (1%)         12 (3%)       3 (2%)         9 (2%)       1 (1%)	5 (4%) 6 (4%) 3 (2%)	4 (3%) 3 (2%) 5 (4%)					
					Partner made her feel afraid, unsafe, or in	75 (18%)	41 (29%)	20 (15%)	14 (10%)	Agree Strongly agree	192 (47%) 182 (44%)	68 (49%) 63 (45%)	63 (47%) 57 (42%)	61 (45%) 62 (46%)
					danger, past year					Friend encouraged PrEP use	258 (63%)	106 (76%)	94 (70%)	58 (43%)

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# adherence support.

**STUDY DESIGN** 

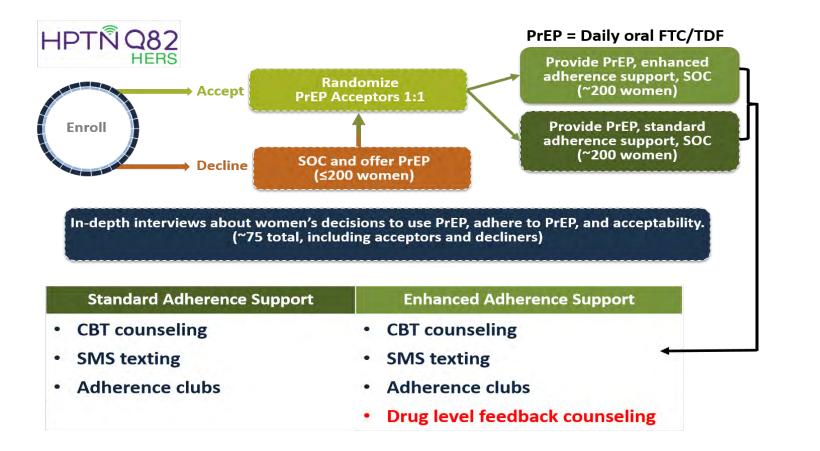
### **PURPOSE & METHODS**

**RATIONALE** HPTN 082 is an open label PrEP study in Cape Town and Johannesburg, South Africa and Harare, Zimbabwe with the primary objectives to: assess the proportion and characteristics of young HIVuninfected women who accept versus decline PrEP, and the difference in PrEP adherence in young women randomized to enhanced adherence support (using drug level feedback) versus standard of care

• 400 sexually active HIV-negative women ages 16-25 were enrolled using the VOICE risk score<sup>1</sup> and a PrEP readiness scale.<sup>2</sup>

• Women interested in PrEP were enrolled regardless of initial decision to initiate PrEP.

 PrEP 'acceptors' were randomized to standard adherence support (cognitive behavioral counseling, 2way SMS, and adherence clubs) or *enhanced* adherence support with drug level feedback at 2 and 3 months plus standard adherence support (see below).



### PREP ADHERENCE SUPPORT

- reminder
- Brief adherence counseling
- adherence in the prior month

Sample week	. Inreshold		Counseling message
Week 4	Week 8	≥500 fmol/punch	Key message: You are doing really well!           Keep up the good work and remember           that taking one PrEP pill every day is
Week 8	Week 13	≥700 fmol/punch	needed for strong protection against HIV.
Week 4	Week 8	16.6-499 fmol/punch	Key message: It looks like you are trying to take the PrEP pills, but may have missed some doses. Remember that
Week 8	Week 13	16.6-699 fmol/punch	taking one pill every day is needed for strong protection against HIV. How can we help you do even better?
Week 4	Week 8	BLQ (<16.6 fmol/punch)	Key message: It looks like you haven't           been able to take the PrEP pills. Is PrEP           something that you are still interested
Week 8	Week 13	BLQ (<16.6 fmol/punch)	in? If yes, how can we help you?

### Table 3: Depression and intimate partner violence among PrEP

accentors at haseline

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 Weekly two-way SMS messages that ask 'Hi girlfriend, how is it going?' to identify those with side effects or other issues for staff to respond to and as a PrEP adherence

 Monthly adherence clubs to interact with other young women and for peer support • Half of women were randomized at enrollment to drug level feedback based on intracellular tenofovir diphosphate levels<sup>3</sup> at the 1 and 2 month visit which reflect

• Qualitative drug level feedback was provided at the next monthly visit with 'wireless signals' for the 3 categories of drug levels, as depicted below:

Table 4: Perceived HIV risk, and PrEP readiness

### **RESULTS: CHARACTERISTICS OF WOMEN WHO STARTED PREP**

### Table 1: Demographics and sexual behavior for women who started PrEP at enrollment, overall and by site

Participants screened

Participants enrolled

**PrEP Accepted at Baseline** 

Age (median IQR)

Education Completed secondary school or hi Ever dropped out of school\*

Age difference >5 years with primar

HIV status of main partner HIV negative HIV positive

> He doesn't know his status She doesn't know his status

ny transactional sex in past month

Vaginal sex acts past month (mediar

Condom use with vaginal sex, past

Never Rarely Sometimes Often

Alwavs

ny anal sex acts past month

Contraceptive use other than condo

\*categories not mutually exclusive

### CONCLUSIONS

- accepted or declined PrEP.
- young African women.
- intimate partner violence in the past year.

### **REFERENCES**

<sup>1</sup>Balkus JE, Brown E, Palanee T, Nair G, Gafoor Z, et al. An Empiric HIV Risk Scoring Tool to Predict HIV-1 Acquisition in African Women. JAIIDS 2016 Jul 1;72(3):333-43.

<sup>2</sup> Fernandez MI, Hosek S, Warren JC, Jacobs RJ, Hernandez N, Martinez J. Development of an easy to use tool to assess HIV treatment readiness in adolescent clinical care settings. AIDS Care. 2011;23(11):1492-1499. <sup>3</sup>Anderson PL, Liu AY, Castillo-Mancilla A, Seifert S, McHugh S et al. TFV-DP in Dried Blood Spots (DBS) Following Directly Observed Therapy:

			•	
	Overall	Harare	Cape Town	Johannesburg
	647	213	183	251
	451	148	141	162
	412	139	136	137
	21 (19,22)	21 (20,23)	19 (18, 21)	21 (20, 24)
Jher*	404 (98%) 122 (30%)	133 (96%) 57 (41%)	135 (99%) 44 (32%)	136 (99%) 21 (15%)
y partner	139 (44%)	73 (65%)	27 (27%)	39 (37%)
	204 (59%) 3 (0.9%) 8 (2%) 58 (17%)	59 (50%) 1 (0.9%) 2 (2%) 20 (17%)	63 (58%) 1 (0.9%) 0 (0%) 21 (19%)	82 (70%) 1 (0.8%) 6 (5%) 17 (14%)
	95 (23%)	52 (37%)	29 (21%)	14 (10%)
, IQR)	4 (2,8)	6 (3,16)	4 (3,5)	3 (2, 7)
nonth	65 (20%) 48 (15%) 104 (33%) 37 (12%) 65 (20%)	35 (34%) 17 (17%) 18 (17%) 10 (10%) 23 (22%)	8 (8%) 12 (11%) 49 (46%) 14 (13%) 23 (22%)	22 (20%) 19 (17%) 37 (33%) 13 (12%) 19 (17%)
	63 (23%)	18 (20%)	29 (29%)	16 (17%)
ns	318 (71%)	123 (83%)	124 (88%)	71 (44%)

• In this PrEP demonstration project among South African and Zimbabwean young women, most young women were at risk through having an older partner, uncertainty about their partner's HIV status or whether he had other partners, and inconsistent condom use.

• The median score on the VOICE risk score was 7; score >5 was associated with 6-8% HIV incidence in prior cohorts.<sup>1</sup> There was no difference in VOICE risk score between women who

• The prevalence of curable STIs (gonorrhea, chlamydia, syphilis, and trichomonas) was 39%, highlighting the importance of identifying better STI diagnostic strategies and interventions for

• Almost half of young women had symptoms of depression and reported one or more types of

• Although the perceived risk of acquiring HIV in the next year was low, PrEP uptake was high (95%). A high proportion of women believed that PrEP would prevent them from getting HIV; over one-third were concerned that PrEP would give them side effects.

DOT-DBS Study. CROI 2017, abstract 419.