HIV Risk and Objectively Measured PrEP Adherence in Young Kenyan Women

1030

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BACKGROUND

- Pre-exposure prophylaxis (PrEP) is a highly effective means for preventing HIV acquisition, yet PrEP use among young women has generally been suboptimal and poorly characterized
- We present objectively measured adherence and associated socio-behavioral factors in a cohort of young women offered PrEP over a 2-year period

METHODS

- 18-24 year old women at high-risk for HIV in Kisumu and Thika, Kenya were enrolled in an open-label PrEP study
- High-risk was defined as a VOICE risk score ≥4 points (*Balkus et al, JAIDS 2016*). Points were assigned as follows:
  - Age ≤25 (2 pts)
  - Being single or not living with a sexual partner (1 pt)
  - A sexual partner having or potentially having other sexual partners (2 pts)
  - Alcohol use (1 pt)
- Participant were randomized 1:1 to receive SMS reminders (*study arms combined for this analysis*)
- Study visits occurred at 1 month, 3 months, and then quarterly for 24 months
- Participants were encouraged to take PrEP for at least 6 months; continued use was discussed with a counselor at subsequent visits
- Adherence was measured with a real-time electronic adherence monitor (Wisepill; Figure 1) and dried blood spots (see poster #1029, Pyra et al)
- Predictors of adherence were assessed with multivariable logistic regression analysis

Table 1. Baseline participant characteristics

	Kisumu	Thika	Total
N	174	173	347
Age, median (IQR)	20 (19.0, 22.0)	21 (20.0, 22.0)	21 (19.0, 22.0)
Serodiscordant couple, n (%)	9 (5%)	3 (2%)	12 (4%)
VOICE risk score, median (IQR)	6 (6.0, 7.0)	7 (6.0, 7.0)	7 (6.0, 7.0)
Use of any contraception, n (%)	125 (72%)	70 (40%)	195 (56%)
Total sex acts in past month, median (IQR)	2 (1,4)	3 (1,7)	2 (1,5)
Any condomless sex in past month, n (%)	92 (52.9%)	136 (78.6%)	228 (65.7%)
Depression, n (%)	17 (10%)	5 (3%)	22 (6%)

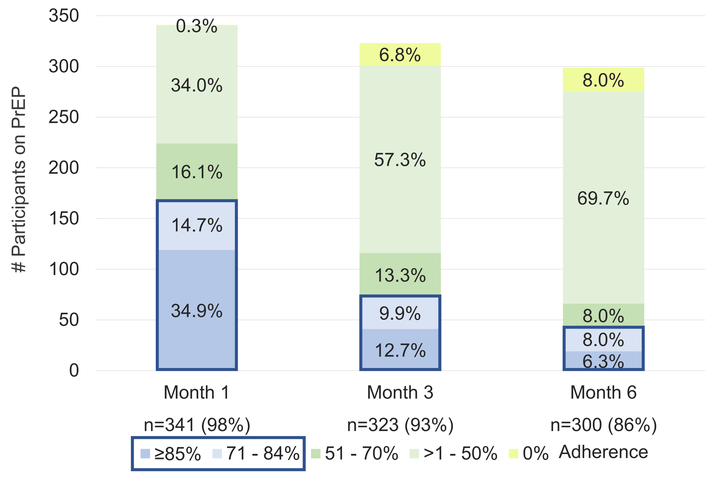
Interest in PrEP was high among young women, although objectively measured adherence was modest and decreased over time

Higher baseline HIV risk was associated with lower adherence

Figure 1: Wisepill device



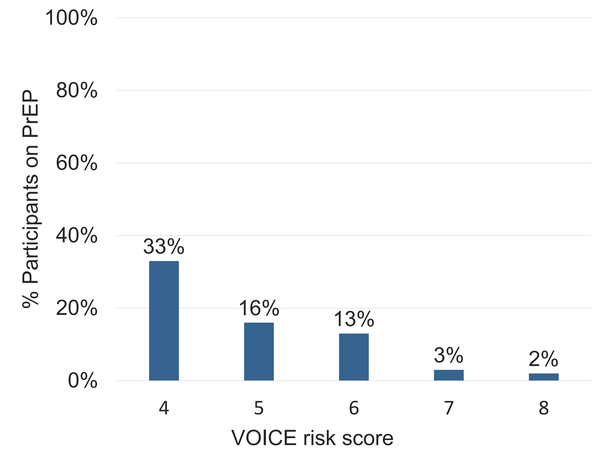
Figure 2: Median PrEP Adherence



RESULTS

- 347 women were followed for 617 person-years.
- Participant characteristics are shown in Table 1.
- Median PrEP adherence over the first 6 months of follow-up are shown in Figure 2.
  - Rates of PrEP pick up were high
  - A wide range of adherence was seen with most participants taking PrEP at moderate levels
- The only baseline factor significantly associated with high adherence (average of 6 doses per week; 85%) was the VOICE risk score: OR 0.53 (95% CI 0.33, 0.85; Figure 3)
- Findings were similar with high adherence defined as an average of 5 doses per week (71%)

Figure 3: Percent of participants achieving ≥85% adherence



CONCLUSIONS

- Interest in PrEP use was high among young women in Kenya, although adherence was modest
- Based on objective measures, a minority of participants achieved PrEP adherence likely to be sufficient for protection against HIV
- Higher baseline HIV risk was associated with lower adherence in the first 6 months of use
- Novel approaches are necessary to help young women understand risk and the means to achieve effective HIV prevention

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