



Partners -- Not Condom Use -- Drive STI Rates among PrEP Users in a Community Health Center

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BACKGROUND

The potential association between PrEP use and STI incidence is an important public health issue, and better understanding predictors of STI diagnosis among PrEP users is critical to developing companion behavioral support. This analysis presents data from SPARK, a PrEP demonstration/implementation project conducted at a community-based health center in New York City.

METHODS

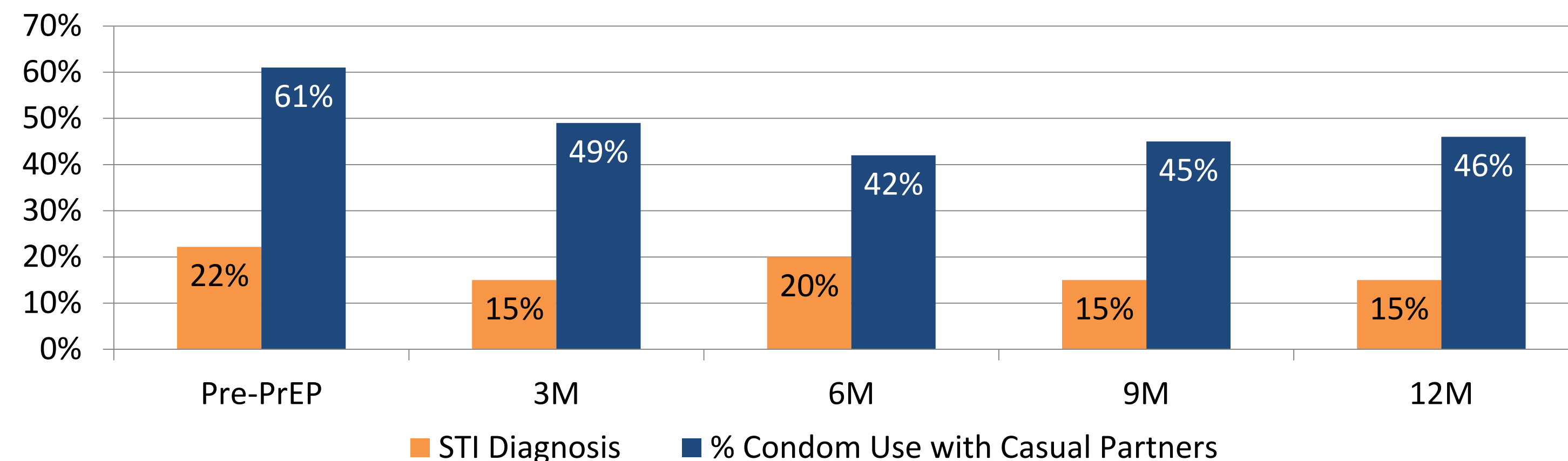
SPARK is a community-based PrEP demonstration project conducted at the largest LGBT health center in New York City. Participants were 300 patients of the health center (18-63; 49% White) who met PrEP eligibility criteria and decided to start PrEP.

SPARK participants were followed for 12-months and tested quarterly for STIs (urethral/rectal gonorrhea/chlamydia and syphilis). Data were also collected on participants presenting to the health center between study visits for STI testing. STI diagnosis at each time point is inclusive of positive results at interim visits. Chart review was conducted to assess STI diagnoses in the 6 months prior to starting PrEP and at the PrEP prescription visit. We examined baseline demographic, behavioral, and psychosocial predictors of any STI diagnosis over the 12-month follow-up, as well as change scores (e.g., changes in condom use and number of partners). Analyses were restricted to the 261 participants (87%) who were retained at 12-months.

RESULTS

22.2% (n = 58) of participants had an STI diagnosis in the 6 months prior to starting PrEP. Over the course of 12-month follow-up, 44% of participants (n = 105) were diagnosed with an STI. Diagnoses at each time-point ranged from 20.3% (n = 53) at 6M to 14.6% (n = 38) at 12M. The percentage of anal sex acts with casual partners during which participants reported using condoms decreased from 61% (BL) to 46% (12M).

Figure 1. STI diagnoses and percent condom use during anal sex with casual partners by time-point



STI diagnosis in the 12-months after starting PrEP was associated with being under 25 ($p < .02$), but not with race/ethnicity, income, or education. In stepwise regression models including significant bivariate variables, four factors were retained as predictors of STI diagnosis: a) being under 25; b) reporting more than 5 partners at baseline; c) STI diagnosis in the 6-months prior to PrEP uptake; and d) increasing the number of partners from baseline to 12-months (See table 2). Average condom use decreased from baseline (61%) to 12-months (46%), but neither overall condom use nor change in condom use were associated with STI diagnosis.

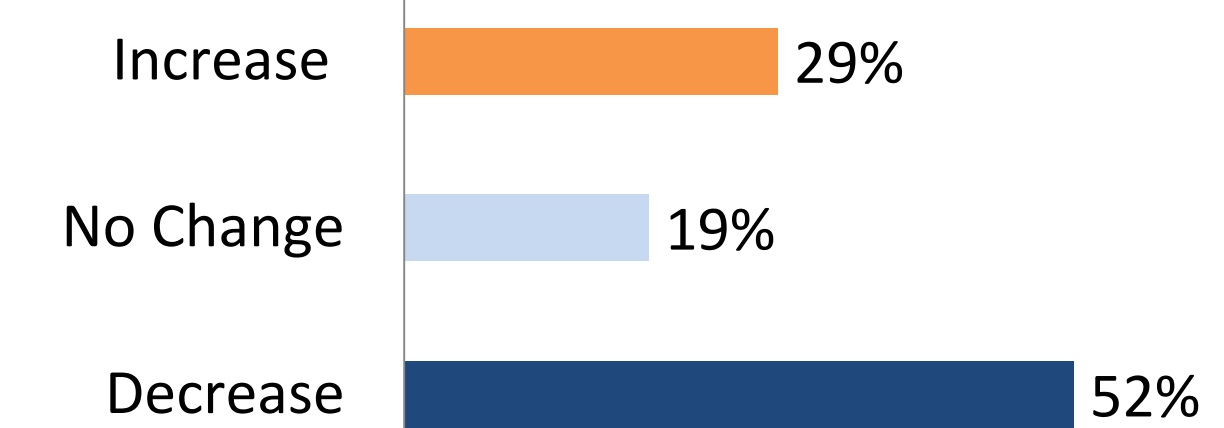
Table 1. Regression Predicting any STI diagnosis in the 12-months after starting PrEP (n = 261)

	aOR	95% CI
Under 25 years old	3.67*	1.11, 12.25
> 5 casual partners at baseline	2.80**	1.43, 5.50
STI in 6 months pre-PrEP	2.22*	1.07, 4.59
Increase in number of casual partners from baseline to 12 months	2.16*	1.07, 4.38

* $p < .05$, ** $p < .01$

Neither overall condom use nor change in condom use were associated with STI diagnosis in the 12 months following PrEP uptake.

Figure 2. Change in number of casual partners during PrEP



While most patients decreased number of partners post PrEP, an increase in number of partners was strongly associated with STI diagnosis.

CONCLUSIONS

The strength of baseline factors in predicting STI incidence suggests that risk compensation may be less significant than underlying behavior patterns in post-PrEP STI diagnosis. The known association between STI diagnosis and HIV seroconversion suggests that PrEP is effectively preventing new HIV infections. Particular attention and support is needed for younger PrEP users. Although many PrEP prevention messages stress condom use, number of partners appears to be a more important predictor of STI diagnosis among PrEP users.

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