

Sexual frequency and planning among at-risk MSM in the US: implications for daily vs. intermittent pre-exposure prophylaxis (PrEP)

Poster # TUPE 362 Albert Liu^{1,2}, Eric Vittinghoff², Risha Irvin¹, Liz Kroboth¹, Doug Krakower³, Matthew Mimiaga^{4,5}, Kenneth Mayer⁵, Javier Lama⁶, Russell Tarver⁷, Patrick S. Sullivan⁷, and Susan Buchbinder^{1,2}

¹San Francisco Department of Public Health, HIV Research Section, San Francisco, United States, ²University of California, San Francisco, San Francisco, United States, ³Beth Israel Deaconess Medical Center , Boston, United States, ⁴Harvard Medical School, Boston, United States, ⁵Fenway Health, Boston, United States, ⁶Investigaciones Medicas en Salud, Lima, Peru, ⁷Emory University, Atlanta, United States.



Introduction

The iPrEx trial recently demonstrated 44% efficacy of daily oral PrEP for HIV prevention among men who have sex with men (MSM) provided a comprehensive package of prevention services.¹

Daily pill use was challenging for a substantial proportion of study participants, and alternative dosing patterns may facilitate PrEP pill use, lower cost, and potentially reduce drug toxicity.

Animal studies provide some evidence that intermittent PrEP dosing strategies may be effective, but medication needs to be started at least several hours before exposure and be taken before and after exposure .² Clinical trials to evaluate the feasibility of intermittent PrEP (iPrEP), including the HPTN 067 ADAPT study, are being planned in MSM.

A previous study on sex frequency and planning in MSM in Bangkok, Thailand suggest the feasibility of iPrEP dosing in this population, but results may not be generalizable to other populations.³

To assess the appropriateness of iPrEP, we evaluated anal sex frequency and planning among MSM in the United States.

Methods

We recruited study participants from social networking sites to participate in an internet-based survey.

Banner ads were used to recruit men to a screener and informed consent process (see figure 1). Recruitment occurred through 2 websites:

- Facebook: men interested in men in the US
- Black Gay Chat: all users

Survey was administered through a secure, online survey provider (SurveyGizmo).

Analyses were restricted to those who reported sex with men in the past 12 months, were not HIV-infected, and completed questions about sexual frequency and planning around sex.

Outcomes included number of days anal sex occurred in the past week and whether sex was planned during last anal sex episode. Planning was defined as either arranging to meet someone to have sex, going to a place to potentially meet a sex partner, or setting up a time to have sex with a partner.

We used multivariable logistic regression to evaluate factors associated with less frequent sexual frequency (≤2 times in the past week) and planning for sex.

Results

Data collected from November 30 to December 19, 2010.

The overall click-through rate was 0.07%.

Of 2,701 men initiating the survey by providing demographic information, 1,013 (38%) provided all required data for this analysis.

Figure 1: Examples of banner ads used for recruitment

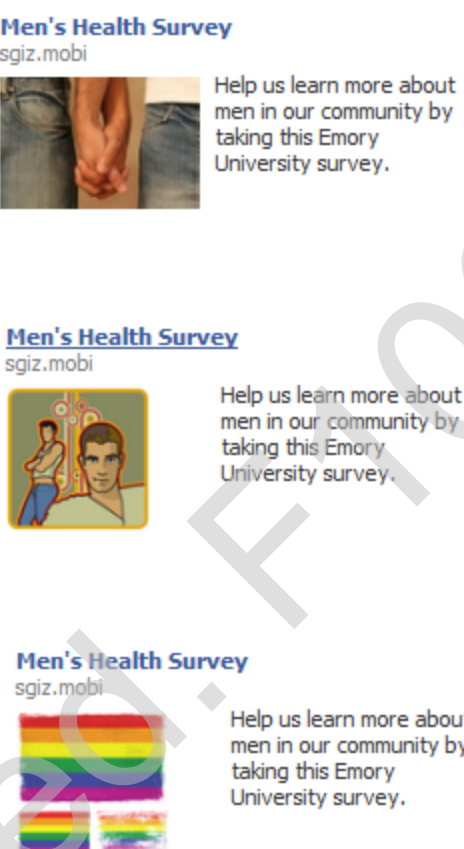
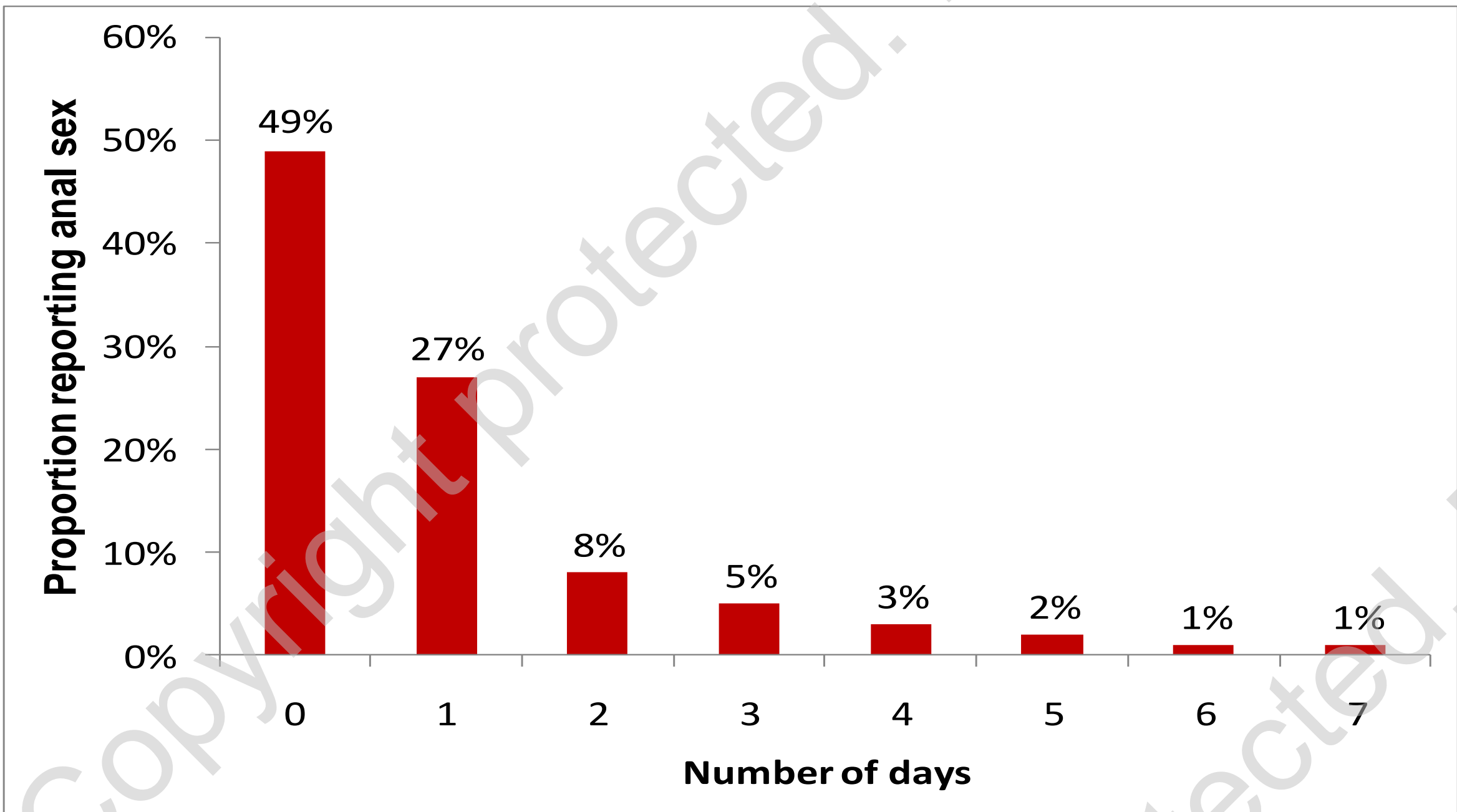
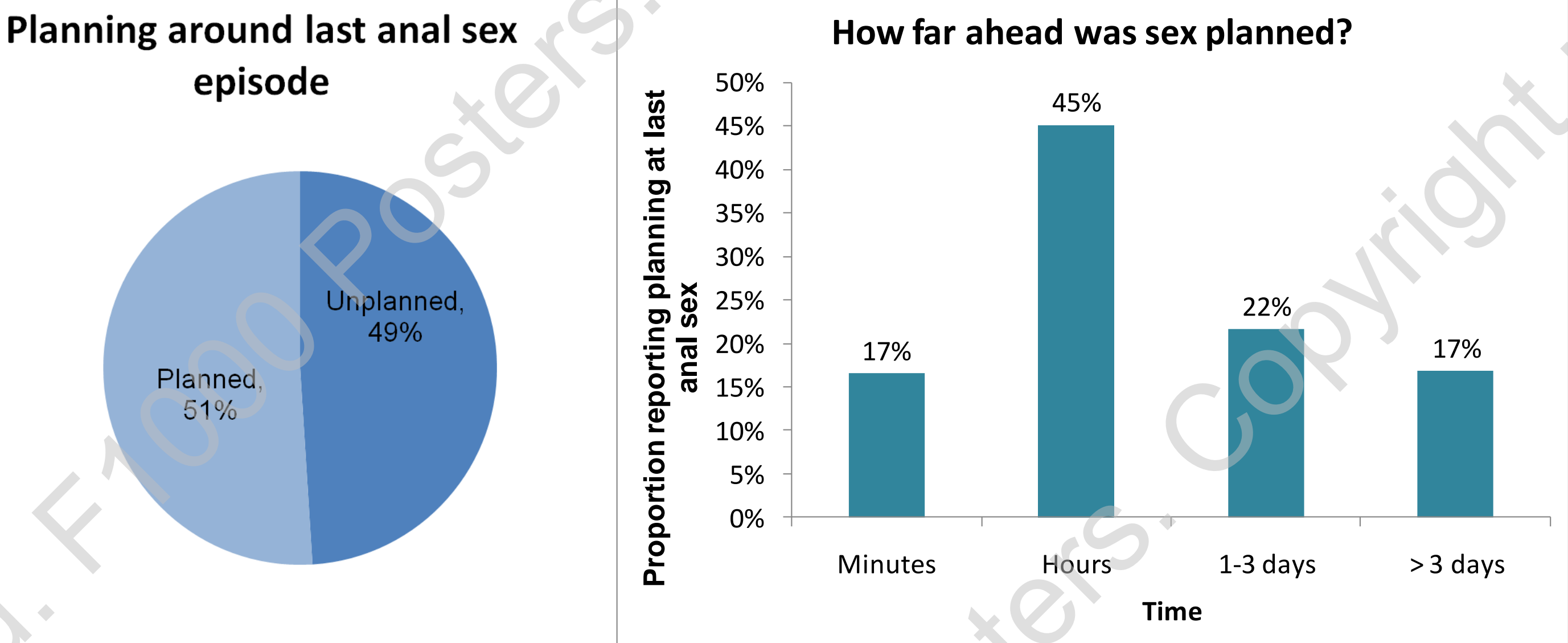


Figure 2. Number of days in the past week anal sex was reported



- Most (85%) men reported having anal sex on 2 days or less in the past week.
- Having anal sex on 2 days or less in the past week was associated with condom use during last anal sex (p<0.001) and not having an HIV test in the past year (p<0.001)
- Anal sex was slightly more common on a weekend vs. weekday (p=0.04)

Figure 3. Planning around last anal sex



- Approximately half (51%) reported their last anal sex was planned.
- Among those who planned their last anal sex, most men (83%) reported planning at least several hours in advance.

Table 2. Correlates of planning for anal sex

Significant Correlates of Planned Sex		
Variable	AOR (95% CI)	P value
Older age	--	0.005 (trend in age)
African American race	2.36 (1.22 to 4.59)	0.011
Higher Education	2.35 (1.41 to 3.92)	0.001
Condom use at last anal sex	1.67 (1.19 to 2.35)	0.003
Drug use at last anal sex	2.13 (1.13 to 4.04)	0.02
Having sex away from home at last sex	1.88 (1.19 to 2.98)	0.007

- Older age, African American race, and higher education were independently associated with last anal sex being planned.
- Condom use, drug use, and having sex away from home were also correlated with planning at last anal sex.

Conclusions

Intermittent PrEP may be an appropriate strategy for some MSM -- most survey respondents reported having anal sex on 2 days or less in the past week, and approximately half reported planning their last anal sex episode.

Correlates of anal sex frequency/planning may identify individuals who would benefit from daily vs. intermittent PrEP.

This study recruited respondents via social networking websites. Sexual frequency and planning may differ among MSM recruited through other strategies.

Additional studies evaluating patterns and planning for anal sex using other recruitment strategies and in other MSM populations are recommended.

Literature cited

1. Grant RM, Lama JR, Anderson PL, McMahan V, Liu AY, Vargas L, et al. (2010) Preexposure Chemoprophylaxis for HIV Prevention in Men Who Have Sex with Men. *N Engl J Med*; 363(27):2587-99.

2. Garcia-Lerma JG, Cong ME, Mitchell J, Youngpairoj AS, Zheng Q, Masciotra S, et al. Intermittent prophylaxis with oral truvada protects macaques from rectal SHIV infection. *Sci Transl Med*;2:14ra14.

3. van Griensven F, Thienkrwa W, Sukwicha W, Wimonasate W, Chaikummao S, Varangrat A, Mock PA. Sex frequency and sex planning among men who have sex with men in Bangkok, Thailand: implications for pre- and post-exposure prophylaxis against HIV infection. *J Int AIDS Soc*;13:13.

Acknowledgments

This work was funded under an MP3 grant from the National Institutes of Allergy and Infectious Diseases, Division of AIDS (5R01AI083060)

