



Enhancing PrEP in Community



***SMS Support Increases PrEP Retention and Adherence
among Young MSM and Transgender Women in Chicago***

**A Liu, E Vittinghoff, P von Felton, KR Amico, Peter Anderson, R Lester, E Andrew,
Ixchell Estes, P Serrano, J Brothers, S Buchbinder, S Hosek, J Fuchs**

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*The views expressed herein do not necessarily reflect the official policies of the City and County of San Francisco;
nor does mention of the San Francisco Department of Public Health imply its endorsement.*

Disclosures

- Gilead Sciences provided study drug for this project.

Background

- Young MSM (YMSM) and transgender women (TGW) are among the highest at-risk for HIV in the US^{1,2}
- While PrEP has demonstrated efficacy in clinical trials,^{3,4,5} adherence has been low among YMSM and TGW^{6,7}
- We developed a youth-tailored, SMS-based PrEP support intervention (Prepmate) and evaluated this strategy in a PrEP implementation study within Chicago's safety-net system



¹CDC HIV Surveillance Report 2014; ²Baral Lancet ID 2013; ³Grant NEJM 2010; ⁴Baeten NEJM 2012;

⁵Thigpen NEJM 2012; ⁶Hosek JAIDS 2017; ⁷Hosek AIDS 2016

EPIC RCT

- YMSM and TGW enrolled between 4/2015-3/2016 and provided 9 months of free TDF/FTC PrEP
- PrEP visits at Chicago CORE PrEP clinic – visits/labs covered by insurance or out of pocket
- Participants (ppts) randomized 2:1 to receive Prepmate + standard of care (SOC) vs. SOC alone (risk assessment, PrEP education, and brief adherence counseling by health educator)
- Final study visit November 2016

Chicago CORE Center PrEP Clinic



Eligibility criteria

- YMSM and TGW between ages of 18-29
- HIV negative test within 7 days of enrollment
- Interested in initiating PrEP; no medical contraindications
- Any of the following risk criteria in the past 6 months:
 - Any condomless anal sex
 - ≥ 3 anal sex partners
 - Self-reported new STI
 - Known HIV-infected partner
- Regular access to computer and/or smartphone
- Ability to send and receive text messages
- Able to read/speak in English



Methods

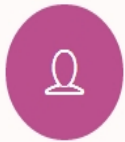
- EPIC ppts recruited from Chicago CORE PrEP clinic / STI screening clinic, online ads, primary care providers
- STI screening performed according to local standard of care (urine and rectal and pharyngeal swabs for gonorrhea and chlamydia, syphilis serology on blood)
- Adherence measured by tenofovir diphosphate (TFV-DP) levels in dried blood spots (DBS) at week 4, 12, 24, and 36
- Impact of Prepmate on study-visit attendance and adherence was evaluated using GEE logistic models with robust standard errors
- **Primary outcomes:**
 - **Retention:** Visit completed (within/outside of window)
 - **Adherence:** Visit completed and TFV-DP ≥ 700 fmol/punch (consistent with ≥ 4 doses/week)
 - *Participants were assumed to be non-adherent for missed visits*



Welcome to Prepmate!

Here's some info to help with getting started.

We know starting PrEP can be exciting and overwhelming, and we're here to help you out in any way we can. Here's how we've got your back:



Real people, real support.

Anytime you need a question answered, some help with PrEP, or just someone to talk to, text us. We'll get back to you as soon as we can, and always within 24 hrs.



Reminders that don't suck.

We'll send reminders (disguised as pretty funny texts) for about 2 weeks to get you started. If you want more, just text to let us know, but we don't want to be annoying.



People like you.

We've got a little social network thing going on so you can talk to other PrEP users. You can find it under the menu at the top right.

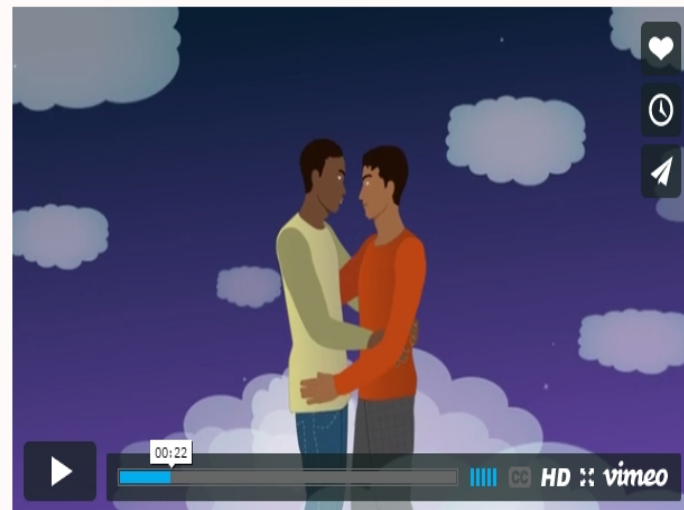


How is PrEP going?

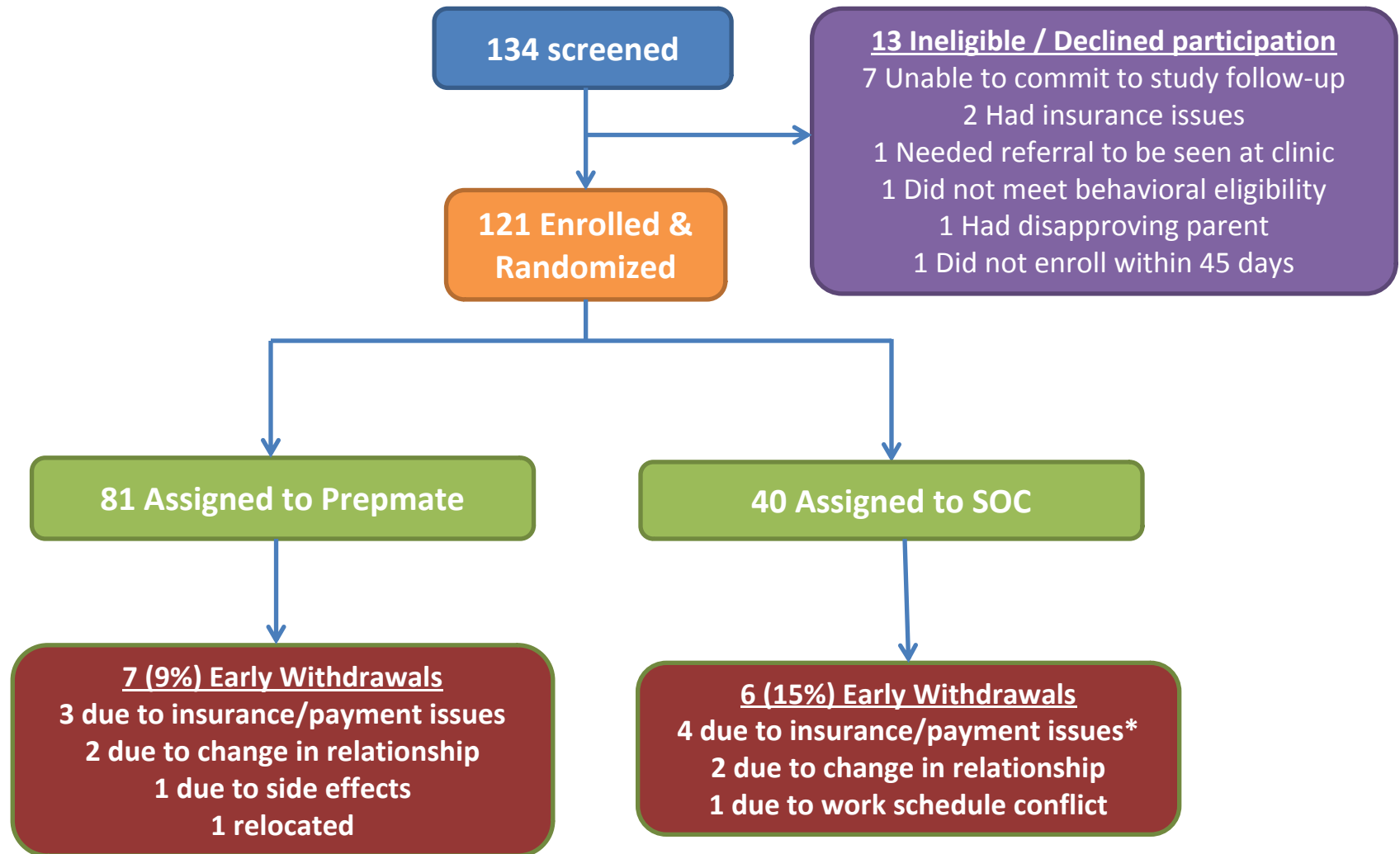
Ok

Not great.

Here are some stories from people who have taken PrEP. It's great to hear about some of the experiences other's have had. Maybe you can relate! Check 'em out! Come back to see new videos every few weeks!



Study Flow

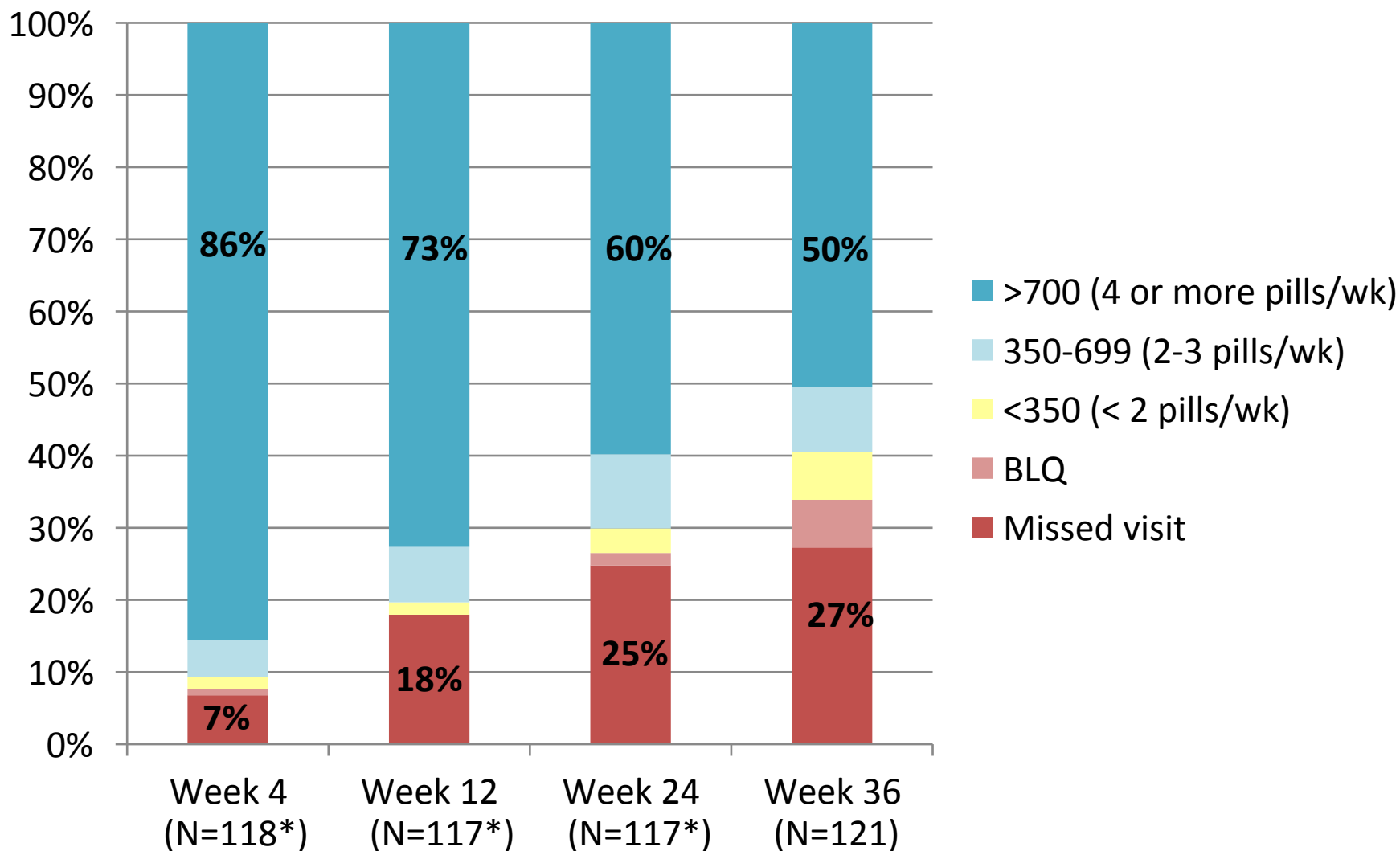


*1 ppt with both insurance issues and change in relationship

Baseline characteristics of enrolled participants (N=121)

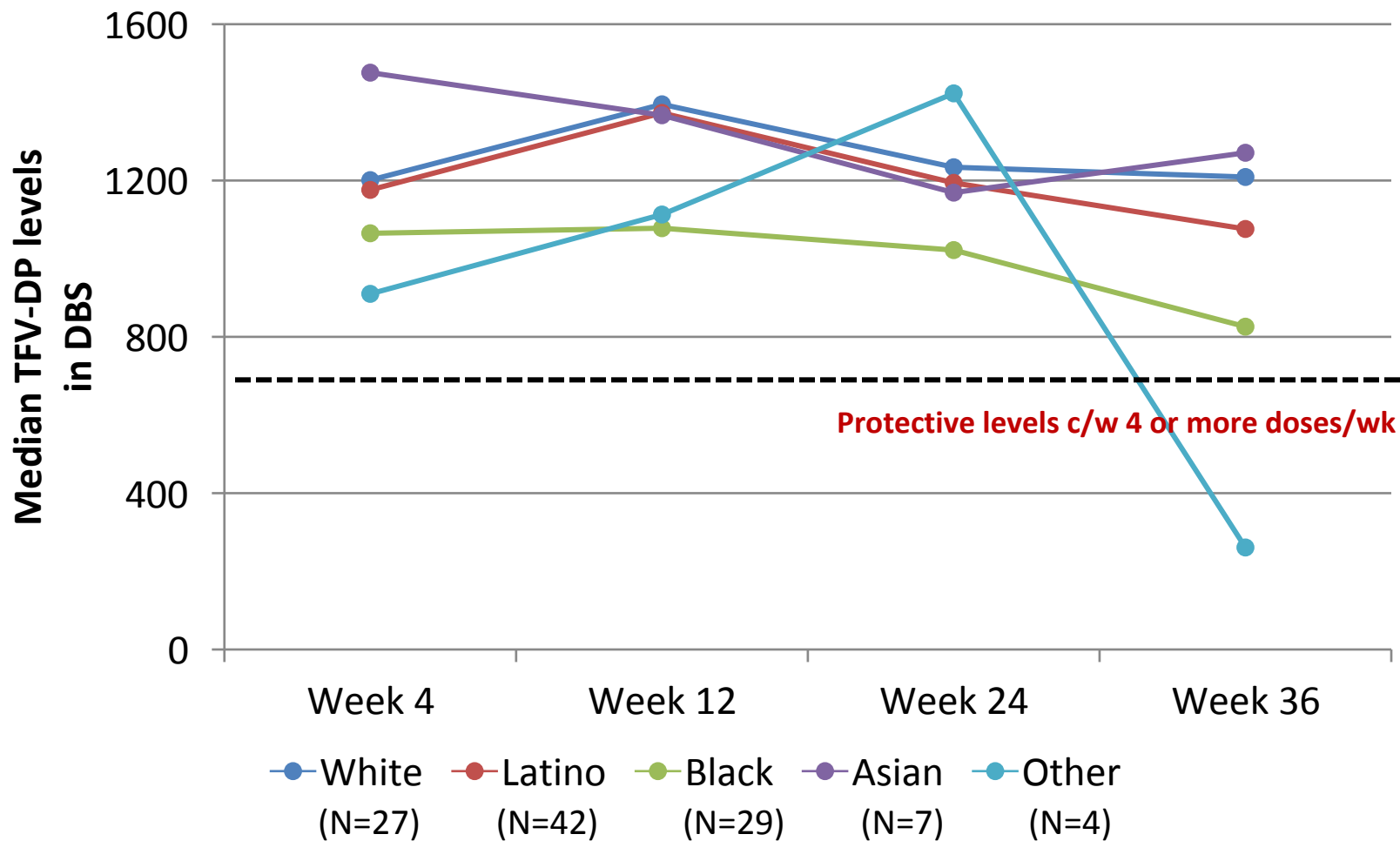
Characteristic	Prepmate N=81	SOC N=40	P value
Mean age	24.2	24.4	0.71
Race/ethnicity			
Black	27%	30%	0.32
Latino	41%	28%	
White	24%	28%	
Asian	4%	13%	
Other	5%	3%	
Gender: Male	96%	93%	0.40
Transgender/Genderqueer	4%	7%	
Education: Some college or higher	78%	70%	0.38
Income: <\$20,000	61%	56%	0.68
Has health insurance	78%	80%	0.82
Has primary care provider	45%	53%	0.45
Depressive symptoms (PHQ-2)	22%	40%	0.02
Any recreational drug use	63%	67%	0.69
Mean # anal sex partners, past 3 months	7.7	4.7	0.45
Condomless receptive anal sex, past 3 mo	51%	39%	0.32
STI (GC, CT, and/or syphilis - lab confirmed)	19%	25%	0.48

Overall Retention/Adherence: TFV-DP (fmol/punch) via DBS w/ Dosing Estimates



*Ppts seen but DBS not collected for 3-4 ppts

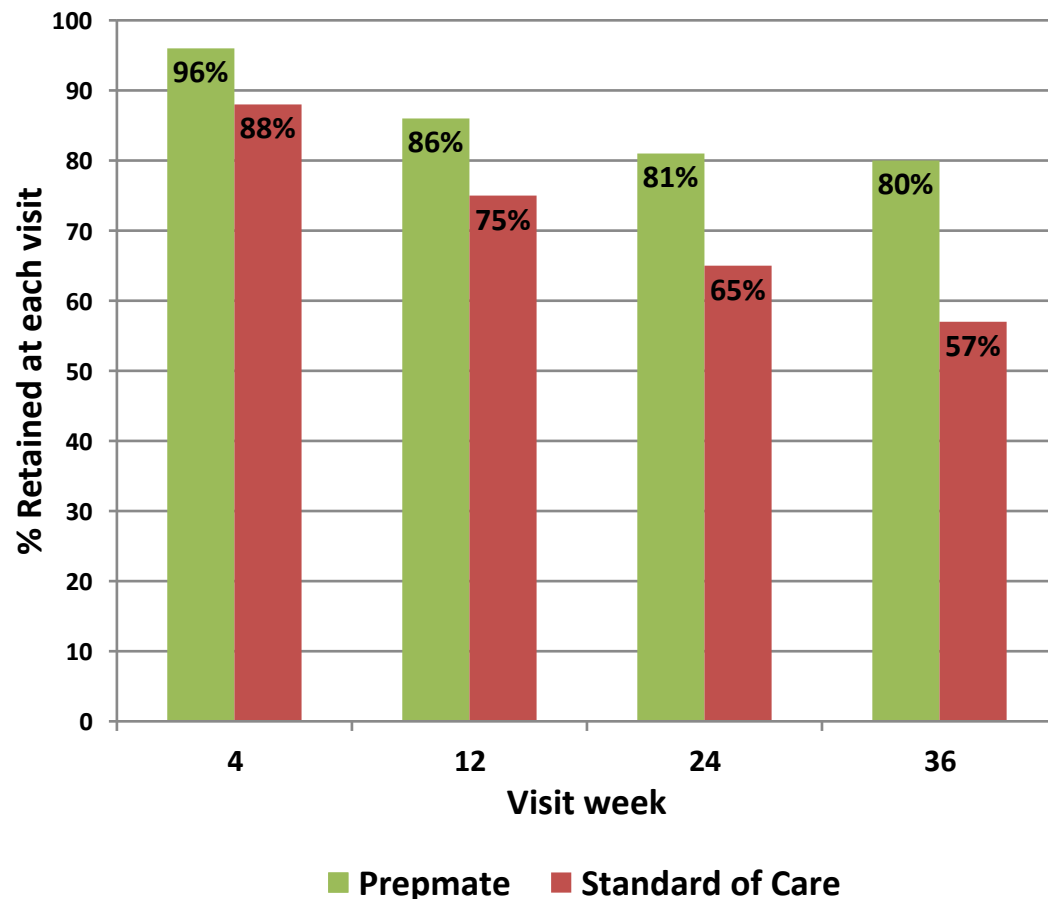
Median TFV-DP by Race/Ethnicity



Visit retention, by intervention arm

Impact of Prepmate on Visit Retention

	Prepmate	SOC
% visits retained	86%	71%
Odds ratio (OR) for retention (Prepmate vs. SOC)	2.62 (95% CI 1.24-5.54) P=0.01	
Adjusted OR*	2.73 (95% CI 1.3-5.73) P=0.007	

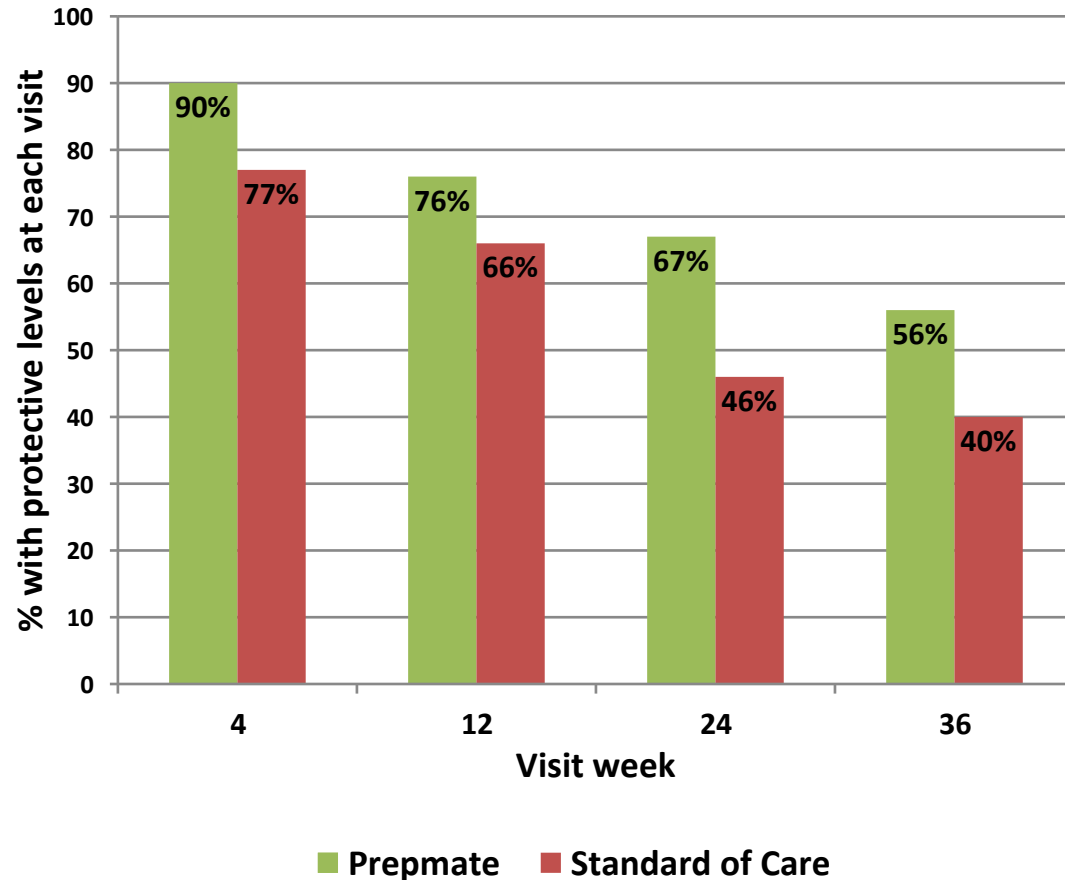


*Adjusted for depressive symptoms at baseline ($p < 0.05$)

Adherence, by intervention arm

Impact of Prepmate on Adherence

	Prepmate	SOC
% with protective TFV-DP levels	72%	57%
Odds ratio (OR) for Adherence (Prepmate vs.SOC)	2.05 (95% CI 1.06-3.94) P=0.03	
Adjusted OR*	2.06 (95% CI 1.07-3.99) P=0.03	



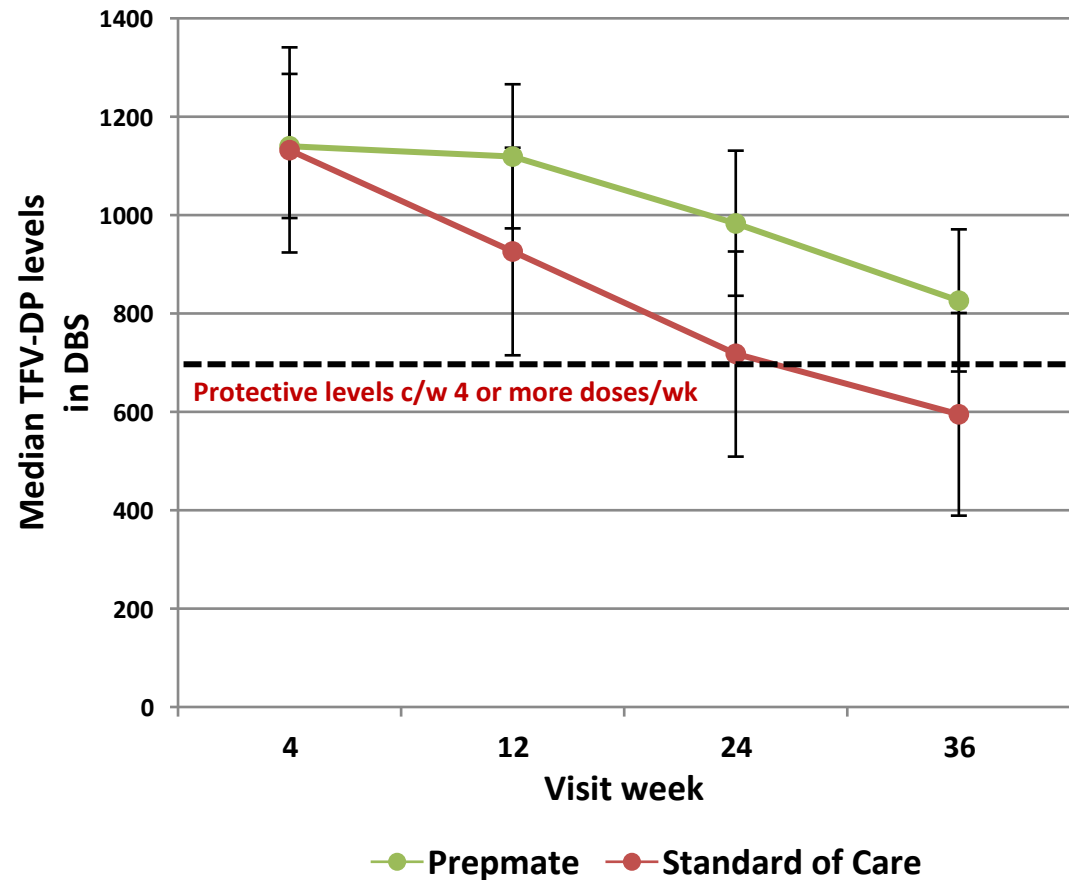
Prepmate efficacy did not differ significantly by age, race/ethnicity, education, or

*Adjusted for depressive symptoms at baseline ($p < 0.05$)

Adherence:

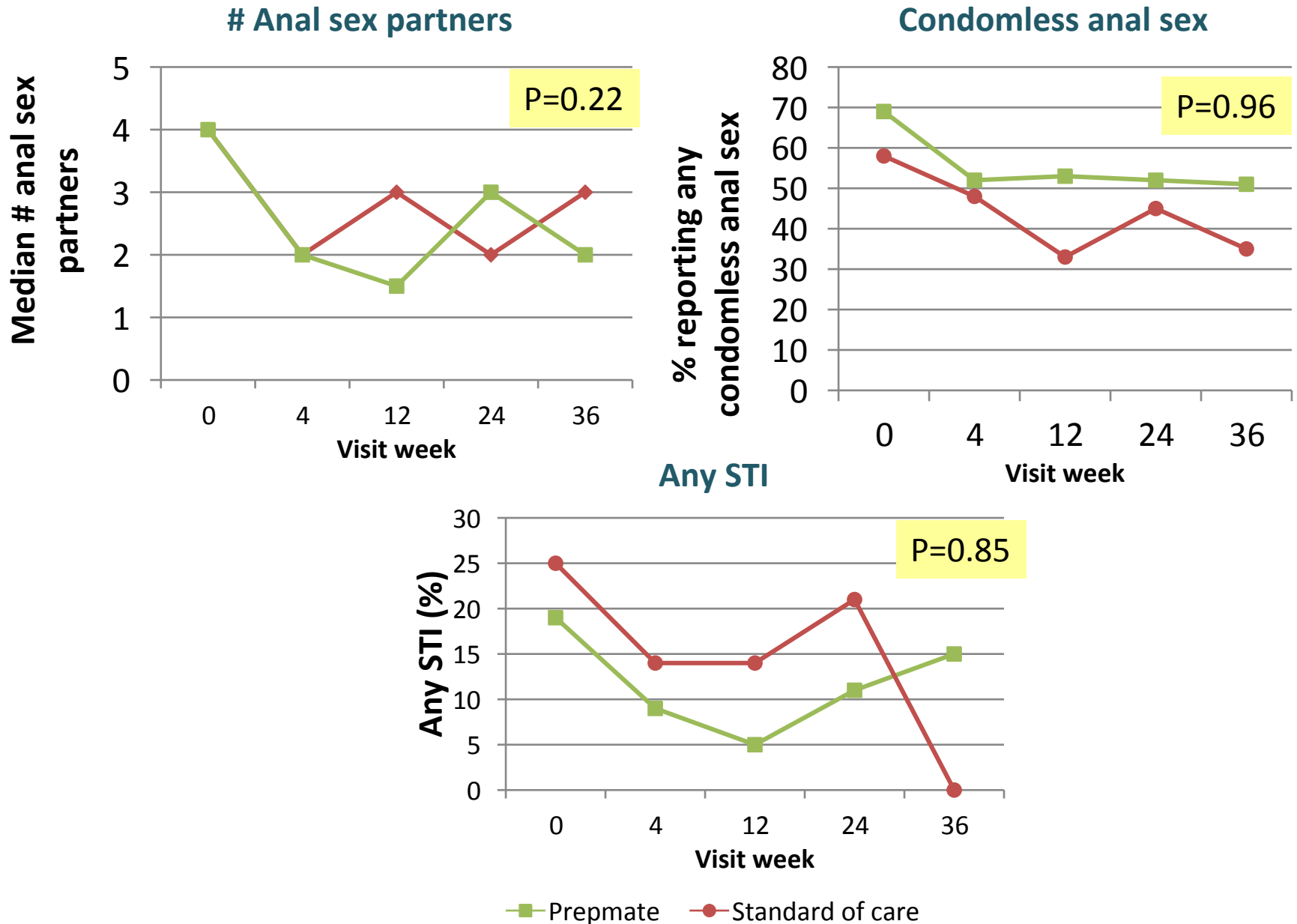
Mean TFV-DP by Intervention arm

Impact of Prepmate on TFV-DP Levels		
	Prepmate	SOC
Mean TFV-DP Level (fmol/punch)	1016	841
Treatment difference	175 fmol/punch (95% CI -32 to 381) P=0.10	
Adjusted treatment difference*	167 fmol/punch (95% CI -38 to 373) P=0.11	



*Adjusted for depressive symptoms at baseline (p<0.05)

Changes in sexual behaviors/STIs did not differ by intervention arm



High Acceptability of Prepmate

	Week 12	Week 36
Prepmate was very/somewhat helpful	89%	88%
Wanted to continue using Prepmate after study	86%	83%
Would recommend Prepmate to others	95%	92%
Prepmate provided a service you wanted	94%	92%
Prepmate met most/all PrEP support needs	94%	93%
Mostly/very satisfied with Prepmate	95%	95%
Prepmate helped deal with your problems	89%	85%

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Prepmate met most/all PrEP support needs	94%	93%
Mostly/very satisfied with Prepmate	95%	95%
Prepmate helped deal with your problems	89%	85%
Worried others would see Prepmate messages	5%	3%
Had problems sending/receiving messages	5%	7%

No social harms reported related to use of Prepmate

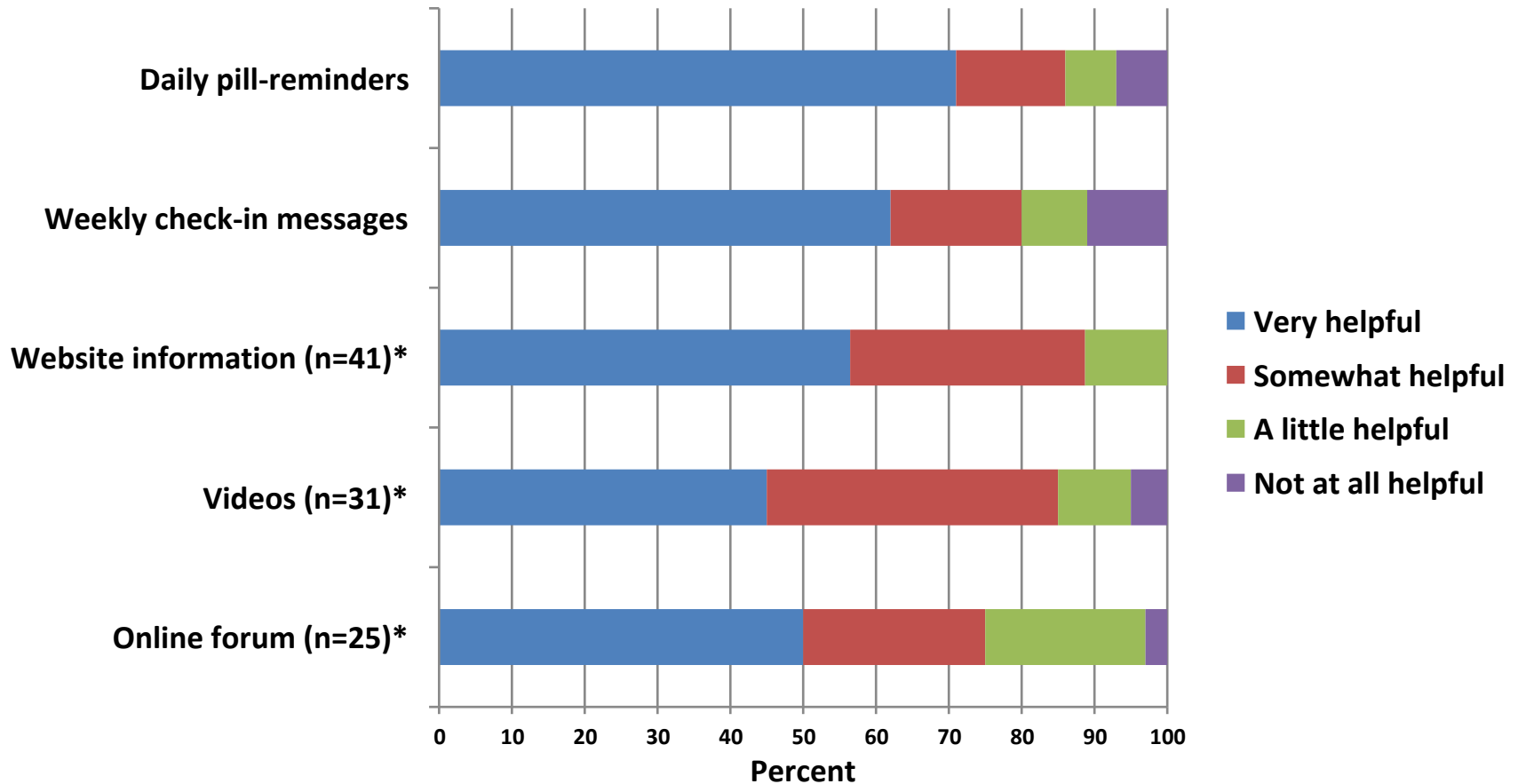
Use of intervention components

Intervention Component	% in intervention arm
Continued weekly check-ins until end of study	100%
Opted in to continue daily SMS reminders AFTER 2 weeks	75%
Accessed information on website*	58%
Watched at least 1 video*	44%
Participated in forum*	35%

*Required login was a barrier to use

54 ppts requested support through Prepmate:
61% appointment/scheduling, 18% other (e.g. billing issues, dosing questions, symptoms, high-risk exposure), 14% counseling, 5% referrals

Acceptability of Prepmate components



*Among those who used these components

Did weekly check-ins help in any other way?

“The sense of having a somewhat total stranger watching out for another person was great to have. Jenn was that total stranger to me, and her and I have developed a pseudo friendship thorough Prepmate. Her weekly check-ins gave me a sense of community/comraderie that can sometimes be lost in this day and age...”

Conclusions

- Early PrEP retention/adherence was high among YMSM and TGW in the EPIC study, with some drop off by week 36
 - Majority of all racial/ethnic groups achieved protective TFV-DP levels
- Prepmate increased both PrEP retention and adherence among diverse YMSM and TGW in a real world clinic setting
- Prepmate had high acceptability among YMSM and TGW, with no social harms reported
 - Daily SMS reminders and weekly SMS check-in messages had the highest acceptability and use
 - Lower use of website information and videos – may be more helpful at earlier stages of the PrEP cascade and if made publicly available
 - Additional analyses from qualitative interviews from ppts and staff are forthcoming
- Strategies to integrate SMS-support components of Prepmate into PrEP delivery settings for youth should be explored

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