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Sexual Health Outcomes Among Daily and On-demand Oral PrEP users in China

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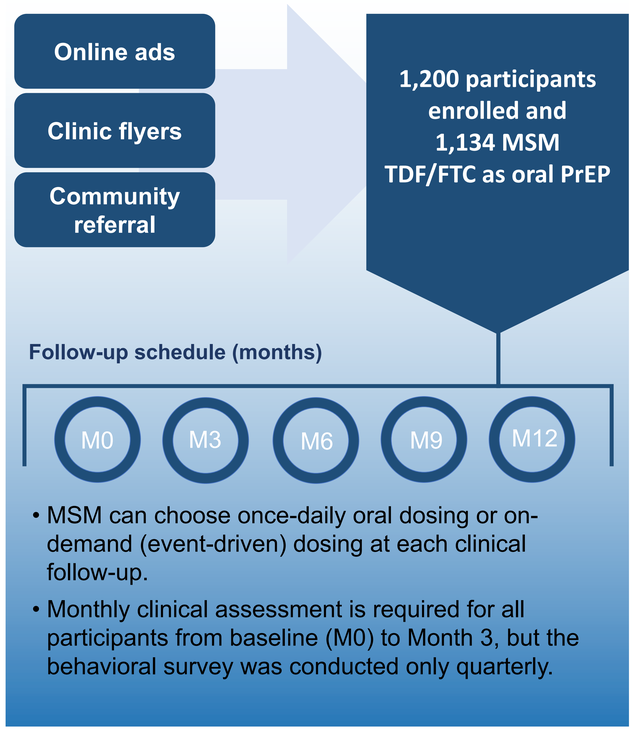
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BACKGROUND

- Longitudinal data on sex behaviors and STIs among Chinese PrEP users is limited.
- Here we present self-reported newly diagnosed STIs and sex behaviors among Chinese MSM who are on TDF/FTC as daily and on-demand PrEP regimens in China.

METHODS

- MSM in Wuhan and Guangzhou were recruited by online ads, clinic flyers, and community referrals to a PrEP demonstration trial.
- Behavioral survey data were collected at baseline and quarterly follow-ups over 12 months (M3, M6, M9, M12). MSM were prescribed TDF/TFC as oral PrEP and could opt for daily or on-demand regimens.
- Descriptive analysis and multivariable logistic regressions were conducted in Stata 15.0.



RESULTS（ September 2021 to September 2023 ）

- 1,134 MSM started oral PrEP, with a median age of 29.1(SD=5.9).
- 239 (21.0%) people discontinued or lost to follow-up before the trial ended.
- About half of the participants opted for on-demand PrEP (the “2+1+1” strategy).
- About 46.0%-52.8% reported having sex under substance use across the time.
- PrEP dosing strategies were not associated with newly diagnosed STIs, condom use habits change, or the occurrence of having sex under the influence of substance use over time,

Fig.1 Distribution of MSM on once-daily vs. on-demand

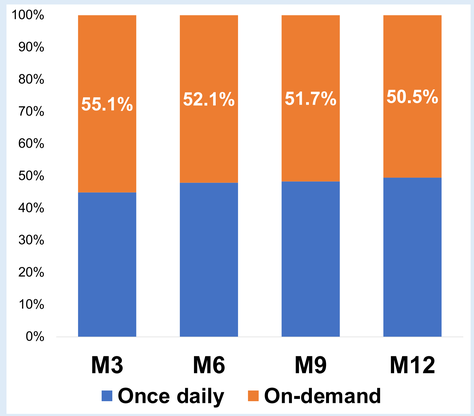


Fig.2 Changes in sex frequency and condom use behaviors in the past 3 months

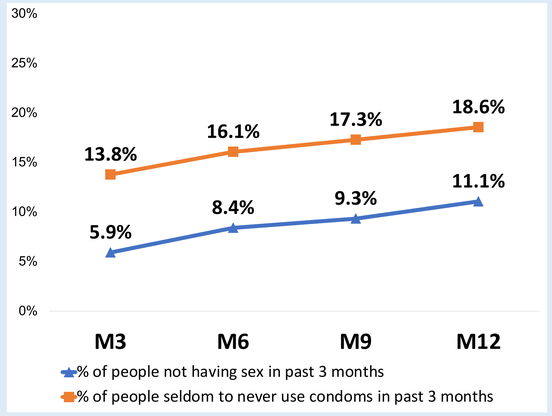


Fig.3 Prevalence of self-reported any STIs and syphilis diagnosed in the past 3 months

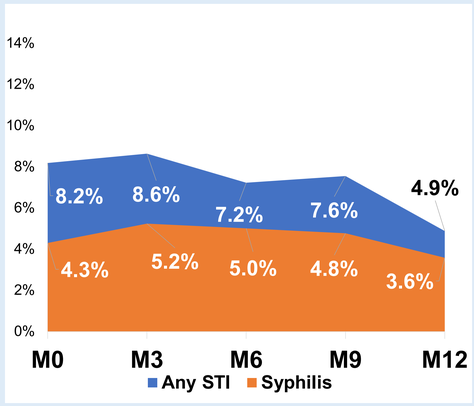


Table 1. Mixed-effects logistic regression results for the outcome “having sex under substance use”

Predictor	aOR	95% C.I.
PrEP dosing (ref: once daily)		
On-demand (2+1+1)	0.66	(0.39-1.11)
Monthly income (ref: <715 USD/month)		
715-1430 USD/month	1.93	(0.90-4.16)
> 1430 USD/month	3.87*	(1.65-9.09)*
Condom use (ref: use condoms often)		
Self-to-never use condom	3.42*	(1.77-6.67)*
Employment status (ref: full-time employee)		
Full-time student	2.34	(0.92-5.94)
Others	2.04	(0.99-4.24)
Age (continuous)	0.99	(0.94-1.04)

CONCLUSIONS

- Once-daily PrEP and on-demand PrEP users show **comparable risks** of STIs or sex behavior changes.
- An **increasing number** of MSM not using condoms when on PrEP and a consistently high number of MSM engaging in sex under the influence of substance use were observed.
- Further research investing in engaging PrEP users in **routine testing and safe sex counseling as a holistic health approach** is highly needed.

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