



Impact of peer referral on PrEP adherence and persistence among GBMSM: A Cohort study in China

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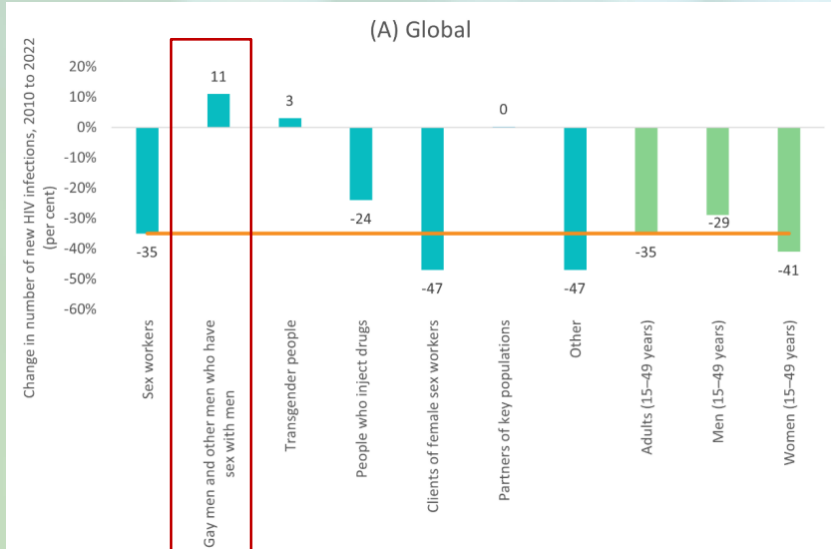
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PrEP and PrEP in China



Proportional change in annual number of new adult HIV infections among selected populations between 2010 and 2022⁴



PrEP efficacy depends on PrEP adherence, and PrEP persistence is a prerequisite for adherence ^{1,2}

China approved Truvada for PrEP in 2020

Adherence among GBMSM in China is only 32%, and there is no data on the persistence of PrEP in China³

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2. CDC. Pre-Exposure Prophylaxis (PrEP). <https://www.cdc.gov/hiv/risk/prep/index.html>. Accessed 18 May 2024.
3. Zhang L, Peng P, Wu Y, et al. Modelling the Epidemiological Impact and Cost-Effectiveness of PrEP for HIV Transmission in MSM in China. *AIDS Behav* 2019; 23(2): 523-33.
4. UNAIDS. New HIV infections data among key populations: proportions in 2010 and 2022. https://www.unaids.org/sites/default/files/media_asset/new-hiv-infections-data-among-key-populations-proportions_en.pdf. Accessed 18 May 2024.

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PrEP and PrEP in China

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Barriers to promoting PrEP adherence and persistence

High Cost of PrEP

PrEP is sold at 2000 CNY (~ 300 USD) per 30 pills — a price point perceived as unacceptable for most participants¹

Uncertainty About PrEP Efficacy and Side Effects

MSM who were more concerned about side effects had a lower medication rate ($p = 0.0208$)²



PrEP Stigma

PrEP users are commonly stereotyped as sexually irresponsible, promiscuous, and immoral, and these stereotypes and associated prejudices undermine adherence to PrEP and contribute to its discontinuation³

1. Li C, Xiong Y, Liu H, et al. Multifaceted Barriers to Rapid Roll-out of HIV Pre-exposure Prophylaxis in China: A Qualitative Study Among Men Who Have Sex with Men. *Int J Behav Med* 2024; 31(2): 252-62.

2. Hu Y, Zhong XN, Peng B, et al. Associations between perceived barriers and benefits of using HIV pre-exposure prophylaxis and medication adherence among men who have sex with men in Western China. *BMC Infect Dis* 2018; 18(1): 575.

3. Calabrese SK. Understanding, Contextualizing, and Addressing PrEP Stigma to Enhance PrEP Implementation. *Curr HIV/AIDS Rep* 2020; 17(6): 579-88.

Peer Referral

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- **Peer referral**
 - a social network-based approach utilizes peers to reach out to and recruit members from their social networks for health services
- **Peer-referred people**
 - receive psychosocial support from their peers
 - reduce HIV discrimination & stigma
 - facilitate the uptake of HIV prevention services
- **Peer influence has great potential to promote PrEP adherence and persistence.**
 - peers providing PrEP-related information and support³
 - peer experiences increased confidence of PrEP use⁴

Peer referral strategy in HIV research

1

Increase HIV testing and counseling (HTC)¹

2

Identify undiagnosed HIV-infected people²

1. McCoy SI, Shiu K, Martz TE, et al. Improving the efficiency of HIV testing with peer recruitment, financial incentives, and the involvement of persons living with HIV infection. *J Acquir Immune Defic Syndr* 2013; 63(2): e56-63.
2. Glasman LR, Dickson-Gomez J, Lechuga J, Tarima S, Bodnar G, de Mendoza LR. Using Peer-Referral Chains with Incentives to Promote HIV Testing and Identify Undiagnosed HIV Infections Among Crack Users in San Salvador. *AIDS Behav* 2016; 20(6): 1236-43.
3. Dang M, Scheim AI, Teti M, et al. Barriers and Facilitators to HIV Pre-Exposure Prophylaxis Uptake, Adherence, and Persistence Among Transgender Populations in the United States: A Systematic Review. *AIDS Patient Care STDS* 2022; 36(6): 236-48.
4. Atukunda EC, Owembabazi M, Pratt MC, et al. A qualitative exploration to understand barriers and facilitators to daily oral PrEP uptake and sustained adherence among HIV-negative women planning for or with pregnancy in rural Southwestern Uganda. *J Int AIDS Soc* 2022; 25(3): e25894.

The cohort study is part of

A Phase IV Clinical Trial supported by Gilead in China
(aimed to recruit 1200 GBMSM)

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Recruitment

Multi-channeled recruitment

Screening, baseline assessment, and enrollment
(Guangzhou/Wuhan screen 1600 each)

Participants' screening and baseline assessment:

- Standard operating procedure
- Online connection and offline appointment
- Preliminary eligibility check
- Informed consent
- Baseline survey
- HIV/ syphilis screen
- Brief PrEP education
- Ask about PrEP referral

Enrollment And Follow up

Ask if interested in starting PrEP at enrollment

If yes, referred to the clinic

If no, document contact info and inform they can still come
back to trial and continue the following steps within 12 months
(since the screening day)

Received physical examination and check for PrEP eligibility

1200 individuals get criteria check and initiate PrEP
(GZ/WH 600 each)

Start PrEP and follow up
(Daily or on-demand)

Follow-up plans for 1200 participants

Follow-up plan for 1200 PrEP users:

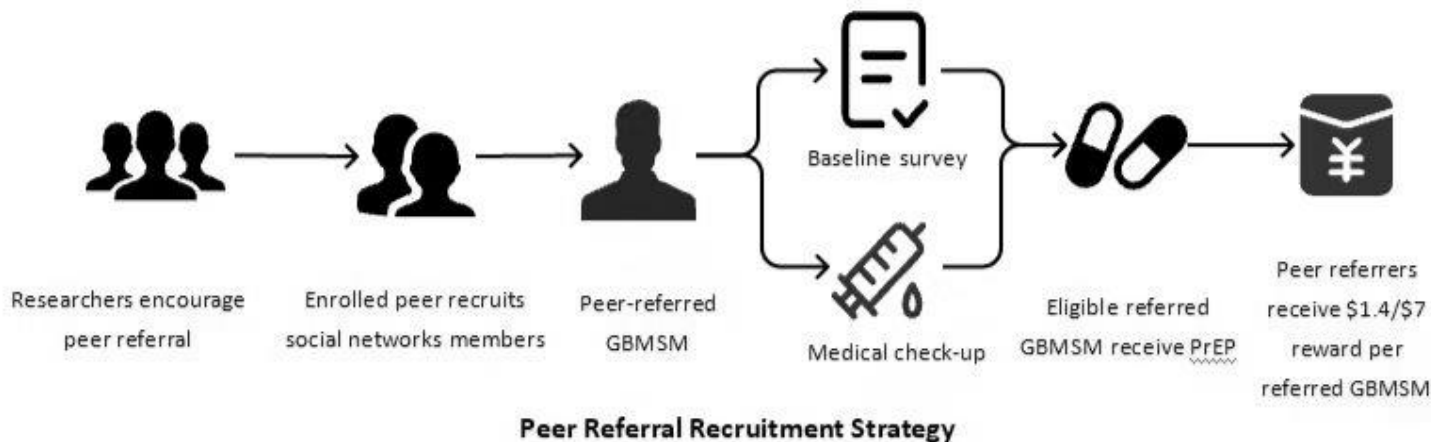
- Initial physical examination and clinic follow-up at the study hospitals or equal qualitative clinic authorities contained the tests of serum creatinine, BUN, liver function tests and enzymes, hepatitis B and C surface antigens, dried blood spot assessment ...at the end of months (3, 6, 9, and 12)
- Online follow-up and web-based behavioral assessment follow-up survey at the end of months (3, 6, 9, and 12)

The cohort study

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Peer referral recruitment strategy



Peer Referral Recruitment Strategy

推荐有奖

快来推荐你的朋友入组吧

活动说明:

自2022年12月15日起, PrEP项目参与者每推荐一位朋友成功入组PrEP项目, 即可获得50元的红包奖励!

目前所有已入组的参与者均可推荐朋友入组!

目前项目名额仅剩不到50个! 想要推荐朋友的小伙伴们抓紧啦! 如有疑问, 可随时找责任沟通哦!

赛思小程序 >>>

扫描收藏赛思小程序, 了解更多PrEP知识



The cohort study

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Online survey through SoJump



Collecting information on sociodemographics, sexual behavior, HIV testing, and PrEP use , etc



GBMSM in Guangzhou, Guangdong and Wuhan, Hubei

The cohort study

Outcome Measurement

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PrEP adherence (self-report)

- Daily users: take ≥ 4 pills in the past 7 days;
- Event-driven users: take 2+1+1 doses $\geq 75\%$ of the time in the past 30 days.

PrEP persistence (Prescription)

- The time from PrEP initiation to the first discontinuation (No longer in possession of TDF-FTC > 30 days).

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Data collection and analysis

Data collection for this study

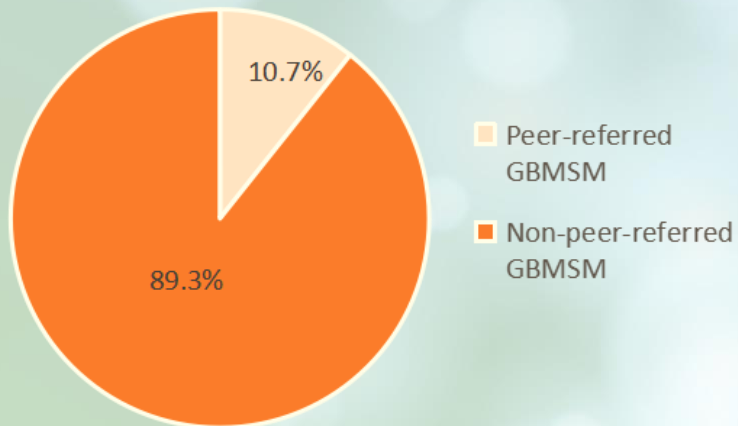
- From September 2021 to December 2023, collected at months 0, 3, and 6.

Data analysis

- PrEP adherence: GEE, where the model fits with log-links, Poisson distributions, and robust standard errors.
- PrEP persistence: A Kaplan-Meier survival curve and Cox proportional hazard regression model.



Socio-demographic characteristics of enrolled GBMSM on PrEP (N=1131)



121 participants (10.7%) were referred by peers

- **Age:** mean age 27.6 ± 5.8 years
- **Highest level of education:** mainly college and above (95%)
- **Marital status:** 95% of participants were single
- **Monthly income:** <\$700 (37%), \$700-\$1,400 (37%), >\$1,400 (26%)

Results

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Comparison of Peer-referred GBMSM and Non-peer-referred GBMSM

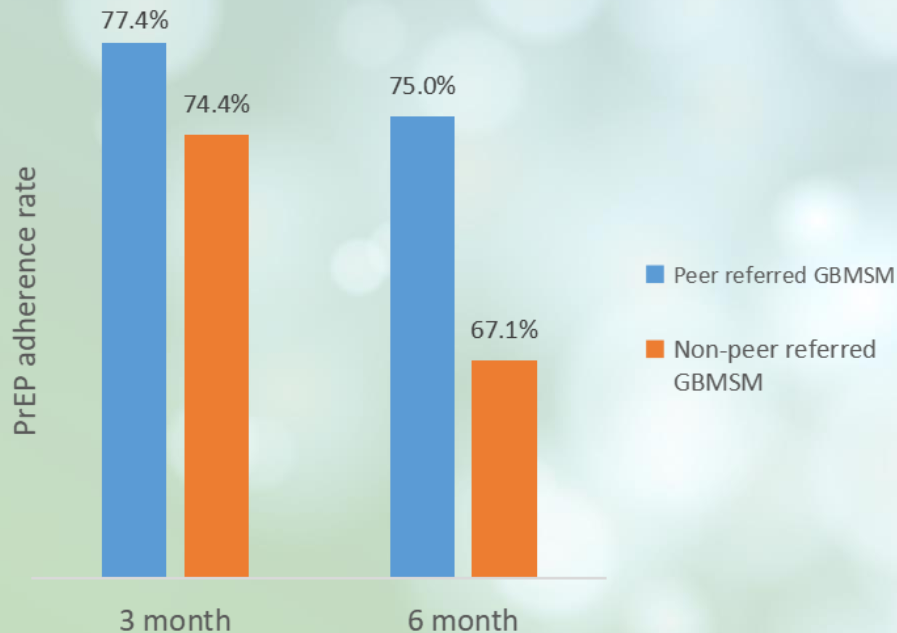
Variables	Total (N=1131)	Peer-referred GBMSM(N=121)	Non-peer-referred GBMSM(N=1010)	P-value
Age (years)				0.01
<35	1003(88.7%)	116(95.9%)	887(87.8%)	
≥35	128(11.3%)	5(4.1%)	123(12.2%)	
Educational level				0.04
High school and below	60(5.3%)	11(9.1%)	49(4.9%)	
College and above	1071(94.7%)	110(90.9%)	961(95.1%)	
Condomless sex				0.01
No	339(30.0%)	24(19.8%)	315(31.2%)	
Yes	792(70.0%)	97(80.2%)	695(68.8%)	

Peer referral was more likely to recruit participants

- Age younger than 35 years (Peer referred GBMSM:**96%** VS. Non-peer-referred GBMSM:**88%**).
- High school degree or less (Peer referred GBMSM:**9%** VS. Non-peer-referred GBMSM:**5%**).
- Had condomless sex in the last 3 m (Peer referred GBMSM:**80%** VS. Non-peer-referred GBMSM:**69%**).

Results

Impact of peer referral on PrEP adherence

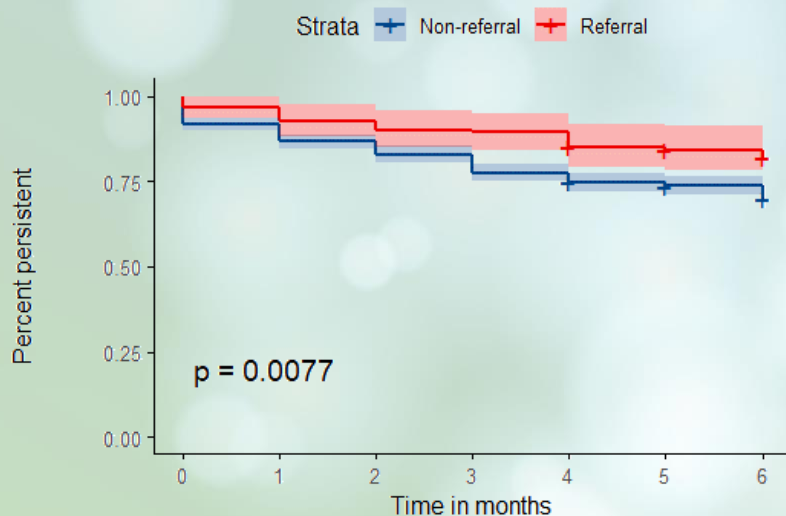


- PrEP adherence declined over time for both groups.
- Compared with non-peer-referred GBMSM, **peer-referred GBMSM were more likely to be adherent** (aRR=1.11, 95% CI: 1.01-1.22).

Results



Impact of peer referral on PrEP persistence



- At month 6 of follow-up, **82.6%** and **70.5%** of peer-referred participants and non-peer-referred participants persisted with PrEP, respectively.
- **Non-peer-referred participants were more likely to discontinue PrEP** than peer-referred users (aHR=1.84, 95% CI:1.18-2.87).

Number at risk

Strata	0	1	2	3	4	5	6
Non-referral	1010	925	875	837	782	749	617
Referral	121	117	112	109	108	102	69

Time in months

Conclusion

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Key Findings

- Peer referral can be used as a strategy to **promote PrEP**
- Peer referral can **reach GBMSM with greater HIV risk (e.g., condomless sex).**
- **Adherence is marginally better** in GBMSM who recruited by the peer-referral strategy
- And peer referral is **associated with PrEP persistence.**

Acknowledgment

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