

Barriers and Facilitators of Linkage to and Engagement in HIV Care Among HIV-Positive Men Who Have Sex with Men in China: A Qualitative Study

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Abstract

Linking and engaging HIV-positive patients in care is the key bridging step to glean the documented health and prevention advantages of antiretroviral therapy (ART). In China, HIV transmission among men who have sex with men (MSM) is surging, yet many HIV-positive MSM do not use HIV care services. We conducted a qualitative study in order to help positive interventions to promote linkage-to-care in this key population. Four focus group discussions (FGD) were held among HIV-positive MSM in Beijing, China, to ascertain knowledge, beliefs, attitudes, and practices related to HIV care. FGD participants highlighted six major barriers of linkage to/engagement in HIV care: (1) perceived discrimination from health care workers; (2) lack of guidance and follow-up; (3) clinic time or location inconvenience; (4) privacy disclosure concerns; (5) psychological burden of committing to HIV care; and (6) concerns about treatment. Five major sub-themes emerged from discussions on the facilitators of linkage to/engagement in care: (1) peer referral and accompaniment; (2) free HIV care; (3) advocacy from HIV-positive MSM counselors; (4) extended involvement for linking MSM to care; and (5) standardization of HIV care (i.e., reliable high quality care regardless of venue). An understanding of the barriers and facilitators that may impact the access to HIV care is essential for improving the continuum of care for MSM in China. Findings from our study provide research and policy guidance for how current HIV prevention and care interventions can be enhanced to link and engage HIV-positive MSM in HIV care.

Introduction

THE ADVANCEMENT AND EXPANSION of point-of-care HIV testing has increased the ease of diagnosis of people living with HIV (PLHIV).¹ Identification of HIV-positive individuals is necessary for entering the HIV care continuum [testing, linkage, antiretroviral therapy (ART), retention, and adherence] and achieving viral suppression.²⁻⁴ Successful ART deployment depends on health system successes at every element within the HIV care continuum (also referred to as the HIV care cascade).^{5,6} Challenges are particularly evident in the early phase of linking newly diagnosed individuals to care and keeping them engaged in long-term care.⁷⁻⁹

There were an estimated 780,000 people living with HIV in China in 2011.¹⁰ The upward trend of HIV incidence and prevalence among Chinese men who have sex with men (MSM) is in contrast to lowered incidence among persons who inject drugs (PWID) and former illegal plasma/blood donors, and still-low rates among female sex workers (FSW).² In China, HIV diagnosis and care are centralized; linkage-to-care can be tracked by determining the date of the first CD4+ cell count after a confirmed HIV diagnosis.¹¹

The attrition rates of HIV testing and linkage to care could be high. For example, in a 14-city study, 76,628 MSM received HIV screening tests, 4563 were HIV-positive; 21% did not receive HIV confirmatory testing. Of 3024 with

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confirmed HIV infection, 34% did not receive CD4 testing.¹² Since 2003, the establishment and scale-up of the “Four Free and One Care” [free ARV drugs, free prevention of mother-to-child transmission, free voluntary counseling and testing (VCT), free schooling for children orphaned by AIDS, and care to people living with HIV/AIDS] policy^{13,14} in China has been the major strategy to facilitate HIV diagnosis and treatment of infected individuals and contain HIV transmission among key populations such as FSW, PWID, former illegal plasma donors, and MSM.^{15,16}

Free HIV testing is available at Centers for Disease Control and Prevention (CDC) VCT clinics at provincial, city/prefectural and district/country levels across the country, and free ART is available to HIV-infected individuals with CD4 count <500 cells/ μ L.¹⁰ For those not on ART, they are eligible to receive one free CD4 and HIV viral load test each year, but patients have to pay for additional tests.¹⁷ It is worth mentioning that when this policy was established, MSM did not largely represent in the HIV epidemic, and therefore did not receive adequate attention from the government commensurate with its focus on other key populations (e.g., former plasma donors, PWID, FSW).^{17–21} Hence, MSM-friendly programs were late in development, often without a clear risk reduction strategy and HIV-related service provision policy. Thus, HIV-positive MSM had low utilization of HIV-related services despite their high risk.^{15,22}

Studies have suggested that certain socio-demographic characteristics (e.g., being younger, single, or less educated)²³ are associated with lower HIV care utilization rates. Some structural barriers (e.g., public and exposed location for care, inconvenience of clinic hours or venues, confidentiality of disclosure of HIV status, high cost, and lack of real-time provision of counseling) might delay access to and discontinue HIV care utilization.²⁴ HIV-related stigma and discrimination have also been important factors influencing people’s reluctance to link to HIV care and treatment.²⁵ Few studies have been conducted to assess the factors associated with linkage to care among HIV-positive MSM in China.²⁶ The purpose of our qualitative study was to ascertain the knowledge, beliefs, attitudes, and practices among Chinese MSM to inform the design, content, and adaptation of the intervention programs for the improvement of linkage-to-care among HIV-positive MSM in China.

Methods

Study design and participants

In 2011, we conducted focus groups with MSM in Beijing, China. Details of the study design have been described elsewhere.²⁷ In short, the Chaoyang Chinese AIDS Volunteer Group (CCAVG), a community-based gay-friendly organization in Beijing, recruited eligible participants. We used a peer-referral snowball recruitment strategy to engage additional participants. Eligible participants were ≥ 18 years of age, self-reported MSM, residents of Beijing, capable of giving consent, and consenting to complete the survey and answer questions during a focus group discussion (FGD). The research protocol was reviewed and approved by institutional review boards of Vanderbilt University and the National Center for STD/AIDS Control and Prevention (NCAIDS) at Chinese Center for Disease Control and Prevention (China CDC).

Data collection

Six FGD were conducted, including four among HIV-positive (11, 10, 10, and 9 participants in each group) and two among HIV-negative or status-unknown MSM (10 in each group, but with 4 status-unknown participants in negative group #2). For this study’s purposes (identify the barriers to and facilitators of linkage to HIV care), we analyzed qualitative data from the four focus groups with HIV-positive MSM only.

Prior to the FGD, a self-administered questionnaire was used to collect information on participants’ age, current marital status (single or divorced vs. married to a woman), education, occupation, and registered Beijing residence (*‘Hukou’*) status for background description. A trained facilitator led each group using a semi-structured discussion guide, in a confidential and convenient location in MSM community in Beijing. A notetaker was also assigned to each FGD to monitor the group process and assist the facilitator when needed.

For the groups with seropositive MSM, focus group questions covered items related to HIV testing experience prior to diagnosis, and obstacles experienced during linkage to HIV care after diagnosis, and suggestions for better facilitate the utilization of HIV care and subsequent engagement. All focus groups lasted approximately 2 h, and all conversations and discussions were audio recorded on two digital recording devices. Digital recordings were transcribed verbatim in Mandarin. The notes and transcripts were then translated to English, embedded with the original language (Mandarin) as a reference for ensuring that meaning was maintained, as judged by bilingual members of our research team (for FGD guides, see <http://globalhealth.vanderbilt.edu/research/mp3/>).

Data analysis

We used descriptive statistics to summarize quantitative, self-reported data. Specifically, frequencies and percentages summarized participants’ age, marital status, education, occupation, and Beijing residence (*‘Hukou’*).

The research team iteratively reviewed all transcripts in English (YL, RA, and HZQ) and in Mandarin (YL and HZQ). We applied four pre-specified themes to these data: (1) barriers to linkage to HIV care, (2) strategies to promote link-to-care, (3) specific recommendations for improving linkage to and engagement in HIV care, and (4) other comments that may help guide intervention development but that did not overlap previous thematic areas. Then, two investigators (YL and XJZ) independently reviewed all participant statements within these four categories, and merged similar statements to produce emergent sub-themes. Reviewer discrepancies were discussed until agreement was reached. We have used representative quotes to characterize and interpret each sub-theme below.^{28–30}

Results

Participant characteristics

The socio-demographic characteristics of the HIV-positive participants are shown in Table 1. Forty MSM participated in one of our HIV-positive FDG. The median age was 29 years [interquartile range (IQR): 26.0–33.5 years]. Most participants self-reported that they were unmarried (single or divorced; 90%), had at least a college education (80%), were employed (92.5%), and did not have Beijing residency status (*‘Hukou’*; 80%).

TABLE 1. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF HIV-POSITIVE MEN WHO HAVE SEX WITH MEN IN BEIJING, CHINA (N=40)

| <i>Characteristics</i> | | |
|---|----------------|----------|
| Median age in years (IQR ^a) | 29 (26.0–33.5) | |
| | <i>N</i> | <i>%</i> |
| Marital status | | |
| Currently married to women | 4 | 10.0 |
| Single or divorced | 36 | 90.0 |
| Education (year of schooling) | | |
| College or above (>12) | 32 | 80.0 |
| High school (10–12) | 6 | 15.0 |
| Junior middle school or lower (<10) | 2 | 5.0 |
| Employment | | |
| Employed | 37 | 92.5 |
| Student | 1 | 2.5 |
| Unemployed or retired | 2 | 5.0 |
| Beijing residence (' <i>Hukou</i> ') | | |
| Yes | 8 | 20.0 |
| No | 32 | 80.0 |

^aIQR, interquartile range.

Barriers to linkage to HIV care

Major barriers to linkage to HIV care documented in this study included: (1) perceived discrimination from health care workers; (2) lack of guidance and follow-up; (3) clinic time or location inconvenience; (4) privacy disclosure concerns; (5) psychological burden of committing to HIV care; and (6) concerns about treatment (Table 2).

Discrimination from healthcare workers. A common reason for not seeking HIV care after diagnosis was our participants' perceptions of discriminatory attitudes from healthcare providers. Participants complained about the unprofessionalism of some healthcare workers observed during their conversations (i.e., the use of unfriendly tone/words, indifference, distrust, and prejudice). Negative expressions from health workers heightened respondents' anger and anxiety, and decreased their motivation to use HIV care services.

"The first time I came here, I found that she [healthcare worker] was very cold to me. She even joked [about] my homosexuality and HIV-positive status with another co-worker when they were having lunch, laughing out loud like I was some special animal. She wanted to force me to fill [out] some questionnaires. I felt angry and [I] didn't fill them [out]. My point is, if they treat you like this, you will be unwilling to use any care service or go to appointments at the recommended intervals." (29-year-old, single, currently employed, non-Beijing resident)

Lack of guidance or follow-up. Participants talked about experiences after HIV diagnosis, and identified two reasons for disrupted linkage to care once diagnosed. Some health-care providers never provided post-testing guidance, such as where they could avail themselves of the CD4+ cell count test, viral load tests, psychological counseling services, and the process to apply for free ART, if eligible. Healthcare workers often were said to have failed to explain the importance of these services to patients. Those unaware of such services would typically leave the clinic without taking further action. For example, one participant said:

"That doctor in the hospital, she didn't give me an explanation from [a]medical perspective. I didn't know [they] had to test [my] CD4 and virus load, etc. I had the test in a first-class hospital, and I knew I had [a]lab-confirmed positive result, but they didn't guide me through the available HIV care services. They just asked me to test again to confirm, on purpose just to charge me more money. I did not know why. As a result, everything was delayed." (43-year-old, single, currently unemployed, legal Beijing resident)

Most participants complained they had never been contacted by healthcare providers to discuss their health condition, the availability of care, or their progress while in care. Thus, participants felt abandoned, discouraged, and wanting to give up on seeking care. For instance, one participant said:

"I had my HIV testing in Ditan Hospital. After it was confirmed, they just called me to go to pick up a diagnosis report and provided me with several options for post-diagnosis care. But after that, I have never received a call from them. I was so upset because I thought they gave up on me. I lost hope and did not know what to do next. Those doctors should have at least given me a call to follow-up on my status." (30-year-old, single, currently employed, non-Beijing resident)

Time or location inconvenience. Most participants worked from early morning to late afternoon, Monday through Friday, which usually conflicted with the office hours of CDC clinics and hospitals where HIV care was available. Participants said they were unwilling to leave work for HIV care because of the sensitivity of this issue as an excuse to ask for leave, and the potential loss of work compensation.

"I think the HIV care provision is very limited in time flexibility. Usually, they are not held on weekends, and we have to go to work on weekdays. We all have jobs, and [the] boss will not allow you to ask for leave every now and then to see doctors." (26-year-old, single, currently employed, non-Beijing resident)

TABLE 2. PERCEIVED BARRIERS AND FACILITATORS FOR HIV TESTING AMONG HIV-POSITIVE MEN WHO HAVE SEX WITH MEN (MSM) IN BEIJING, CHINA (N=40)

| <i>Barriers</i> | <i>Facilitators</i> |
|---|---|
| <ul style="list-style-type: none"> ● Perceived discrimination from healthcare workers ● Lack of guidance or follow-up ● Time or location inconvenience ● Privacy and disclosure concerns ● Psychological burdens of committing to long-term care ● Concerns about care and antiretroviral therapy | <ul style="list-style-type: none"> ● Peer referral and accompaniment ● Free HIV care ● Advocacy of HIV-positive MSM counselors ● Extended involvement for linking MSM to care ● Standardization of quality HIV care across clinics |

The inaccessibility of HIV care hospitals involved spending time traveling, and was a major perceived barrier to patients' actively linking to care.

"If you live far away from the hospital, you need to get up very early to go to a counseling session or have [a] CD4+ test. And often it is [a] workday, which is very inconvenient. So you may choose not to go if you feel it is not necessary." (29-year-old, single, currently employed, legal Beijing resident)

Privacy for disclosure of status. Another commonly discussed barrier to linking to care by our participants was the fear of disclosing one's HIV and homosexuality status. The potential embarrassment of meeting non-gay acquaintance such as colleagues, friends, and family members in the hospitals, and the concern that their records of seeking HIV care and their gay identity would be documented and reported to the government or linked to future healthcare plans, influenced decisions to avoid the available HIV care services.

"I know many residents in Beijing don't like to go to the CDC in their own district for fear of being recognized [by] their friends, [a] family member, colleagues or sexual partners. They are just reluctant to go there." (41-year-old, married to a woman, currently employed, legal Beijing resident)

"In almost all hospitals, the doctors will keep all the reports and details. Although I know this is their routine work, I am still uncomfortable and afraid that this sensitive information will be disclosed to the government, my health insurance company, or my employer. You know, this disease and gay experience are a shame! Maybe I am worrying too much, but that's a major reason I avoid seeking HIV care if I feel I don't need it." (23-year-old, single, currently employed, non-Beijing resident)

Psychological burden of commitment to care. Being committed to HIV care, once initiated, was considered to have a long-term influence on one's lifestyle and require making sacrifices. Despite the benefits of HIV care, several participants thought they would endure a lifetime of pessimism, stigmatization, and suffer from psychological burden as a result of repeatedly frequenting HIV care facilities and being treated as sick individuals for the rest of their life. Hence, they would rather avoid getting involved in care from day one. For example, one participant said:

"I met one person who thought this disease was no big deal. He wanted to be alive without going to [the] hospital continuously as a 'sick' person. Compared to the suffering from the psychological burden of linking to and engaging in the care for the remainder of his life, he said he would rather choose to live another 4–5 years, happily, instead of a miserable 20–30 years." (43-year-old, single, currently unemployed, legal Beijing resident)

Concerns about ART. HIV treatment affected decisions to use HIV care. Generally, participants voiced concerns about experiencing drug side effects, having insufficient knowledge of the benefits of treatment, and taking medicines at inconvenient times that added to their uncertainty about linking to and engaging in care. For example, one participant said:

"I am not sure whether the medicine will work. I don't have much knowledge [about] that. But I heard from a friend saying he had been taking the drug for two years and always felt dizzy and could not work. And he also said it was too troublesome to

take the pills regularly, and once you took it, you needed to take it all your life or drug resistance will develop...It sounds horrible to me. I would rather not use that care or take drugs until I am very sick." (25-year-old, single, currently employed, non-Beijing resident)

Facilitators of linkage to care

Five major sub-themes emerged from discussions on the facilitators of linking to care. These facilitators were: (1) peer referral and accompaniment; (2) free HIV care; (3) advocacy from HIV-positive MSM counselors; (4) extended involvement for linking MSM to care; and (5) standardization of HIV care (i.e., reliable high quality care regardless of venue) (Table 2).

Peer referral and accompaniment. Many participants thought they would be more likely to initiate HIV care if a friend or partner introduced them to a hospital or a specific healthcare provider. Positive testimonies based on a peer's experience would build up their confidence and trust in those services.

"Before taking the first step out, it is very essential to have open communication with a friend who frequents a clinic or hospital and let him give you a suggestion as to which doctor is the best choice. If positive feedback [towards the hospital or doctor] is given repeatedly, I will be more willing to follow in his footsteps." (19-year-old, single, student, legal Beijing resident)

Having a companion (gay friend or intimate partner) would also be a great facilitator for those who were first-time HIV care seekers. Participants considered accompaniment as a tremendous source of emotional support and psychological comfort.

"I think the role of an experienced companion is highly recommended for those newly infected with HIV [who are] deciding to seek HIV care. Your companion would be able to comfort you and explain further from his perspective based on what the doctor said. This is my experience. For me, I am not willing to go alone." (24-year-old, single, currently employed, non-Beijing resident)

Free HIV care. Despite national policies that have instituted free HIV counseling services and antiretroviral drug provisions (for eligible individuals) in China, some routinely recommended HIV care services [e.g., CD4 counts, viral load tests, sexually transmitted infection (STI) tests] require expensive out-of-pocket costs. Almost all participants said the government-supported HIV care services facilitated their linkage to and engagement in HIV care. For instance, one participant said:

"At least I think the tests [CD4+ cells and viral load] before treatment are necessary and should be free. And the drugs should be made free to everyone who wants to initiate ART. Then I believe more people would be financially relieved and willing to be cared if all expenses of these services are financially covered by the government." (25-year-old, single, currently employed, legal Beijing resident)

Advocacy from an HIV-positive MSM counselor. Participants thought post-diagnosis counseling was a strong determinant of receiving subsequent HIV care. They suggested

hospitals and clinics should recruit and train volunteer HIV-positive MSM to deliver this counseling either in the hospital or in community settings. Participants said they would be more comfortable talking to a HIV-positive peer, and would be more willing to take suggestions from someone who is similar to themselves. For example, one participant said:

“I think the counseling services should be carried out by a person who has been diagnosed as HIV-positive before and has had experience in HIV care. I think their words are more trustworthy. When I was a volunteer, I did psychological counseling and they [the clients] trusted me very much. The first reason is that I’ve been alive for such a long time and they believe me very much. So they all went to care.” (43-year-old, single, currently unemployed, legal Beijing resident)

Extended involvement for linking MSM to care. Despite healthcare providers often failing to inform HIV-positive persons fully about available HIV care services, the major route of receiving such information is still from professionals. Participants suggested the government and relevant organizations should do a better job of communicating where, how, and why to initiate and engage in HIV care. Participant ideas included giving lectures, disseminating booklets, and playing video tutorials in some MSM-frequented venues to increase exposure of MSM to such information.

“Most infected guys generally have no idea about it. This is due to insufficient publicity. If you meet some good guy, he can give you some useful information. My point is, why not publicize those services in some places that we regularly visit? Invite some professional to give a talk or pass down a flyer with detailed information. I believe this will improve the situation greatly.” (29-year-old, single, currently employed, non-Beijing resident)

FGD participants endorsed electronic communication platforms to promote HIV care services, specifically suggesting leveraging short message service text messaging via cell phones, e-mail, and use of QQ (an instant message chatting tool in China). At the same time, some participants expressed concerns about sensitive words being used in these messages. One participant said:

“Of course it is helpful [to receive messages]. HIV positive friends [would] be glad to receive these messages through QQ groups. At least I like it. It is also helpful to send emails periodically. This [would] raise their awareness [of] HIV care and function as a reminder. But do not use words like ‘HIV’ or ‘gay’ or others words of this kind in the conversation.” (34-year-old, single, currently employed, non-Beijing resident)

“Targeting us through email or other chatting tools is okay, but I personally prefer short messages sent to my smartphone because I am not always logged on QQ or my email account, but I can always take a glance at my phone and notice such information. But be aware of the words used, because someone may stand around you. Basically all these channels would be efficient [to facilitate linking people to HIV care].” (32-year-old, single, currently employed, legal Beijing resident)

Standardization of HIV care. Participants suggested the government should establish a national guideline for all participating clinics and hospitals across the country to standardize HIV care vis-à-vis provision of services, operational management, and training of healthcare providers. Comprehensive regulations and an authoritative monitoring

system for the implementation of the guidelines would not only greatly strengthen patients’ confidence in care, but facilitate access to consistently high quality care, without geographic constraints in terms of quality variation.

“I think that current HIV care should be standardized. I mean, in addition to the CD4 and viral load tests, counseling, and ART provision, more should be included. For example, test of renal function, the liver function, ultrasound, chest, hepatitis B and HCV should be all examined. I know these are just optional based on personal will, but they are important, too. The country should invest more to make them a standard part of HIV care.” (43-year-old, married to a woman, currently employed, legal Beijing resident)

“In my experience, HIV care varies from hospital to hospital in terms of wait time, logistics, and the quality of healthcare providers. My assumption is that there is no specific rule that applies to all these HIV care facilities. Well...this is understandable...but...I guess we [would] be more motivated and see it as convenient to go if the quality and operational efficiency is consistent among all these settings. So...I think a universal standard should be promoted by the government to ensure [that] changes.” (29-year-old, single, currently employed, non-Beijing resident)

Discussion

Throughout the globe, the need to design HIV testing and care programs to meet patients’ expectations is apparent, with effective linking of PLHIV to care. A recent study using the Chinese national surveillance data suggested that, despite the decreasing trend in late entry to HIV care, delayed linkage-to-care was associated with an increased incidence of AIDS-related mortality.³¹ The knowledge about the intervening factors has remained limited.^{12,32}

Consistent with other observations,^{26,33,34} HIV-positive Chinese MSM reported barriers to care that may be remediable with clinic staff training (addressing discriminatory attitudes, coaching staff on follow-through, ensuring privacy and disclosure confidentiality), structural adjustments (improving accessibility of HIV care facilities), and improved information sharing with communities and clients (to address a lack of understanding what services are offered, and negative patient attitudes towards HIV care and ART). Similarly, declared facilitators of HIV care suggest positive program options that can be preserved, initiated, or expanded, including government support to compensate all HIV care costs, provision of sustained and comprehensive HIV care, and peer support/referral/counseling.

Participants in our study expressed their concerns about drastic lifestyle changes and stigma as a result of linking to and committing to care. To overcome their reluctance to initiate access of HIV care services, innovative strategies that participants found appealing were the use of peer counselors in regular HIV care sessions and e-communication tools for expanded inclusion coverage. In the intervention that followed these FGDs, both peer engagement and internet-based resources were emphasized, so it will be valuable to assess their results (ClinicalTrials.gov Identifier: NCT01904877: Multi-component HIV Intervention Packages for Chinese Men Who Have Sex with Men—Test, Link and Care [MP3]).

The stigma surrounding HIV/AIDS and homosexuality rooted in traditional Chinese social taboos and cultural isolation of MSM continue to play a crucial role in causing

negative feelings among MSM towards formal health service structures whose staff may be unsympathetic.³⁵ Some participants in our study who interrupted their own HIV care emphasized their anger and disappointment in the prejudice and disrespect they perceived from healthcare workers. Previous studies also suggested that HIV/AIDS stigmatizing and discriminatory attitudes from healthcare providers hindered the utilization of HIV prevention, care and treatment.^{36,37} It is important to conduct routine training and evaluation among all medical staff who provide HIV care in order to provide care through a positive and unprejudiced relationship with patients.

In addition to the stigmatizing behaviors from healthcare professionals, our participants also anticipated the commitment to HIV care would raise their stress and label them with lifetime stigma. It is possible that, with the presence of this internalized stigma, individuals would tend to over-amplify perceived stigmatizing beliefs, heightening their concerns for experiencing discrimination, rejections, and indignities when engaged in HIV care.³⁸ As a consequence, individuals may purposely sacrifice their objective interest just to avoid being associated with a stigmatized condition,^{38,39} including linkage to and engagement in HIV care. These reports demonstrate the need to increase the availability of psychological counseling services and educational campaigns to equip MSM with stigma-coping skills and promulgate positive beliefs towards using HIV care services.

Despite successes of China's "Four Free and One Care" policy in reducing the HIV-related mortality and morbidity,⁴⁰ no national regulations exist to guide the operation, management, monitoring, and evaluation of the quality of HIV care provision. The standardization of HIV care services was one of the facilitators deemed to have the capability to counter several personal, inter-personal, and structural barriers by our participants. As suggested in our focus groups, the government should enforce guidelines for all participating clinics and hospitals to abide to a strict standard with accommodation to patients' needs.

These standardized guidelines would refer to approaches for the introduction and description of HIV care service content, specified convenient times and timeframes for handling logistics and follow-up, the training of ethical and professional healthcare providers, fair cost and compensation rules, precise operational hours with weekend shift schedules, a toll-free hotline for collecting public feedback for improvement, and an internal mechanism for service and staff evaluation. With a standardized HIV care system, patients may be more motivated and reassured to use those services in the desirable volume.

Although it may take a long time to institute needed quality improvement to standardize HIV care across the country, some trained HIV peer facilitators could be integrated into intervention programs in the short-term. The recruitment and training of volunteer HIV-positive MSM to assist healthcare providers in care settings or conduct active outreach within the MSM community would likely be a cost-effective and sustainable way to improve linkage to care among MSM. This is because communicating with a peer could lessen the anxieties of HIV-positive MSM who have not yet initiated care; peer-initiated care might be carried out in MSM-friendly manner with flexible schedules in convenient locations.¹¹ Thus, this approach would address several barriers

such as time or location inconvenience, stigma, and discrimination associated with traditional hospitals and clinics.

In addition, the vast development of electronic technology (emails, short message service text messaging via cell phone, QQ, WeChat, Grindr, and others) been popular among Chinese MSM.⁴¹ We speculate that the better application of these tools could cost-effectively target more HIV-positive MSM for the dissemination of relevant information on care and stigma management tips for improved linkage to and engagement in HIV-related services.

There are limitations in our study. First, FGD were conducted among convenience samples in Beijing. Although we identified several important barriers to and facilitators of HIV care, these findings may not be generalized to other Chinese MSM and may need further validation. Second, our focus groups consisted of a mixed sample of HIV-positive MSM, men who had never initiated HIV care and others who had HIV care experience. We are not sure who said what, so some findings may come from experience and others from speculation. Third, the FGD were facilitated and were variable in the degree of interactive dynamics during the discussion among participants, which may affect the richness of our findings. Nonetheless, our study is one of very few qualitative efforts to explore the barriers to and facilitators of using HIV care among Chinese MSM, potentially helpful to health care planners and policymakers.

In conclusion, we identified several important individual, healthcare provider, and structural-level factors that might determine how MSM may or may not be linked or engaged in HIV care. Our FGD participants also suggested some innovative strategies to improve HIV care utilization among MSM. Future efforts to initiate and sustain HIV care among Chinese MSM likely depends on close collaboration between the government, community-based organizations, HIV care facilities and staff, and MSM themselves to create a more socially and culturally tolerant environment and a robust and comprehensive HIV care system.

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Author Disclosure Statement

The authors declare that they have no competing financial interests.

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