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Opiate Users' Perceived Barriers Against Attending Methadone Maintenance Therapy: A Qualitative Study in China

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Abstract

Methadone maintenance therapy (MMT) in China is facing challenges such as high relapse rates and low coverage. The study assessed factors influencing MMT utilization among opiate users. In-depth interviews were conducted among 30 opiate users in 2008 to ascertain the barriers against seeking MMT. Data were analyzed using ATLAS.ti. Barriers to the treatment included requirement of registration with police, perceived discrimination, logistic difficulties, side effects, fear of being addicted to another drug, lack of additional services, and economic burden. The result suggests the need for structural changes such as improving comprehensive services, simplifying application procedure, and enhancing referral system. The study's limitations are noted.

Keywords

methadone maintenance therapy; China; qualitative; opiate users; HIV/AIDS

INTRODUCTION

Since the first AIDS case was identified in China in 1985, HIV/AIDS has been spreading at an alarming rate. It was estimated that there were about 700,000 people living with HIV/AIDS (PLWHA) in China in 2007 (State Council AIDS Working Committee Office, UN Theme Group on AIDS in China, 2007). Injecting drug users (IDU) accounted for more than 38.5% of the cumulative reported HIV/AIDS cases (State Council AIDS Working Committee Office, UN Theme Group on AIDS in China, 2007). It was estimated that 260,000 drug users were infected with HIV in China by the end of 2007 (State Council AIDS Working Committee Office, UN Theme Group on AIDS in China, 2007). Reported HIV infection rates among IDU were significantly varied across geographic regions, ranging from 30% to 80% (China Ministry of Health and UN Theme Group on HIV/AIDS in China, 2004). In addition to needle sharing, drug users also engage in high-risk sexual behaviors

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that put their sex partners at a greater risk of HIV infection (Liu, Lian, Zhou, & Wang, 2001; Sullivan & Wu, 2007; Wu, Detels, & Zhang, 1996). Given that drug users represent a potential bridge to the general population, it is a top priority to target this population when addressing HIV prevention in China.

Implementation of the methadone maintenance therapy (MMT) program in China is one of the most significant measures ever taken by the Chinese government to address drug use and HIV prevention challenges (Sullivan & Wu, 2007). On the basis of scientific evidence indicating the efficacy of MMT in reducing heroin use, HIV transmission, and criminal behavior in western countries (Kerr, Wodak, Elliott, Montaner, & Wood, 2004; Kreek, 2000), the Chinese government initiated pilot studies of MMT in 2004. The initial MMT trial took place in eight clinics in five provinces: Guangxi, Guizhou, Sichuan, Yunnan, and Zhejiang (Wu, 2004, 2005). An evaluation study of these pilot programs showed reduction in heroin use and drug-related crime and an increase in employment and healthy family relationships among those who received MMT (Pang et al., 2007).

On the basis of the success of the pilots, the program was scaled up. China's Action Plan for Reducing and Preventing the Spread of HIV/AIDS (2006–2010) set nationwide criteria that call for MMT clinics to be set up in any city or county with over 500 registered opiate users (State Council of China, 2006). As of November 30, 2008, 558 MMT clinics had been established nationwide in 23 provinces. Client inclusion criteria include: (1) several failed attempts to quit heroin use, (2) being at least 20 years old, (3) being a registered local resident of the area in which the clinic is located for at least 6 months or holding a temporary resident certificate, and (4) being of good civil character. Those who are HIV-positive do not need to fulfill the second criterion. The fourth criterion has been understood as the applicant must have the ability to give informed consent, and they are free of any criminal or civil charges (Ministry of Health, Ministry of Public Security of China, & State Food and Drug Administration, 2006). Participants pay no more than 10 Chinese yuan per day (US\$1.47) for their treatment.

The MMT program demonstrates the government's strong commitment to controlling illicit opioid use and HIV/AIDS and provides opportunities for engaging the most marginalized people (Gill & Okie, 2007). However, given its recent emergence, the MMT program in China also presents special challenges: the overall coverage rate is very low (Lu, Fang, & Wang, 2008), although the total number of registered opiate users is greater than 500 in the participating cities and counties, some clinics have fewer than 20 clients (Wang, 2006). In addition, the client dropout rate is high in most sites (Lu, Zhao, Bao, & Shi, 2008; Qian, Schumacher, Chen, & Ruan, 2006). This study used a qualitative method to explore opiate users' perceptions of MMT and the factors influencing their use of treatment services. The primary purpose was to identify barriers against MMT entry and retention and suggest strategies for lowering these barriers.

METHODS

Study Participants

Between February and June 2008, we conducted 30 in-depth qualitative interviews with opiate users in Zhejiang and Jiangxi Provinces, China. About half (16) of the participants were individuals who were currently in methadone treatment. The sample size was determined by “theoretical saturation” as the researcher continued expanding the sample size until the interviews revealed no new information (Douglas, 2003). We recruited a convenience sample from six MMT clinics randomly selected from a total of 28 MMT clinics in the two provinces. The other participants included seven opiate users who had previously been taking methadone but dropped out and those who had never initiated MMT.

Study investigators also asked health care providers in MMT clinics to refer some of the opiate users who dropped out of the program for in-depth interviews. Seven opiate users who had never used MMT were recruited from needle exchange programs, voluntary detoxification centers, nongovernmental organizations (NGOs), and opiate users' networks. Referrals occurred through word of mouth or a flyer advertising a "MMT utilization study." The refusal rate was less than 8%. The criteria for participation in the study were: (1) having a history of drug use, and (2) being at least 18 years old. To obtain comprehensive information, we selected opiate users of different genders, ages, marital status, education levels, and detoxification history. Table 1 presents the demographic characteristics of the participants. Of the 30 opiate users interviewed, 26 (86.7%) were IDU and 18 (60%) had used opiate for more than 10 years. About half were 30–39 years of age, were married or living with partners, unemployed, and had a junior high education.

Data Collection

The in-depth interviews lasted 60–120 minutes and were conducted in a private room by experienced interviewers. All interviewers received 2 days of training regarding the study objectives and questions, qualitative interviewing skills, ethics, and safety. Before the interview, respondents were informed of the study purpose, procedures, and potential benefits and risks of the study. Informed consent procedures were used, and participation was voluntary. All interviews were digitally audio recorded for analysis and quality control. There were no personal identifiers linked to the recorded interviews. All participants were paid 40 yuan (US\$5.88) for their participation. Approval to conduct this research was obtained from the Institutional Review Boards of both the University of California, Los Angeles (UCLA) and the National Center for AIDS/STD Control and Prevention, Chinese Centre for Disease Control and Prevention (CCDC).

Interviews were semistructured according to specific guidelines and included a set of open-ended probes to be used when necessary. The open-ended probes asked participants about their sociodemographic characteristics, course of drug use, treatment experiences, perceptions of MMT services and treatment goals, as well as barriers against seeking and maintaining MMT. For those who were currently using MMT, we asked them how they were recruited in the MMT program, their perception of service, doctor–patient relationship, and their perceived barrier against maintaining the treatment. For those who never used MMT, we collected information on the reason why they did not choose MMT and their willingness to participate in the program in the future. For those who dropped out from MMT, the questions were mainly focused on the reasons for termination of treatment.

Data Analysis

After the interviews were completed, the digitally recorded interviews were transcribed verbatim into Chinese. Cross-checking and confirmations of the transcriptions were carried out to assure the quality of the work. The data were then imported for management, coding, and analysis to ATLAS.ti (Muh, 1997), a qualitative data analysis software package. A grounded theory approach was used to analyze the data (Glaser & Strauss, 1967). A first draft of the coding system was created, based on the interview guides. The coding lists were revised throughout the analysis process based on examination of the content of the interview transcripts. Following a variety of revisions, a final code system was established, with a total of 56 codes and 10 code "families" (grouping of codes with the same theme). Analyses were conducted by identifying the themes occurring most frequently and putting them in the context of other information provided by the participants (Sandelowski, 1986). All transcriptions, coding, and analyses were completed in Chinese, and the results were later translated into English utilizing the "forward–backward" translation procedure (Brislin, 1970). The Chinese citations were first rendered into English by bilingual scholars, and then

the outcomes were rendered back into Chinese by another member of the translation team. Question items were compared with the original Chinese citations to assure that the integrity of the qualitative data was saved in the translation.

RESULTS

Most respondents had a favorable attitude toward MMT, and thought that it would relieve their economic burden of using drugs and improve their health, family relationships, opportunity to work, and ability to function in society. However, when examining the interview transcripts through the code and text search, several themes regarding the structural-, cultural-, and individual-level barriers to initiating and maintaining therapy emerged from the participant data. These are described below.

Application Procedure

A number of the participants (36.7%) discussed the application procedure for MMT. To gain entry to the treatment, participants had to provide the proof of previous failed detoxification treatment and get approval from the local police department. The opiate users' chaotic lifestyles and unstable living arrangements often caused them to lose their treatment records. At the same time, investigation by the police department was reported by more than one third of the participants as a deterrent to treatment entry, especially for those who were not registered with Public Security as opiate users. Opiate users' primary concern was that they would be registered formally and monitored by the Public Security from then on. One participant recalled the experiences from his days of seeking treatment:

You have to fill out forms and get a signature from the police. No all drug users are brave enough to do that. Tell you what, some of them might have some other crime and they definitely want to stay as far away as possible from the cop I remember that was my first time going to the police bureau. I didn't even know where the department was and who to ask. I kept looking and looking until the withdrawal symptom struck me. I really wanted to give up at that moment! You know what, quite a few of my friends gave up because of the requirement. (Male, 27 years old, junior high graduate, married, currently using MMT)

Stigma in Society

Perceived societal stigma toward opiate users was also reported as one of the reasons why opiate users did not enter the treatment. Entering the door of a methadone clinic everyday was perceived as being a "stamp on the forehead" proclaiming that one was an addict. This fear of discrimination was aggravated by the perceived overall negative attitudes of society toward opiate users. Respondents indicated that being identified as a drug addict would possibly result in losing their jobs. A current client stated that as the reason why his friend refused to use MMT:

He works for the government, he is afraid that coming to the clinic will affect his career and future. Very few people know that he uses drugs. What if his supervisor or co-workers saw him here? The whole thing would be disclosed, and his reputation would be ruined. He could even lose his job. (Male, 24 years old, junior high graduate, single, currently using MMT)

Inappropriate Perceptions of Methadone

We found that using heroin was perceived by the opiate users as being a symbol of high socioeconomic status. Those using MMT were considered as "running out of money" and "losing face." There were some opiate users in their network who chose to use heroin and remain outside of the clinic because their financial status enabled them to continue their

drug use without hardship. On the other hand, other participants stated that methadone did not produce the euphoria of heroin that they craved and therefore preferred to stick to their old lifestyle. Two participants commented on the difference between drug use and maintenance treatment:

Those who come to the clinic are the really poor ones, and they come here because they can't afford heroin. Once they had some money they will buy heroin again and get high, and the feeling is totally different. (Female, 26 years old, secondary technical school graduate, married, dropped out of MMT)

We use heroin because we like the feeling. I would prefer dying after five years of using heroin than living for 10 years using methadone. The heroin makes me feel so good but methadone gives me nothing and it is as toxic as heroin. (Male, 30 years old, junior high graduate, married, dropped out of MMT)

Logistical Barriers

So far, taking home doses of methadone is not allowed in China. MMT requires its users to attend clinics on a daily basis, which poses logistical difficulties for many users. Reported daily commute times to the clinic varied considerably between clients, ranging from 2 minutes of walking to 5 hours on buses daily. Longer commute times were often cited as a reason for reduced treatment retention. In the words of one participant:

Can you imagine how freezing it is to ride a bike on snowy days? It is so inconvenient that the clinic just moved to a suburban area that doesn't even have a bus. Sometimes I rush here after work, and would be afraid that they will be closed soon, so I had to take a taxi, but it is not affordable if I do that every day. (Female, 31 years old, some junior high education, divorced, currently using MMT)

After sometime in treatment, opiate users can regain their function in society and many of them start working. This becomes a new problem because the operating hours of MMT clinics often conflict with clients' working schedules. Moreover, it becomes very difficult for employed methadone clients to go out of town for business trips. Even though a referral system for a local clinic in other cities was available, it took several days to get the paperwork completed and processed, and in some cities, there are no MMT clinics. Because of these inconveniences, more than 80% of the participants reported not wanting to be in the program for long-term or lifelong maintenance. Two interviewees further illustrated the point:

I feel like I am a normal person now, so I found a job to support myself. But the clinic opens at 9 am and closes at 5 pm. I need to go to work at 8 in the morning so I am not able to come. Every day after work I will have to rush here, and if I miss a dose, the withdrawal syndromes occur at night. I feel it is such a burden to me. (Female, 32 years old, junior high graduate, married, currently using MMT)

Last time I left the city in a rush. Before I left, I handed in the transfer application form and faxed it to the clinic in the city I was going to, but they didn't approve it right away because the director was out of town. Only the director could approve it, so I waited for a couple of more days. The procedure was very troubling. (Male, 25 years old, secondary technical school graduate, single, dropped out of MMT)

Side Effects

Side effects were also reported as one of the reasons for dropping out of MMT. The most frequently cited side effects in this study included constipation, erectile dysfunction, menstrual cycle irregularities, and sleeping disorders. For some of the participants (20.0%),

the side effects were severe enough to interfere with their daily lives and family relationships. One participant complained:

I totally lost my sexuality, totally! It was even worse than using heroin. I heard many other clients had the same problem as I did. My wife didn't understand and suspected that I was having an affair You know, I almost got divorced because of that. After I quit using methadone, things kind of got back to normal. (Male, 30 years old, junior high graduate, married, dropped out of MMT)

Unfortunately, the majority of clients did not receive appropriate medical care for the side effects. Some of them were reluctant to consult the MMT clinic service providers about the treatment of side effects, because the doctors were considered to be "unprofessional." However, they felt ashamed to seek treatment for methadone-related symptoms in other hospitals. A few MMT clients were told by the service providers that lowering the dosage was "the only way to solve the problem." Consequently, the reduced methadone dose eventually did not stop the withdrawal symptom and probably contributed to relapse to heroin and the high rates of dropout from the clinic.

In addition to the direct side effects, many participants of childbearing age were concerned about the potential effects of methadone on pregnancy and long-term effects on future babies. However, few of them received a clear answer to their question from the service providers. Two clients stated:

At the beginning, my period stopped for nine months. I got two progesterone shots, but they didn't work. I really want to get pregnant. (Female, 26 years old, secondary technical school graduate, married, dropped out of MMT)

My girlfriend wants me to quit methadone as soon as possible, because I am 25 already, and she is not sure if it will have some adverse effect on my fertility. She believes that long-term use of methadone will be bad for our baby. She said she won't marry me before I stop the treatment. (Male, 24 years old, junior high graduate, single, currently using MMT)

Fear of Addiction

Many (73.3%) expressed fear of methadone withdrawal. The respondents had doubts about maintenance therapy, and thought it was pointless to replace one addiction with another. It was believed by many opiate users that methadone causes an even greater dependence, and that the withdrawal symptoms were much severer than those associated with the use of heroin. Withdrawing from methadone in jail was reported to be a common experience of methadone clients. Some participants preferred voluntary detoxification centers or self-prescribed strategies for managing heroin rather than MMT. As stated by two participants:

The withdrawal of methadone is worse than heroin. It is like a bug scratching in your bones I don't know how to describe it, and you will have to lie down in bed, your body is so weak. (Male, 34 years old, junior high graduate, married, never used MMT)

After I used methadone for a while I was caught by cop and sent to rehab. The other people who didn't use methadone before became normal very soon, in about twenty days. But I still felt bad after I was there for three months! So I felt that methadone is more addictive than heroin, and it is so hard to quit. I won't use methadone again because it is so addictive. I would rather use heroin (Male, 32 years old, elementary school graduate, married, dropped out of MMT)

Public Security's Intervention

Almost all of the participants said that the intervention of Public Security was a significant disincentive for treatment maintenance. In some areas, the police constantly patrol outside the MMT clinic and vicinity and approach persons they think are “suspicious.” Those who occasionally used heroin would be identified and placed in a mandatory residential compulsory rehabilitation center for detoxification, which became a primary reason for discontinuing maintenance treatment. In addition, news of other opiate users' arrests also discouraged other clients' from continuing MMT:

During the half year I have been here, I know more than ten people who were caught by the police. They usually wait for you outside of the clinic or some nearby streets. Once you come out of the clinic, they stop you for a urine test, and if it is positive, you are sent to a rehab. The other clients hear the news and hide, and that is why some clients use methadone very irregularly. (Male, 24 years old, junior high graduate, single, currently using MMT)

Lack of Comprehensive Services

Current clients in the MMT clinics stated that they tend to use heroin when they are bored or depressed, so comprehensive services, such as psychological counseling and health education, seem to be an important need. In actuality, these services seem to be very limited in the clinics. The staff members are too busy to provide services in addition to their heavy workloads. Most clients stay in the clinic as short a time as possible and leave the clinic without actually talking to any of the service providers. Some clinics have no private areas for individual consultation. These circumstances prevent a discussion of sensitive topics. A client stated:

There is no education, no counselling, nothing. We hope the doctors can chat a little bit with us, but they don't. I think more communication would be highly appreciated. I would hope that the doctors could teach us how to avoid drugs Now I feel like we just come every day to get the dose and leave right away. (Male, 29 years old, some junior high education, married, currently using MMT)

Economic Burden

The MMT clients reported engaging in criminal activities previously to support the cost of their drug habit (about 500 yuan daily). Payment for MMT, although only 10 Chinese yuan (US\$1.47) per day, was cited as a barrier for about one third of the participants in the study, because upon entry of the MMT, they were no longer engaged in criminal behavior for money. The unemployed clients had to depend on their family for supporting the treatment. Some potential clients who could not receive financial support from their family might not be able to have the treatment. In addition to the treatment cost, the daily transportation fees are also a financial burden. As one of the participants stated:

As a known opiate user I couldn't find a job, so I don't have any income. My parents support the treatment fee, but they make less than 1000 Yuan per month. Methadone costs 300 Yuan per month, not including transportation, which is about 5 Yuan per day. How much is left for their daily expenses? My parents are getting older and older, what I am going to do after they pass away? (Male, 42 years old, senior high graduate, divorced, currently using MMT)

DISCUSSION

China has made significant progress toward implementing the MMT programs in the past 5 years or so. Tens of thousands of opiate users are benefiting from the positive outcomes

associated with participation in MMT such as decreased drug use and associated criminal behaviors, and increased quality of life and employment (Pang et al., 2007; Sullivan & Wu, 2007). The communities have also profited from the ancillary effects of the program, including reductions in the size of the local drug markets and corresponding crime rates and improved public security (Pang et al., 2007). As the program expands, the potential for more individuals and communities to enjoy these benefits also increases.

Findings indicate that there are many barriers to current MMT programs and the efforts to improve the health of individuals and communities. This research has highlighted several of the major perceived barriers against accessing and remaining in MMT. It is remarkable that after being in place for only a few years, the MMT program in China elicits similar barriers as one would expect in other countries with the established use of MMT. A recent study in the United States also reported the lack of money or health insurance, side effects, fear of withdrawal from methadone, and unwillingness to commit to indefinite maintenance as barriers to the treatment entry (Peterson et al., 2008). Thus, while the reported barriers indicate opportunities to expand the benefits from methadone treatment's proven efficacy in reducing heroin use, HIV transmission, and criminal behavior (Kerr et al., 2004; Kreek, 2000), there may be a ceiling of the number of individuals willing to enroll. Still, efforts to improve enrolment and retention in MMT in China are important and need to be addressed.

Fear of being reported to the police is perhaps the strongest barrier to enrollment and retention in MMT. In addition, there were incidents in which the police waited outside the MMT clinics to arrest opiate users who were concurrently using heroin. Also reported by other studies (Luo & Wu, 2004; Xu & Zhuang, 2005; Yuan, 2005), fear of the police is a strong deterrent to utilizing MMT in China. This is not surprising, given the historically punitive approach to drug use by the government (Yang et al., 2008). Although the current central government has given explicit orders to support MMT programs (Sullivan & Wu, 2007), Public Security authorities still regard drug misuse from a criminal justice perspective, which complicates the implementation of MMT for both individuals and clinic staff members (Thompson, 2005). This issue also highlights the need for the government to actively involve police and Public Security personnel in supporting MMT and changing their attitudes toward opiate users. The opiate users would benefit if clear policies were created, implemented, and enforced to specify the rights of MMT clients. For example, many more opiate users may enroll in MMT clinics if the requirements for registration with the police were dropped.

Drug use is considered to be in sharp conflict with the traditional Chinese cultural and moral values. The stigma associated with drug use is common in Chinese society (Deng, Li, Sringeriyuang, & Zhang, 2007). Participants in our study reported drug-use-related stigma as a barrier to the uptake of MMT. Treatment was perceived as stigmatizing and as a barrier to obtaining employment if identified as a opiate user when registering at MMT clinics. The stigma discourages opiate users from using services and results in continued use of drugs and/or other risky behaviors. This finding underscores the importance of programs to reduce stigma among the general population and disseminate knowledge about the benefits of MMT to society.

The high relapse rate might be reduced by providing relevant services in addition to simply dispensing methadone. Currently, additional services are in the process of being incorporated into the standard MMT program, including psychological counseling, HIV and hepatitis testing, and health education (Wu, Sullivan, Wang, Rotheram-Bonus, & Detels, 2007). However, these comprehensive services are still in the early stage of development, so they have been provided only infrequently (Pang et al., 2007). Psychological counseling and motivational enhancement therapy have been shown to increase the effectiveness of MMT

(Miller & Rollnick, 2002; Stevens, Radcliffe, Sanders, & Hunt, 2008), so increasing the quality of psychosocial care within MMT is necessary to expand the MMT programs throughout China. Also, in order to attract and retain opiate users in methadone treatment, it would be helpful to develop meaningful employment opportunities and effective side-effect treatments to help opiate users in their rehabilitation process.

Financial difficulty was reported as a major barrier to drug user treatment (such as detoxification, rehabilitation, and outpatient observation) in other countries such as Russia and United States (Appel, Ellison, Hadley, & Oldak, 2004; Bobrova et al., 2006). In China, the relatively small payment required by the MMT program was cited as a barrier to treatment, especially for those who are unemployed or do not receive adequate support from their families. However, once dependent, individuals have few choices beyond engaging in criminal behaviors to support active drug use or to fund the relatively lower costs for MMT. One option available to policymakers is to allocate more resources to the MMT programs and explore ways to waive or reduce fees for opiate users with financial difficulties. Alternatively, treatment systems could consider giving incentives to opiate users for continuously using MMT (such as free doses or take-home doses), which has been shown to encourage longer retention in treatment and increase the probability of better outcomes (Gao, 2006).

There are other active structural changes in clinical practices that may be useful to increase treatment enrollment and retention. These approaches include the development of an easier referral system, which would provide the MMT clients with a “universal” membership card that contains an individual's identification and treatment information, so that the opiate users can receive methadone from any MMT clinic in the country without going through complicated referral procedures. This would hopefully prevent concurrent heroin use when opiate users are traveling. Other approaches include mobile vehicles dispensing methadone and offering street outreach to clients. Moreover, as discussed by many study participants, MMT clinic's operating hours should be extended or held in off-hours so that they do not interfere with clients' work schedules or other family responsibilities.

STUDY'S LIMITATIONS

As in every study, there are several limitations of this study. The findings may not be generalized to other parts of China in which the drug-using patterns and economic situations may differ considerably from those in Zhejiang and Jiangxi Provinces. Second, the recruitment procedure restricted us from finding the most hard-to-reach opiate users and identifying their perceptions of barriers to MMT. Despite these limitations, our findings underscore the critical need to reduce barriers that hinder uptake of the MMT program and suggest the need for structural changes to provide more effective service for opiate users in China. The findings are informative for designing future laws and policies. Structural constraints must be removed, and explicit policies must be created to encourage and facilitate access to drug user treatment, which clearly benefits society as a whole.

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Biographies

Dr. Chunqing Lin, Ph.D., received her doctorate degree from the Fogarty International HIV/AIDS training program of University of California, Los Angeles (UCLA). She is currently a project director in the UCLA Semel Institute—Center for Community Health. Dr. Lin has more than 6 years of experience in qualitative and quantitative researches. Her research interests include HIV/AIDS behavioral control and intervention. She has authored and coauthored over 30 articles published in international peer-reviewed journals.

Dr. Zunyou Wu, MD, Ph.D., is making his mark in global health as the director of the National Center for AIDS/STD Control and Prevention, Chinese Center for Disease Control and Prevention, the highest position for HIV/AIDS control in China. Dr. Wu was the first public health investigator to report the HIV epidemic among former plasma donors in rural China in 1995 and initiated a health promotion program supporting condom use. Dr. Wu was also the first to successfully implement outreach programs for female sex workers through extensive behavioral interventions. He led China's first research project for harm reduction among drug users, and then took a leadership role in scaling up China's national methadone maintenance program. His research sparked the creation of national guidelines in China for sex workers and substance users, translating science into life-saving public health programs. Dr. Wu also serves on committees which oversee HIV intervention projects in Russia, India, Peru, and Zimbabwe, as well as the Task Force on drug use and HIV for UNDCP and UNAIDS in the Asia-Pacific region.

Prof. Roger Detels, MD, MS, is professor and chair of the Department of Epidemiology at the UCLA School of Public Health. He began his research on HIV/AIDS in 1981, with the development of a cohort of homosexual students. Since 1984, he has been the principal investigator of the Los Angeles Center of the Multicenter AIDS Cohort Study, one of the largest natural history studies of HIV/AIDS in the world. For 18 years, he has been the

program director of the National Institutes of Health UCLA/Fogarty AIDS International Training and Research Program, which has trained over 110 health professionals from China, India, Brazil, Thailand, Vietnam, Cambodia, Myanmar, Indonesia, the Philippines, and Laos in epidemiology and HIV/AIDS. He has served as a consultant for the World Health Organization and the UNAIDS programs in China, India, Indonesia, and Vietnam; for USAID in the Philippines and Cambodia; the United Nations Development Program in Myanmar; and Family Health International in Cambodia. He has assisted the governments of Thailand, Myanmar, the Philippines, Cambodia, and Indonesia in the development of their HIV sentinel surveillance systems. He has spoken on HIV/AIDS throughout the world and has published over 200 articles on HIV/AIDS from a total of over 400 published articles and chapters on various topics since 1966.

GLOSSARY

HIV	Human immunodeficiency virus, a virus in humans that causes acquired immunodeficiency syndrome (AIDS), in which the immune system begins to fail, leading to life-threatening opportunistic infections.
In-depth interview	An in-depth interview is a conversation with an individual conducted by trained staff that usually collects specific information about one person. It is designed to reveal the underlying motives of the interviewee's attitudes, behavior, and perceptions, and it is usually conducted on one-to-one basis.
Methadone	Methadone was developed by German scientists in the late 1930s. It was approved by the US Food and Drug Administration (FDA) in 1947 as a painkiller. Because methadone is effective in eliminating withdrawal symptoms, it is used in detoxifying opiate addicts. Taken orally once a day, methadone suppresses narcotic withdrawal for between 24 and 36 hours. It is, however, only effective in cases of addiction to heroin, morphine, and other opioid drugs.
Qualitative study	Qualitative study uses nonnumerical data collection or explanation method to gather an in-depth understanding of human behavior and the reasons that govern such behavior. The qualitative method investigates the <i>why</i> and <i>how</i> of decision making, not just <i>what</i> , <i>where</i> , <i>when</i> . Hence, smaller but focused samples are often needed.

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TABLE 1

Demographic characteristics of opiate users who participated in qualitative in-depth interviews

	Number	Percentage
Province		
Zhejiang	15	50.0
Jiangxi	15	50.0
Age (years)		
20–29	10	33.3
30–39	16	53.3
40–49	4	13.3
Gender		
Male	24	80.0
Female	6	20.0
Marital status		
Single	8	26.7
Married or living with partner	17	56.7
Divorced	5	16.7
Education		
Elementary school	6	20.0
Junior high	13	43.3
Senior high	11	36.7
Employment		
Unemployed	17	56.7
Self-employed	7	23.3
Employed	6	20.0
Route of drug administration		
Intravenous injection	26	86.7
Other	4	13.3
History of opiate use		
>10 years	18	60.0
10 years	12	40.0
MMT use		
Never	7	23.3
Current use	16	53.4
Dropped out	7	23.3

Note: Total sample size = 30.