A New HIV/AIDS Intervention Model for MSM: Experience of Using Social Media for AIDS Interventions and HIV Testing Mobilization in China

China-Gates Foundation HIV Prevention Cooperation Program

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
BMGF	Bill & Melinda Gates Foundation
CASAPC	China Association for STD/AIDS Prevention and Control
CBO	Community–Based Organization
CD4	CD4 helper T–cell count
CDC	Chinese Center for Disease Control and Prevention
CPMA	China Preventive Medicine Association
FSW	Female Sex Worker
GONGO	Government–Organized Non–Governmental Organization
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HIV+	HIV positive (infected with HIV)
IDU	Injecting Drug User
MARP	Most–at–Risk Population
MSM	Men who have Sex with Men
NCAIDS	National Center for AIDS/STD Control and Prevention
NHFPC	National Health and Family Planning Commission of China
NGO	Non–Governmental Organization
NPMO	National Program Management Office
PBFM	Performance–Based Funding Management
PLHA	People Living with HIV and AIDS

Executive Summary

According to the data released by National Health and Family Planning Commission of China (NHFPC) (Pervious Ministry of Health) every two years, the growth rate of new HIV/AIDS cases has slowed down in China, but the proportion of new HIV infections via homosexual transmission is increasing significantly. The prevention of HIV transmission among men who have sex with men is prioritized in HIV/AIDS response.

In the first half of 2012, 388 million netizens accessed the Internet via mobile phones. Mobile phones have become the primary Internet terminal among netizens in China. Along with the development of mobile Internet, social media have been popularized. By the end of 2011, more than 80% of netizens utilized instant messaging (e.g. QQ, MSN and WeChat) in China. By the end of June 2012, the proportion increased to 82.8%, involving a population of 445 million, with a growth rate of 7.2% within a short period of half year. Particularly, over 200 million netizens utilized WeChat in June 2012. Social media are playing a more and more important role in daily life and posing significant impact on the change of social behaviors. This enormous technological change has also affected friend-making patterns and behavior patterns among MSM. Instant messaging has even become one of the main channels used by MSM to make friends (i.e. e-dating) (Geyer, 2003).

China-Gates Foundation HIV Prevention Cooperation Program was launched in 2007 and has involved and guided a large number of CBOs to conduct advocacy and intervention for HIV/AIDS prevention among MSM. In practice, these CBOs have leveraged different social media technologies to mobilize HIV test and conduct interventions. The "three-in-one" working model (i.e. cooperation among CDCs, health facilities and social organizations) has improved the professionalization, standardization and creditability of network platforms originally run by MSM groups, and also created an innovative strategy to strengthen testing mobilization and HIV/AIDS prevention among MSM via social media. Nevertheless, the use of social media in this regard is still at an early stage. There are neither summarization and analysis of existing experiences nor scientific implementation and guidance.

This paper will briefly describe specific social media technologies used by CBOs in testing mobilization, offline service delivery and care for PLHA during the implementation of China-Gates HIV Program, including instant chat (e.g. QQ, chat room and MSN), microblog, mobile social network (WeChat, MiTalk and Jack'd) and “gztellthem” website.

To understand the specific characteristics of social media used in HIV/AIDS interventions with MSM and further strengthen HIV/AIDS response in China, this paper tries to summarize the "Model for HIV Testing Mobilization and Intervention via Social Media" from the perspective of effective implementation. The model consists of three key components: (1) implementing interventions via social media based on excellent CBOs; (2) linking and synergizing online interventions via social media and offline service delivery by CBOs and CDCs (or hospitals and community health centers); and (3) integrating multiple social media to expand the coverage of social media and maximize the effectiveness of interventions.

1 Background

1.1 MSM: Important Target Population for HIV/AIDS Control and Prevention in China

The number of newly reported HIV infections in China saw a gradual increase in recent years. According to a joint assessment by NHFPC, the Joint United Nations Programme on HIV and AIDS (UNAIDS) and the World Health Organization (WHO), there were 780,000 AIDS patients and people living with HIV in China as of the end of 2011, among which 154,000 people were AIDS patients. The assessment also states that in 2011, there were about 48,000 newly-reported HIV infections and 28,000 AIDS-related deaths. Furthermore, the State Council reviewed and adopted China's HIV/AIDS Containment and Control Action Plan (2011-2015) in 2011, indicating that the central government is intensifying efforts to fight against the spread of HIV/AIDS.

Statistical data released by NHFPC on a bi-yearly basis show that the growth of newly-report HIV infections in China has been slowed, yet it saw a dramatic rise in the proportion of HIV transmissions through homosexual intercourse. The UNAIDS Report on the Global AIDS Epidemic 2009 showed that in China, HIV/AIDS was mainly transmitted through sexual intercourse, and 32.5 percent transmission cases were via homosexual intercourse while the proportion was only 12.2 percent in 2007.

From 2008 to 2009, centers for disease control and prevention (CDCs) in 61 cities across China, in collaboration with local gay communities, carried out a three-round survey on MSM (men who have sex with men) populations, with about 56,000 MSM participants. The survey result showed that 5.0 percent of the participants were HIV-infected, while the percentage respectively in some cities in southwest China such as Guiyang, Kunming, Chengdu and Chongqing exceeded 10 percent. Furthermore, that percentage soared to over 20 percent in some regions in 2011, showing a drastic rise compared with only 0.4 percent in 2005. At the same time, because most Chinese people believe in the concept of family in a traditional sense, about 90 percent of MSM populations in China choose to get married and 40 to 74 percent of them will have sexual relations with women, resulting in HIV/AIDS spread to the general populations. Therefore, MSM populations have become the important target for HIV/AIDS control and prevention in China.

1.2 Significance of using social media for HIV/AIDS interventions

"Social media" first appeared in 2007 in an e-book "What is Social Media" written by Antony Mayfield who defined "Social Media" as new-type web-based platforms where users (individuals and communities) create and exchange user-generated content. This definition points out the core feature of social media, i.e. social media are participatory platforms that allow users to share their ideas and interact with others' ideas. The specific applications of social media include email, forums, instant messaging tools (QQ, MSN, etc.), blog, podcast, Wikipedia.org, Answers.com, SNS, microblogging, group-buying websites, among others.

1.2.1 A large population of active social media users in China

According to the "The 30th Statistical Report on the Internet Development in China" released by the China Internet Network Information Center (CNNIC) in July 2012, there have been 538 million Internet users in China as of the end of June 2012, and the Internet penetration rate reached 39.9 percent.

Furthermore, the Report also shows a new trend in China in terms of what terminals the Internet users are using to go online. Till the end of June 2012, 388 million people used their mobile phones to access the Internet while 380 million people use PCs, thus mobile phones have become the most frequently used terminal in China for people to access information through the Internet. The rise of social media is closely related to the development of the mobile Internet. All mainstream social media are trying to expand their shares rapidly in the mobile Internet terminal market. Taking advantage of portable carriers and provision of small pieces of information, social media soon establish their presence among Internet users. Meanwhile, with the development of mobile terminals, geolocation-based applications become popular and more and more social media start to offer this type of services.

Statistical data on the application of social mainstream media in China show that instant messaging tools including QQ, MSN and WeChat are the top three social media applications in China. It shows that by the end of 2011, the utilization rate of instant messaging tools among Internet users in China was over 80 percent, while as of the end of June 2012, 82.8 percent Internet users, i.e. about 445 million people, are using one or more instant messaging tools, representing a growth rate of 7.2 percent within merely six months. In addition, the position of instant messaging tools as the top application for Internet users in China has been further solidified on the basis of further development of the mobile Internet, in particular the promotion of the application of intelligent terminals, as well as the innovations in mobile phone chat tools.

Statistical data also show that as of the end of June 2012, there are about 353 million blog or

personal web space users; and 274 million microblogging users, up 9.5 percent compared with that at the end of 2011. It means that 50.9 percent of Internet users in China have their microblogs, up 2.2 percentage points compared with that at the end of 2011.

1.2.2 The use of social media by MSM populations

Both governmental and private sectors are becoming more and more open to MSM populations, but we have to realize that MSM are still considered as "aliens" by people who believe in traditional Chinese family values, thus are under a lot of pressure from all sectors of society or even suffering from discrimination. Social media are open to all people and allow people to communicate and interact with others anonymously, thus are replacing traditional "face-to-face" social venues (such as parks and bars) to become the major channels for MSM populations to have friends, such as e-dating. (Geyer, 2003)

Some social media do a good job in protecting personal information and privacy. MSM populations are usually considered as socially marginalized populations and are suffering from AIDS-related stigma or discrimination (WHO, 2011). In this regard, MSM populations have exceptionally high demand for privacy protection, and they are extremely cautious when they take the initiative to seek help or are subject to intervention. A research report shows that the biggest concern for MSM populations is whether their privacy will be well protected when they decide to receive medical treatments; then they would think about whether they could afford the medical costs or whether the services are easy to access. (Onyango-Ouma, Birungi, & Geibel, 2005) Social media can well satisfy MSM populations' demand in this regard, thus help HIV/AIDS prevention workers quickly gain trust of the target populations and build effective communication with them. Furthermore, through social media, HIV/AIDS prevention workers may encourage target populations to take the initiative to seek help, protect themselves and have self-management.

In addition to the abovementioned functions, social media also serve as platforms for MSM populations to set up mutual support groups or communities where they could find a sense of belonging and obtain more knowledge and information, thus receiving emotional and psychological support. These groups and communities sometimes organize offline activities to help MSM populations express themselves and protect their legitimate rights and interests.

Social media such as instant messaging tools can not only help establish effective communication between MSM populations and HIV prevention workers and enable MSM populations to gain practical knowledge and information, but also maximize the protection of the privacy of the MSM populations. Therefore, instant messaging tools have become very popular in MSM populations (See Figure 1). According to the "The 30th Statistical Report on the Internet Development in China", as of the end of June 2012, males account for 55.0% of all Internet

大陆名站	公益健康	海外酷站	名博名吧	各地聊天	生活社区
阳光地带	中国彩虹热线	亚洲帅哥交友网	张北川教授	阳光同志聊天城	纯爱社区
淡蓝网	爱知行动	全球男同志交友网	李银河	北京同志聊天室	阳光社区
北京男孩网	北京同志中心	漾Men（台）	程青松	四川同志聊天室	同志第一社区
亚洲美男交友	爱白成都青年中心	女同学社	李学庆	湖北同志聊天室	华同社区
帅哥交友网	中国艾滋病基金会	拓峰交友网	百度SHO翔吧	军警同志聊天室	深蓝社区
会所指南	台湾同志咨询热线	同志旅行机票打折网	百度GAY吧	深圳同志交友聊天室	搜同社区
男朋友	同志健康促进会	Gay.com	Baidu同志吧	云南同志聊天室	江同社区
湖南同志网	中国红丝带	同志聊天室大全	蓝宇吧	碧落星空聊天室	男孩本色
湖北同志网	39健康门户	Fridae	新浪同志男性频道	浙江同志聊天室	帅同社区
纯男孩	台湾同志骄傲节	Trevvy	中华网爱人同志	西安同志聊天室	西安情天社区
青同时代	你好志愿者	Gay-tv	断壁山吧	江苏同志聊天室	左岸社区
广同	同语（拉拉志愿者）	男舍女舍（马来西亚）	搜狐同志情深	黑龙江同志聊天室	断背社区
朋友别哭	点杂志	Boyslove	同志！你好！	辽宁同志聊天室	逆光社区
博亚网	同性恋亲友会	亚洲同志网	形式婚姻	重庆同志聊天室	北京社区

Figure 1 Screenshot of MSM websites browsed on www.gaywang.com (MSM websites search engine)

Brief Translation of Figure 1: The table above contains all major online platforms for MSM populations, which are divided into six categories, namely MSM websites in mainland China, health care websites, overseas MSM websites, celebrities' blogs, chat rooms, and MSM communities.

users in China. Professor Zhang Beichuan estimated that in 2010, about 10 to 15 percent of male adults in China had the experience of having sex with men. (Zhang, Li, &Shi, 2002) In light of the aforesaid, there could be about 29.60 million to 44.40 million MSM populations in China who are Internet users till 2012.

MSM populations in China started to use social media since the end of 20th century. For example, the founder of GZTZ.org set up his personal website in 1998 (GZTZ.org is a very famous LGBT website across the south of China), MANBF.com, an HIV/AIDS prevention work group in Chongqing, was also established in 1998, and BOY532.com was founded in 2001. Some statistical research reports showed there were about 500 MSM websites in mainland China in 2002 and each website had thousands of users (Wang & Ross, 2002). The Internet brought great changes to MSM populations in terms of finding partners and having communication. In 2004, Professor Zhang Beichuan led a group to carry out a survey on 1,389 gay men in six cities in China, and the survey showed 43 percent of them found their partners via the Internet. (Professor Zhang Beichuan, 2007) Mr. Xing Jianmin conducted an online questionnaire in 2004 and received feedback from 5,710 gay men. The survey result showed that 47.7 percent of the survey participants found their partners through the Internet. (Xing Jianmin, 2007) Professor Jing Jun from Tsinghua University led a group to carry out a small-scale questionnaire survey in 2010. The survey covered 300 MSM in three major cities, and 81% of them found their partners online. (Jing Jun, 2012)

China-Gates Foundation HIV Prevention Cooperation Program ("China-Gates HIV/AIDS Program") officially launched in 2007 implements the strategy of promoting testing and prevention among MSM populations, facilitating medical treatments for people infected with HIV/AIDS, and making efforts to control the spread of HIV/AIDS. The Initiative invites CDCs, medical institutions and community-based organizations (CBOs) to collaborate in providing the three-in-one services, i.e. intervention and mobilization, testing and counseling, and treatment and care services. Most CBOs under the Initiative use the Internet as one of the major channels for HIV testing mobilization and interventions. Comparing to services provided by MSM groups, the three-in-one platforms jointly run by CDCs, medical institutions and CBOs provide MSM populations with more reliable, professional and standardized internet-based services. It also indicates that using social media for HIV testing mobilization and HIV/AIDS prevention and control among MSM populations in China has entered into a new stage.

1.2.3 MSM who use social media are faced with higher risks in terms of HIV infection

Among MSM populations, people who use social media are usually of young age and tend to be more sexually active. As we said earlier, social media are open to all people, allow people to communicate and interact with others anonymously and facilitate social connections, thus enabling MSM populations to find sexual partners easily. In 2007, Mr. Zou Huachun conducted a survey on 429 MSM in Urumqi who are the Internet users. The survey showed that 96.2 percent of the survey participants had the experience of e-dating, 91.2 percent of them found one or more sexual partners through the Internet, and 70.1% did not ask about HIV infections status before having the e-dating. (Zou Huachun, 2008)

MSM populations who use social media tend to have high-risk sexual behaviors. Furthermore, they have more opportunities to be exposed to high-risk sexual partners and tend to accept high-risk behaviors. Finding sexual partners through the Internet is a high-risk factor for MSM populations to be infected with STD. (Benotsch, 2002) Some research show that in China, the demographic characteristics of MSM populations who use the Internet are of young age and having higher education. But they usually do not use condoms when having sex, and they tend to have more than one sexual partner, or sometimes they might just find casual sex partners; thus they compose the high-risk group for HIV transmission. Therefore, social media can play a significant role in carrying out HIV intervention among MSM populations. (Zhang, Bi, Lv, Tang, Zhang, & Hiller, 2007)

2 Experience of Using Social Media for HIV Interventions among MSM Populations

China-Gates HIV Program, officially launched in 2007, has invited a number of CBOs to join the program to provide HIV/AIDS prevention and intervention services. In practice, these organizations apply various social media techniques in HIV testing mobilization and intervention. The following sections will give a brief account of successful experiences of CBOs in using social media techniques for HIV testing mobilization, and provision of offline services and care and support to people living with HIV/AIDS.

2.1 HIV testing mobilization and counseling

2.1.1 Using instant messaging tools (QQ, chat rooms, MSN, etc.)

Instant messaging tools (including chat rooms and QQ group) are widely used social media techniques by all CBOs for HIV testing mobilization and health education. As of the end of June 2012, there have been 445 million instant messaging users in China, with a use rate of 82.8%. With mobile phone devices, mobile instant messaging applications allow users to stay online anytime, anywhere, thus can better meet the needs of users. Therefore, there are more and more mobile instant messaging users in China. In fact, more and more CBOs are using instant messaging tools to communicate with target populations, and the most frequently used tool is QQ – almost all CBOs have their own QQ accounts or QQ groups. Compared with MSN, QQ can better protect users' privacy because QQ account or group registration does not require applicants to provide information pertaining to their real identities and the account or group names can be composed of pure numbers; while MSN account registration requires applicants to provide their email accounts, which might lead to the disclosure of applicants' personal information. QQ has become the most widely used social networking tool in China and possibly the second most popular instant messaging tool in the world. At present, almost all CBOs under

the Initiative have set up their own QQ accounts or QQ groups. In fact, individual QQ account and QQ group play different roles. QQ applications work in two ways:

(1) QQ account: "one–one" counseling platform

The Internet offers people a stress-free space, in particular for MSM populations. They could be more relaxed when chatting online because they do not need to worry about how other people would think of them or how professional physicians would judge them. Therefore, QQ provides a convenient platform for CBOs to do counseling for MSM individuals.

CASE

Shanghai Jing'an District Youth Service Center of AIDS Prevention ("Shanghai Qing Ai") is a typical case of using QQ to provide counseling services to the target populations. After joining the China-Gates Foundation HIV/AIDS Initiative in 2009, Shanghai Qing Ai began to try a multi-service strategy. They quickly discovered that social media were becoming more and more popular among MSM populations. Thus they started the "comprehensive HIV/AIDS prevention platform for MSM populations" in March 2007, and provision of counseling services through QQ account is an important part of the platform.

Shanghai Qing Ai's counseling service QQ is a single QQ account, having the account name as "Shanghai Qing Ai" to show that the QQ account is officially set up by “Shanghai Qing Ai” organization. The main function of this QQ account is to provide counseling services to the target populations, including HIV/AIDS related knowledge, HIV testing related information, help for HIV infected people, and some entertainment activities. Shanghai Qing Ai assigns several experienced staff to work with this QQ account to ensure people connected to the account may have answers to their questions at any time.

People connect to Shanghai Qing Ai's counseling service QQ account can be classified into three groups: (1) people who have received offline services provided by Shanghai Qing Ai and are willing to stay in contact with the organization. Staff working with this counseling service QQ regularly receive information pertaining to target populations who have received Shanghai Qing Ai's intervention services and add these people as their contacts, then provides them with follow-up care and support services; (2) people who get in touch with Shanghai Qing Ai through other platforms (Shanghai Qing Ai maintains several other platforms such its official website, Taobao store, and hotline service platform) and want to receive further counseling services and have more communications. But these people have not received any offline services; and (3) people who heard about Shanghai Qing Ai through other channels. They usually do not have any urgent request but would like to establish the connection in case any assistance needed from Qing Ai in the future.

QQ account can add as many contacts as needed, enabling Shanghai Qing Ai to find and establish contact with target populations who have received or will possibly receive the intervention services. Shanghai Qing Ai uses its counseling service QQ account to send instant messages to its contacts about HIV/AIDS prevention related activities, such as HIV testing or VCT (voluntary counseling and testing) activities.

Statistical data showed that in July 2011, among people who have taken the VCT, 40 percent of them took their first VCT because they saw the relevant messages sent via QQ.

Therefore, providing counseling services to the target populations via QQ is an effective means of intervention. Data show that in average, Shanghai Qing Ai's counseling service QQ account provides counseling services to 20 to 30 people each day. And there is one or two peak days each month when the QQ might provide services to 100 people.

(2) QQ group: classified management of MSM populations

Meanwhile, many HIV/AIDS prevention and intervention teams tend to use QQ groups because it is easy for them to use QQ groups to carry out classified management of the target populations.

CASE

Wuhan Xinyuan Working Group ("Xinyuan") consists of 11 core staffs and 76 volunteers and joined the China-Gates HIV/AIDS Initiative in 2008. The QQ group registered by Xinyuan is composed of five major core groups and 300 subgroups. The five major core groups are the "Wuhan elite volunteers group" (including all volunteers), "Group A under the China-Gates Foundation HIV/AIDS Initiative", "Group B under the China-Gates Foundation HIV/AIDS Initiative", "Group A under the Global Fund" and "Group B under the Global Fund". Xinyuan has strict control over these five core QQ groups in terms of their participants. People applying to join the said core QQ groups must be Wuhan residents and they must go to Xinyuan's office to complete four systematic training courses. Furthermore, they need to have full understanding of the relevant initiatives and programs such as the China-Gates Foundation HIV/AIDS Initiative before joining the relevant core groups. The first training course gives an introduction to Xinyuan in terms of its aims, work content, history of development and organizational structure. In the second training course, Xinyuan invites Wuchang or Hankou CDC staff to impart basic knowledge on HIV/AIDS, ethics basic principles and work principles in HIV/AIDS prevention. In the third training course, Xinyuan volunteers talk about how to carry out peer education and outreach activities. And the fourth training course focuses on effective work approaches such as

how to attract target populations. HIV/AIDS risk assessment is the focus of all the training courses.Trainees are required to grasp the assessment criteria. It takes three hours to finish each training course and Xinyuan offers the course once a week.

Xinyuan only provides necessary assistance in terms of the management of the 300 subgroups. The "subgroup masters" are usually people having many contacts in cyberspace and considerable prestige and influence in certain fields or areas. They reach and recruit members from MSM communities by online or offline means. These "subgroup masters" can be the "center of influence" and play active roles in helping Xinyuan reach out to target populations and carry out effective management. For instance, Xinyuan may first invite subgroup masters to have a meeting via a major core QQ group and tell them about goals to be reached; and then the subgroup masters may organize relevant activities within their respective subgroups. Xinyuan may follow up with activities and provide necessary assistance. Active subgroups may receive a reward of RMB 500. In principle, Xinyuan does not intervene in specific activities carried out by subgroups, but it does require half-an-hour HIV/AIDS prevention advocacy during each activity. Subgroups are open to all people and each subgroup may have 70 to 80 members, and most members are online from 19:00 to 22:00 each day. Subgroups are classified in various ways. Some subgroups are classified according to age, for example, members of a subgroup named "back yard" are all high school students of about 16 years old; and members of a subgroup called "boy's bedroom" are all students; some subgroups are classified based on colleges and universities, such as "Wuhan University" subgroup and " East China Normal University" subgroup; and some other subgroups are classified based on hobbies, for example, there are subgroups called "track and field sports", "music", "outing", "badminton", "soccer", "swimming" and "bodybuilding". Among all subgroups, the most popular ones are "Wuhan gathering 1-3", "Gay VIP" (mainly students), and "boy's bedroom". These various subgroups help Xinyuan to effectively expand HIV testing coverage.

As of the end of 2010, Xinyuan's core QQ groups for China-Gates Foundation HIV/AIDS Initiative had 2,800 members, and the relevant subgroups had 45,000 members. And Xinyuan's advocacy coverage reached out to more than 30,000 gay men in Wuhan (almost the half of the total MSM population in Wuhan). Furthermore, accumulatively 4,000 people took HIV testing through QQ group interventions, and 260 of them were found infected with HIV.

Experiences of CBOs under the Initiative show that instant messaging tools play an important role in expanding service coverage in terms of HIV testing mobilization; meanwhile they could help CBOs to stay in relatively close contact with target populations. With respect to a single

counseling service QQ account and QQ groups, QQ groups are more effective in classified management of the target populations while a single QQ account has advantages in providing "one-one" counseling services.

2.1.2 Microblogging

There are two important concepts in social media, UGC (user-generated contents) and CGM (consumer-generated media). UGC means that the contents disseminated in the social media are created by users. This kind of information network can be extended constantly on the basis of social network and interaction.

Both blogs and forums contain UGC. If taking information generation and dissemination rate as the evaluation criteria, microblogging has obvious advantages: microblogging only allows users to post short passages (limited to 140 Chinese characters), thus readers or followers can quickly grasp the main information; users may post their messages in flexible ways such as text, images, video or audio clips, links, among others; users may post messages through various terminals (PC, mobile phones, iTouch, iPad, etc.); and a number of portal websites in China allow their visitors to share their content on microblogging sites. The said advantages of microblogging provide users with better experience in interaction and communication with others, thereby helping users to be more active and creative. It can be said that microblogging represents the development trend of information dissemination. "The 30th Statistical Report on the Internet Development in China" shows that there had been 274 million microblog users as of the end of June 2012, showing an increase of 9.5% compared to that at the end of 2011. In addition, 50.9% of Internet users have their own microblogs, indicating microblogging is replacing blogs and forums to become a new mainstream social media.

First, microblogging is attractive to MSM populations because of their information sharing functions and easy accessibility. Users may visit microblogging sites anytime and anywhere, and become followers of any microbloggers they are interested in and obtain information from these microbloggers. A microblogging user may build his/her own information network based on his/her interests, thus develop a "social circle" online. Furthermore, the overlapping of different "social circles" helps users to expand their original online social circles. Such online "social circles" may be established based on relationships in the real world; meanwhile they are open to strangers who have the same or similar interests. MSM populations are attracted to the "weak ties" and online "social circles" established through microblogging, in which they could freely express themselves.

Secondly, microblogging provides users with good experience in searching and obtaining information they are interested in. Names displayed on microblogging sites are not necessarily

real names of users. This feature of microblogging is greatly welcomed by MSM populations because they are usually sensitive of privacy protection. On the other hand, microblogging does not require users to post certain amount of information before obtaining any. It means microblogging users can be information providers or microblogging celebrities, or they could simply be "information searchers/obtainers" who select information to satisfy their own needs or interests.

Thirdly, microblogging has comprehensive functions. As an open platform, microblogging has the potential to integrate any useful features such as geolocation-based instant message posting, classified information collection, privacy settings that allow users to control who can read their microblogs, search functions that help users find microblogs containing certain information, starting a ballot, and recommending microposts or microblogers to users. The integration of people-oriented functions significantly enhances the social cohesion of microblogging. At the beginning, MSM populations may use microblogging as platforms to achieve self-realization, establish social circles or find channels to express themselves. With the expansion of social circles, they could have access to many resources they never had before and develop new capabilities. Meanwhile, microblogging serves as cost-effective platforms where CBOs and other organizations may collaborate with each other and convey messages to target populations, thereby effectively carrying out mobilization and advocacy activities.

The social cohesion of "micro power", on one hand, facilitates the communication among MSM populations, thereby helping them receive group support and acknowledgement. On the other hand, the "micro power" may potentially help the entire society to consider the needs and have more understanding of MSM populations, and then changes the attitude towards them. Several active individuals or communities of MSM populations may play a leading role in helping to bring about the beginning of this changing course. Ultimately, MSM populations will develop an integrated platform for individuals and information sharing and access.

CASE

Some CBOs under the China-Gates Foundation HIV/AIDS Initiative already started to carry out HIV/AIDS prevention advocacy through microblogging. For example, Shanghai Qing Ai registered its microblog,“Shanghai Qing Ai”, and has published 2,083 microposts. Now it has 17,102 followers. Qingdao Sihai Xiongdi registered its microblog “Qingdao Sihai Official Weibo” and has published 1,504 microposts. Now it has 688 followers.The registered microblogs of “Chongqing Lanyu Working Group” and “Lingnan Huoban” have published 398 and 93 microposts ,and have 1,159 and 587 followers respectively.

At present, these CBOs mainly establish their presence through their microblogs, aiming to gather target populations and show them what they can do to help them. First, they include in micrblog account description their basic information such as their office addresses,

official websites, QQ accounts and hotlines. Secondly, the content of microposts usually includes information pertaining to activities held by CBOs, HIV testing and prevention advocacy, health care and counseling services, and testing-related Q&As. Microblogs allow users to comment on their posts. When users consult about privacy-related health problem, CBOs will have one-one communications with them through microblogging's "private message" function. Some CBOs post MSM-related news, images and other interesting content to attract more followers from the target populations.

However, we must realize that, either in a subjective or objective sense, microblogging still cannot serve as the main platform for interaction and communication between CBOs and target populations. At present, microblogging still serves as a platform for CBOs to establish presence and images, and to carry out advocacy activities. The potentials of microblogging are yet to be discovered.

In fact, microblogging has become an important way for CBOs to find target populations.

CASE

Micro-blogger named "Shen Cai Fei Yang" published a micropost on March 15, saying his friend Xiao Hai already had AIDS, who had been suffering from "low-grade fever accompanied by strong tinnitus". A microblogger "F Anran" saw the post and replied "Shen Cai Fei Yang" by reposting and gave some useful advice: "Tell your friend to have testing and diagnosis at CDC. And he should no longer stay up late or have any pet. Now the government provides free drugs. AIDS has been included in the category of chronic diseases. The average life expectancy in China is 75 years old. If your friend has early detection and actively takes treatment, his lifespan will be only five months less than usual." "F Anran" also said, "You may send me private messages if you need my help. I am a volunteer at Tianjin Shenlan Working Group."

Practice has proved that CBOs can reach out to people in need through this kind of interaction. Reaching out to target populations through microblogging does not require the microblogs to be registered under an official organization, CBO staff or volunteers may use their own microblogs to achieve the same goal. In fact, all staffs of Chongqing Lanyu Working Group have their own microblogs, and staff/volunteers of many CBOs under the China-Gates Foundation HIV/AIDS Initiative have their personal microblogs, too. Microblogging may play a greater role in HIV intervention if CBOs integrate strength of organizations and individuals and help their staff/volunteers to enhance their awareness of providing service through appropriate training.

2.1.3 Social networking websites (SNS)

By the end of June 2012, there have been 251 million social networking site users in China, indicating that 46.6 percent of Internet users are using social networking websites. Compared with that at the end of 2011, 2.6 percent more people are using social networking sites, but the utilization rate of this type of websites among Internet users dropped slightly. The high-speed growth period of traditional social networking sites that display real identities of users is over because of the further development of functions of instant messaging tools and high-speed development of microblogging. However, these traditional social networking sites still play an important role in social life of MSM populations.

Many CBOs under the China-Gates HIV/AIDS Initiative have their "portal websites for MSM", and they are still using them as important channels and platforms for HIV/AIDS intervention and advocacy. In the past, most MSM portal websites in China served as entertainment platforms or chatting or dating platforms for MSM populations. Those platforms mainly provided users with relevant news or emotional stories, but seldom published information pertaining to sexually transmitted diseases (STD) or HIV/AIDS prevention. MSM need to visit websites established by CDCs or medical institutions to find STD/AIDS related knowledge or answers to their specific questions. However, those health-related professional websites are usually not very attractive to common people because they only publish content that requires certain expertise to understand. People will not visit these websites unless they find they have been infected with certain diseases. Therefore, HIV/AIDS prevention related information published on those websites cannot really reach the target populations who think they have no health issues. It can be said when HIV/AIDS related websites were first set up, including MSM portal websites and health-related professional websites, they did not effectively carry out HIV/AIDS prevention advocacy and intervention.

The launch of the China-Gates Foundation HIV/AIDS Initiative pushed the change of this situation in China. One of the important missions of the Initiative is encouraging more MSM populations to take HIV testing. After joining the Initiative, some CBOs and MSM website operators made adjustments to the operating modes of their websites in order to make a better utilization of their websites in HIV/AIDS prevention advocacy and interventions.

CASE

Among all websites established by CBOs under the China-Gates Foundation HIV/AIDS Initiative, "Si Hai Xiong Di" has been in the forefront of innovation. "Si Hai Xiong Di" website is the most influential MSM website in Qingdao. It was founded in 2001 and now has more than 500,000 registered users, with the daily page view of about 40,000. It serves as the main platform for Si Hai Xiong Di Health Working Group ("Si Hai Working Group") to carry out HIV intervention online.

"Si Hai Xiong Di" website was originally an entertainment and social portal website for MSM, mainly providing MSM populations in Qingdao with some common information. Meanwhile, it had a very active chat room. Si Hai Working Group joined the Initiative in 2010, and it turned its website into an online base for HIV/AIDS prevention advocacy, mainly providing HIV-related knowledge and information to MSM populations. It also established a reliable HIV testing mobilization system. Now the website has reduced the posting of pure entertainment information, and adds more STD or AIDS related knowledge and information pertaining to HIV prevention activities organized by Si Hai Working Group. Information pertaining to activities organized under the Initiative can be found under the "Activities" column on its home page, through which website visitors may participate in various health-related gatherings or activities. And HIV prevention knowledge and Qingdao AIDS Prevention Association can be found under the "Daily Life" column.

GZTZ.org is similar to Si Hai Xiong Di website. GZTZ.org is an advocacy platform managed by Lingnan Partner Community, and is the most influential MSM website in China with the longest history of continuous service provision. The website was founded in 1998. Till 2010, it has more than 2.11 million absolute unique visitors in Guangdong Province. As a communication platform for MSM populations, it includes a number of columns that are popular among MSM population such as general information, dating, entertainment, and community services. Meanwhile, the website sets up a column named "Red Ribbon" to carry out HIV prevention advocacy and intervention. Visitors may find all sorts of STD or AIDS related knowledge under this column, including HIV/AIDS transmission and prevention, and basic medical treatments for HIV infection.

All CBOs constantly bring forth innovations to promote website transformation and increase the diversity of content to attract more MSM populations to participate in activities organized through the social networking site and the attractiveness of social networking sites is enhanced vice versa.

CASE

GZTZ.org launches online applications to improve "self-intervention"

Taking the advantage of network technologies, GZTZ.org makes a number of useful attempts to carry out HIV intervention and testing mobilization among MSM populations. In addition to establishing website, registering QQ and microblog, and setting up the Easy Notification (gztellthem.org) system, GZTZ.org has developed other online applications to help target populations enhance "self-intervention". An online game called "Crossroads in Life" is one of the online applications developed by GZTZ.org. The storyline of the game is about an MSM who needs to make choices in different scenarios. For example, in the game, a player needs to choose whether to use condoms when having sex, and then choose whether to take HIV testing after sexual intercourses. Different choice may lead to different consequence and the player will see the consequences of his choices in the end. There is no data demonstrating whether this kind of game will exert direct impact on players, but through the game, players (target populations) may see the serious consequences of their wrong choices, thereby encouraging target populations to take correct behaviors in real life.

Another online application developed by GZTZ.org to encourage "self-intervention" among MSM populations is called "Rainbow Health Path". This application is designed to help target populations to do an online self-test in terms of HIV infection risks they are exposed to, and provide them with advice on behavior changes. The application developers learnt that most MSM populations in Guangdong Province are active online. They have participated in HIV/AIDS prevention advocacy activities and 90 percent of them have basic knowledge on HIV/AIDS. However, they still tend to have high-risk behaviors such as not using condoms when having sex, and not taking VCT. Reasons for their high-risk behaviors are because they are not clear about the possible consequence of their dangerous behaviors, thus they are not motivated to make any changes. In this regard, Guangdong STD/AIDS Prevention Association and GZTZ.org jointly developed the "Rainbow Health Path", the first online self-test system in China for MSM populations to assess the HIV infection risks they are exposed to. Based on advice and suggestions from experts and social workers, the developers set up infectious risk factors and assign different weights to different factors. When a user takes the self-test, the system would collect the user's information in terms of risk factors he is exposed to, and process the information according to the weights set to different factors. Then the system will display to the user his risk rating. The most important is that the system may issue an e-prescription to the user to help him avoid his high-risk behaviors. The system includes: (1) comprehensive assessment in terms of his exposure to

risk factors; (2) risk ranking of each high-risk behavior, and possible consequence; and (3) advice and suggestions on behavior change. Thus, after taking the self-test, the user may have a comparatively accurate knowledge on the HIV infection risks he has been exposed to, and may change his behaviors according to advice and suggestions offered by the system.

To summarize, experiences of "Si Hai Xiong Di" website and GZTZ.org show that by making appropriate adjustments to website content, strengthening interactions and providing extended testing services, entertainment and dating websites for MSM populations can be transformed into platforms for HIV/AIDS prevention advocacy and intervention. Furthermore, the various content of websites may attract more MSM populations, thus CBOs may reach out to more target populations and expand intervention coverage.

2.1.4 Mobile social media (WeChat, MiTalk and Jack'd)

Low prices of smart phones enable more people to use their mobile phones instead of computers to go online. Social media that provide geolocation-based services become more and more popular, and geolocation-based service has become a trend in the development of mobile social media. Mobile social media such as WeChat, Mitalk and Jack'd have become very important communication and interaction tools among MSM populations.

In 2011,Tencent developed a smart phone application “WeChat“ a free software for instant messaging tool. Users may send text, pictures even videos via WeChat. The biggest advantage of this type of software is that it enables users to use WeChat to communicate with their friends who are using QQ. It is estimated that there are about 200 million WeChat users in China. Jack'd is a geosocial networking application geared towards homosexual community, and has become more and more popular among MSM populations. Both WeChat and Jack'd are geolocation-based applications which allow users to easily locate their target groups in areas within a certain geographic distance. For example, with Jack'd, a user may locate target gay men within a three-kilometer radius. Jack'd is very popular among MSM populations in China, and they call it the "best chat and dating tool".

Currently, some CBOs already started to use this type of softwares to locate and mobilize target populations to take HIV testing.

CASE

Chongqing Lan Yu Working Group already started to use Jack'd to locate target populations and mobilize them to take HIV testing. There is a residential community in Chongqing where many money boys live. Money boys compose a hidden high-risk group. They usually do not take any testing because of their fear of social discrimination and pressure. Lan Yu Working Group uses Jack'd to locate the target populations and regularly send them information pertaining free testing and HIV-related knowledge via the instant messaging function of the software, thereby encouraging them to take testing. Jack'd is a geosocial networking application geared towards homosexual community and its users are all gay men, therefore, it is easy for MSM populations to accept information sent by CBOs through this platform. Lan Yu Working Group's experience of using this type of social media for HIV testing mobilization has proven to be a success.

Software like Jack'd includes the "one-one" instant messaging function, which can ensure the protection of users' privacy. This is also one of the major reasons why the software has become so popular among MSM populations. Besides, this type of software is geared towards certain populations, therefore is suitable to be used for HIV testing mobilization and intervention among populations who tend to conceal their sexual orientation. We visited nine CBOs and found that Lan Yu Working Group is the only CBO that uses Jack'd to carry out testing mobilization and intervention even though the software is very popular among MSM

Figure 2.
Translation of Information Displayed in Figure 2 (Message on the Right):From Chongqing Lan Yu Working Group Jack'd, this is from Chongqing Lan Yu Working Group, which is one of the first MSM community organizations in Chongqing. We are a reputable and trustworthy organization. We set up a MSM activity center at Guanyin Qiao Walking Street, where we provide you with free counseling service on STD/AIDS. In addition, you may take HIV and syphilis testing at a price much lower than that at hospitals. All testing fees collected will go into activities organized at the center and the center's daily operation. Various activities for MSM populations are held at the center, including mahjong and other board games. We also offer free HIV testing in collaboration with www.boyiboy.com. Please visit the website to make an appointment. For any questions, please call our service hotline 400-023-1069.

populations. Figure 2 displayed a message sent by Lan Yu Working Group via Jack'd. Is it possible for CBOs to make better utilization of this best dating tool among MSM populations for HIV testing mobilization and intervention?

2.1.5 Easy TellTM-a platform for anonymous HIV/AIDS exposure notification to sexual partners

"Early testing, early detection and early treatment" are extremely important in HIV/AIDS prevention and control. The target populations should take testing on a regular basis, and seek professional treatment if found HIV infected, so as to extend their life expectancy. Although AIDS is spreading quickly among MSM populations, some of them still do not realize that they have been exposed to risk of HIV infection thus do not consider it necessary for them to take HIV testing regularly. But it might have been too late when they realize that their former sexual partners have been HIV-infected. An interview with seven MSM who have been found HIV positive showed that all of them wished that their sexual partners would sent them warning notifications. (Zhong Fei, Xu Huifang, Cheng Weibin, Meng Gang, Wen Fang and Liu Qi, 2012) Another research shows that 50 to 70 percent of people infected HIV are willing to inform their spouses of their infections, while only less than ten percent of them want to inform their regular or non-regular sexual partners of the message. (Zhong Fei, Xu Huifang, Cheng Weibin, Meng Gang, Wen Fang and Liu Qi, 2012) According to observations of social workers, MSM populations in China usually have more than one sexual partner, and they do not maintain stable relationship with their partners; thus it is very difficult for them to send the relevant notifications to their partners.

Using the Internet to notify MSM populations anonymously of their possible exposure to HIV/AIDS makes it easier to notify relevant people of the possible risks they are exposed to. A research shows that 80 percent of MSM populations would like dating websites to set up AIDS/STD notification systems, and users may choose whether to disclose their personal information when sending alert messages to their partners via such systems. (Rotheram-Borus, Swendeman & Chovnick, 2009) Such non-face-to-face notification system may help avoid embarrassment to the maximum extent possible.

CASE

Guangzhou CDC and Guangzhou Xiao Culture Communication Co., Ltd. jointly developed an anonymous notification platform that can be used via the Internet and mobile network, which is call Easy TellTM (http://www.gztellthem.org/). The platform enables MSM populations to anonymously notify their sexual partners of their possible exposure to HIV infection.

The Easy TellTM system (http://www.gztellthem.org/) is easy to use. After logging onto the homepage of the website, a user may inform his/her sexual partners by simply clicking on the button of "sending an anonymous message". In the message, the user needs to provide information such as gender and what diseases he/she has according to diagnosis results. And the user may also write his/her words in the message. Then the user may choose to send the message via SMS or email and provide the contact information of the sexual partners he/she is trying to reach. The Easy Notification system will subsequently send a standard message to the recipient to remind him/her to check messages related to his/her health status. The recipient may check his/her message on the strength of the verification code contained in the reminder SMS or email. During the whole process, the system will not give out any identity information of the sender such as name and contact information.

Figure 3 Screenshot of the Easy TellTM system (http://www.gztellthem.org/)

Translation of the screenshot:

Easy TellTM system – Anonymous, Convenient, Responsible

You use this platform to send anonymous notification to your friends, so that they could take necessary testing to find out about their health condition.

Major functions:

1. Tell a Friend: you may notify your spouse or lover that you have been infected with STD/AIDS;
2. Take a Test: if your partner has been infected with STD/AIDS, you may learn more information about testing and other related knowledge if necessary;
3. View a Message: if you have received a notification from the number 135 6002 9690, you may view your message here by providing the verification code contained in the notification.

When the recipient logs onto www.gztellthem.org, he/she can not only check his/her personal message but also learn about some practical health care related knowledge, including frequently asked questions related to STD and AIDS, and the relevant testing. In addition, as a "one-stop" service website, www.gztellthem.org also has a column named "picking up testing report", with which users may have their testing reports online. (See Figure 3)

Data show that from December 1, 2009 to December 31, 2010, 165 people used the Easy TellTM platform to send 279 messages to their sexual partners, which means that in average, each person sent 1.7 messages. All of the messages sent, 84.9 percent thereof, i.e. 237 messages, were related to HIV infection, 35.5 percent thereof, i.e., 99 messages were related to STD infection, and 20.4 percent thereof, i.e., 57 messages were related to HIV and STD infections. On the other hand, about 23.7 percent of recipients logged onto the system to view their messages, and this view rate was about the same as that of some similar notification systems abroad. (Zhong Fei, Xu Huifang, Cheng Weibin, Meng Gang, Wen Fang and Liu Qi, 2012)

Although we still do not have the latest statistical data of its utilization, it is foreseeable that "Easy TellTM" has room to improve. For instance, the initial version of Easy Notification could only send notifications via SMS, thus limiting the target user groups. Since the application has been upgraded in 2012, now it allows users to send notifications through emails, which greatly expanded the scope of users. In this way, people can use "Easy TellTM" to notify their partners as long as they can go online.

2.2 Reaching out through offline services

Using social media for intervention is efficient and cost-effective. Therefore, CBOs usually use social media for preliminary intervention activities. We could say that online intervention is the initial step in the entire intervention course. However, networking technologies are means through which we reach our goals and our ultimate goal is to reach out to people in need in the real world, which requires us to move from online to offline, from virtual community to practical work. Therefore, the core of intervention is for CBOs to provide offline services to the target populations. The key to maintain sustainable development is that CBOs attract and gather target populations via social media and then provide them with timely and quality services. GZTZ.org and Lan Yu Working Group have achieved positive results in using social media for intervention.However, persons in charge of these CBOs stressed that the role of social media in HIV intervention should not be exaggerated, but it should be clearly pointed out that one of the

important functions of social media is to reach out through offline services. Using social media for interventions is an extension of traditional intervention services, while offline services may further enhance the coverage and community influence of social media.

2.2.1 Testing services referral

Having established contact with the target populations, CBOs need to move into the next step-providing them with timely and quality services. On one hand, it should be guaranteed that the target populations receive qualified testing services. On the other hand, service referrals are necessary in light of different demands of the target populations. To provide offline services, CBOs need to establish close collaboration with local CDCs and medical institutions, which cannot be achieved through online intervention.

CASE

The work mode of Shanghai Qing Ai is called "comprehensive information platform for HIV/AIDS prevent and control among MSM populations". Its strategic flowchart shows that the purpose of online intervention through QQ, hotline and SMS platforms is to expand the coverage of the target populations and establish a database of target populations. (See Figure 4)

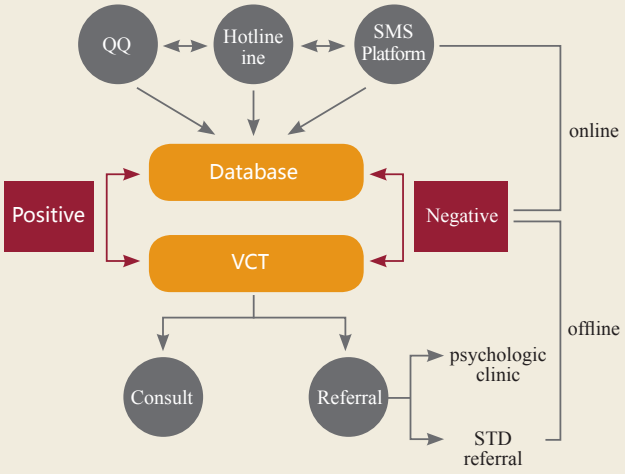


Figure 4 Shanghai Qing Ai's Strategic Flowchart

The key part of this comprehensive information platform is carrying out intervention by the combination of online and offline activities. Small application tools such as QQ, hotline and SMS platform share the same database, and target populations are classified into different categories according to their needs and they are provided with classified counseling services according to the testing mobilization program under the China-Gates Foundation HIV/AIDS Initiative. After preliminary screening and testing,

target populations may be referred to different medical institutions according to their needs. With the utilization of this platform, the positive discovery rate in 2011 was 5.1 percent, while it was 3.5 in 2010. Among all people discovered with HIV positive in 2001, 48.2 percent of them were people who took the testing-related services for the first time. VCT services including counseling, HIV testing, referral, and syphilis treatment were provided to 1,065 people in 2011, and the platform distributed 2,560 condoms per month. Statistical data show that in July 2011, of all people who accepted VCT services, 40 percent of them took the testing for the first time after seeing the relevant messages sent by Shanghai Qing Ai through its QQ accounts, and 20 percent of them were referred by the hotline services of Shanghai Qing Ai.

2.2.2 Health education and publicity

Antony Mayfield summarized that social media have six features. First, social media are participatory platforms that encourage users to take the initiative to contribute and share their ideas, wherein there is not clear boundary between advocates and audiences. Secondly, social media are open platforms, which means that these platforms are free and allow people from different backgrounds to get together online. Users can utilize content published in social media without any obstacles unless certain content is under special protection. (Antony Mayfield, 2007)

Social media are participatory platforms that allow people from different backgrounds to get together online. And within the online communities, users have the equal right to speak, which helps MSM populations to develop the sense of equal participation and encourages them to access relevant information. Furthermore, social media can serve as the best platform for health education. At present, almost all CBOs under the China-Gates Foundation HIV/AIDS Initiative are carrying out "AIDS prevention", "testing counseling" and other health education activities through their websites, and "Si Hai Xiong Di" website in Qingdao and GZTZ.org in Guangzhou made great achievements. CBOs that have not established their own websites are using social media such as online chat rooms and QQ groups to do health education and advocacy. Some of them hold activities such as "prize winning quiz on HIV/AIDS prevention knowledge" and "stories from peers" on a regular basis to do HIV/AIDS prevention advocacy and provide health care counseling services.

CASE

Qingdao Si Hai Working Group often organizes activities such as online expert counseling and stories from peers in online chat rooms. Hosts would make publicity of these activities through chat rooms and other means before the launch of the activities to attract more people to come. And after these activities, the Working Group would carry out outreach activities in bars and public baths. The Working Group usually invites medical institution staff to participate in the outreach activities to combine health education with on-site intervention and mobilization. Initially, bar owners hesitated about those outreach activities to be held at their place, afraid that those activities might annoy their customers. But later they found those activities actually brought them more customers. Now bar owners and public baths owners all take the initiative to invite the Working Group to hold activities at their places.

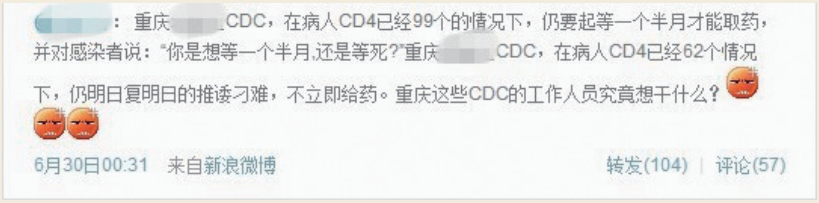
Professor Zhang Beichuan, a member of the AIDS Advisory Committee of NHFPC and a professor at the Medical College of Qingdao University, is very positive about the work mode of Si Hai Work Group – the combination of online advocacy and outreach activities. He said, "At present, there are eight MSM community work groups participating in the promotion of VCT. In the past, these groups all faced with problems such as limited coverage. Si Hai Working Group took the full utilization of strengths of online virtual communities, such as strong protection of privacy, and overcame geological and cultural barriers in promoting VCT in MSM communities. Meanwhile, it actively promotes HIV/AIDS prevention related interaction between health care experts and target populations by organizing lectures through online chat rooms and outreach activities at bars and public baths, thereby integrates online advocacy with offline intervention."He also said,"MSM grassroots groups usually carry out VCT promotion by one of the said means. But Si Hai Working Group adopts and implements a multi-layer work mode by organically integrating all said approaches."

Social media enables users to have the equal right to participate in activities and share information. In response to certain negative information spread over the Internet or the Internet rumors, for instance, the story about an AIDS patient randomly injecting blood containing HIV virus into others, many MSM CBOs also started to use the equal participation right as well as the information disclosure and sharing functions of social media to do crisis PR and disclose sensitive information.

CASE

Lan Yu Working Group uses its microblog to do crisis PR

Context: On June 30, 2012, a microblogger posted a message: A CDC at Chongqing asked a patient whose CD4 was 99 to wait for about 45 days before any medicine would be available to him. But not only that, the staff at the CDC also scolded the patient, "What do you want? To wait for 45 days or death?"



Translation of the above screenshot:

A CDC at Chongqing asked a patient whose CD4 was only 99 to wait for one and a half months before any medicine would be available to him . And a staff at the CDC scolded the patient: "You want to wait for one and a half months or death?" A CDC at Chongqing deliberately delayed in giving medicine to a patient whose CD4 was 62. What on earth these CDC staff wanted to do?

Impact: This micropost was re-posted 104 times within one hour, causing a lot of negative impact within the target populations in Chongqing – most of them were afraid that they cannot receive appropriate services after taking testing. Later, a large number of people infected with HIV and persons in charge of organizations of HIV-infected people re-posted this message and commented: "CDC like this should be punished." Some of them even asked the target populations no longer to take any testing because testing without follow-up services is meaningless. The event also evoked panic among many HIV-infected people and testing and counseling work staff, and they contacted us for advice – medical staff were worried that target populations would stop taking testing while target populations said they would consider to quit testing because they were afraid that they would not receive any follow-up services and the services would be deliberately delayed.

Actions of Lan Yu Working Group:

(1) On the morning of June 30, we contacted the CDC involved in the event to ask about the relevant information. The staff who received the patient admitted that she did say something quoted in the micropost. But she also said that the micropost did

not tell the full story. The fact was that the patient had no prescription because he didn't have the pre-medication health check. No medicine could be offered without prescription and what's more, CDC had no right to give any prescription . The staff also admitted that she was not patient enough because of the heavy pressure from receiving too many patients during that day, and she expressed her apologies to the patient.

(2) On the afternoon of June 30, we contacted the patient in the event to learn the story from his side. The patient said that he did not have the prescription and did not take the pre-medication physical check. He admitted that he was quite anxious when complaining to his friend, the micrblogger who published that miscropost. And what was quoted in the micropost was not exactly what the staff said. It was rephrased by the patient based on his own understanding.

(3) The patient was not diagnosed with HIV infection at the said CDC, instead, he had been diagnosed with the infection early in April. Why he took the CD4 testing as late as in June and then applied to take medication? After investigation, we learnt that another working group was taking care of this patient, and referred the patient to its partnership CDC for follow-up services. But because of his household registration related issue, the patient was asked to transfer his household registration to some other district and then to Chongqing. Somehow, his household registration was transferred to some other city instead of Chongqing, which caused so much delay for the patient to go on with following issues, thus he was so depressed and under so much pressure that he become very emotional.

(4) On July 1, we referred the patient to Chongqing Infectious Disease Hospital for prescription and pre-medication physical check. The patient thought the hospital was too far away from where he was living and did not want to go, and still prefered to have prescription and pre-medication physical check at the designated local hospital of his residential place. However, the local hospital required too many processes and it would take a long time for the patient to have the medication. So the caring team of Lan Yu Working Group persuaded the patient to have the prescription and pre-medication check at Chongqing Infectious Disease Hospital.

(5) Then Lan Yu Working Group posted the true story on its microblog and asked the patient involved to comment on the micropost to explain what had really happened. Thereby, misunderstanding, tension and negative impact were

successfully eliminated.

Result: On July 6, the patient began to receive drugs and medication.

Reflection on the event: It is important to let the public know what really happened and should not mislead the public by posting negative information based on incomplete facts. People infected with HIV, CDC staff and community working groups should be fairly treated. In this event, we were not only dealing with the situations where patients have difficulties in receiving drugs and having medication, but also we tried to tell the public the true story - it requires patients to go through standard process before taking medication. At present, CBOs that do not offer "back door" services to patients often complain that media are unfair to them and like to play the game of "quoting out of context". But, whether CBOs are doing the same to mislead the public?

2.3 Counseling and care services for HIV-positive people

Some previous researches show that it is unsuitable to provide care services to HIV-infected people through online channels because there are conflicts between the nature of care services and network attributes. When a working group provides care services to an AIDS patient, on one hand, it needs to learn about the details of the real identity of the patient; on the other hand, it needs to keep confidential of such information. Social media allow users to interact and communicate with others anonymously, but they are still public platforms. If a user uses his/her real identity to participate in online communication, there is a possibility that his/her personal information would be disclosed. A number of CBOs under the China-Gates Foundation HIV/AIDS Initiative made bold attempts to use multiple functions of social media to provide care services to people infected with HIV. In this regard, Xi'an Tongkang Working Group showed us a very good example.

CASE

the Story of the "Peanut Guru" in Xi'an

Xi'an TongKang Working Group ("Tongkang Working Group"), founded in 2002, is one of the first grassroots MSM NGOs in China mainly composed of gay men. An Ran (pseudonym), the founder of Xi'an Tongkang, is one of the influential leaders

of HIV prevention NGOs. A member of Tongkang Working Group diagnosed with HIV infection two weeks ago described An Ran as their "guardian angel". At present, Tongkang Working Group provides care services to one third of people infected with HIV in Xi'an, amounting to 231 people. Tongkang sets up detailed personal file for each of these members, and divides them into different QQ groups for better management.

"Peanut Guru" is a key member of one of the said QQ groups. He is in his 40s and calls himself as "Lao Gay" (meaning a gay man of old age). Meanwhile, many members of the QQ group like to call him "San Sao" (meaning sister-in-law). There are about 160 members in the QQ group and they all have been infected with HIV. Why Lao Gay or San Sao is also fondly called "Peanut Guru" by the QQ group members because he strongly recommends the members to take a kind of "peanut soup" (which is made with fresh peanut skins soaked in water). Peanut Guru is a key member of the QQ group and he has good knowledge of Chinese traditional medicine. Besides, he is over 40 years old and has experienced a lot as a gay man, thus has high prestige in the group. He often reminds the QQ group members to take CD4 testing on a regular basis and not to stay up late to have enough sleep. He also uses his experience to help the new group members to relax. Meanwhile he warns them to stay away from people with unhealthy intentions and not to have high-risk sexual behaviors. A HIV-infected person who joined the QQ group a month ago said: "When I first realized that I am HIV positive, I started to panic and did not know what to do. After joining this QQ group, San Sao gave me all sorts of help, from advice on nutrition and health care to information pertaining to testing and treatment. I could say that I received a strong psychological support of this group. Now I just stay in the QQ group all the time, then I don't feel lonely any more. With the support of this group, I can survive the panic this month. Now I am dependent of this group. In fact, I never get so much psychological support of physicians."

The story of "Peanut Guru" told us that we can use social media to establish a "virtual community" within a short period of time. And in this kind of community, members may freely share their ideas on topics of interest. To be specific, MSM with HIV infection may find better peer education or more effective psychological support through this kind of mature virtual community.

3 Successful Experience of Using Social Media for Interventions

3.1 Improving the testing mobilization efficiency (expand social network)

The first principle of the China-Gates HIV Program emphasizes that "testing is the core of carrying out behavioral interventions among high-risk groups", which is also the starting point of further care support and treatments. Researches and studies show that testing is beneficial to individuals as well as the general public. For individuals, once they find out they are HIV positive, they would actively seek medical help and treatment to prevent the deterioration of the condition. For the public, once people realize they are HIV positive, they usually would take measures to protect themselves as well as other people, thus avoiding high-risk behaviors. The China-Gates HIV Program takes "expanding testing coverage" as a principal strategy for reducing the HIA/AIDS spread, and HIV testing mobilization is one of the key funding areas of the Initiative.

A major feature of social media is to expand users' social network, thereby accelerating information dissemination. Now that social media have been widely used nowadays, people's social networks include not only their social connections in the real world but also connections existing in online virtual communities. The combination of online and offline connections greatly enlarges our social networks and enables us to have a lot more accesses to information.

In general, social media carry a large amount of information, have a wide coverage and are more cost-effective for testing mobilization compared with traditional on-site mobilization activities. Considering the aforesaid attributes of social media, almost all CBOs under the Initiative attach great importance to social media and tend to use them for testing mobilization, and they have made great achievements.

We still do not have specific data about the achievements made by CBOs supported by the China-Gates HIV Program in terms of how many people have been mobilized to take testing through social media. We visited nine CBOs located in four cities. Eight CBOs told us that at least 30 percent of MSM populations who took the testing received the mobilization information through social media, and MANBF.com even reported a much higher percentage, 58.4 percent,.

Only Chongqing Zhi Ai Working Group reported 20 percent, which is less than 30 percent. Lan Yu Working Group said staff and volunteers have been under much work pressure in recent years, therefore, they hadn't organized any on-site mobilization activities. It means that almost all mobilization activities were organized through social media. or through some offline networks and channels that are closely connected to social media.

Therefore, it can be said that social media have been playing a key role in testing mobilization program under the China-Gates Foundation HIV/AIDS Initiative.

3.2 Improving the quality of care services for HIV-infected persons

The second principle of China-Gates HIV Program is "strengthening the management of HIV-infected persons", providing the target population with timely anti-viral treatment and reducing the spread of HIV through effective care services and treatment. Anti-viral treatment may significantly reduce the infected people's viral load, thereby lowering the risk of secondary transmission. In the meantime, AIDS patients persistent in taking anti-viral treatment may enjoy a normal life expectancy. Therefore, another key funding area of the Initiative involves follow-up visits, referral services, treatments, and care support for HIV-infected people.

For a long time, because there was no effective management of HIV-infected people and those people feared of the leakage of their personal information and social discrimination HIV-infected people seldom established a stable relationship with any caring service providers. The use of social media has made great improvements in this regard.

In 2011, a group of comparative experiments made in the United States showed that when implementing online intervention among MSM populations, SMS as an ancillary means helped people of certain races/ethic groups to develop the sense of dependency on the project. (Khosropour & Sullivan, 2011) Some cases in the China-Gates HIV Program had proved this result. Data provided by Chongqing Lan Yu Working Group showed that HIV-infected people tend to stay with the same QQ group for a long time because they are dependent of the Working Group both emotionally and physically.

CASE

Xi'an Tongkang Working Group Care Support for HIV-infected People

Xi'an Tongkang Working Group joined the China-Gates Foundation HIV/AIDS Initiative in 2008, and now is a leading organization in China in the provision of care services to people infected with HIV and attractive to HIV-infected people all over China. Tongkang has set up a number of QQ groups for people infected with HIV. The person-in-charge of Tongkang told us that each QQ group is like a big family – there are good kids and bad kids in the family – but they are all MSM populations who have been infected with HIV. There is no discrimination, mockery or pressure in the families, but there are "parents" in those families and families do have rules.

"Peanut Guru" we mentioned in previous passages is a "parent" in one of the QQ groups. The person-in-charge said each QQ group has several key members like Peanut Guru, who are responsible for maintaining order in the groups. They set forth rules and ask members to abide by those rules. For example, one of the rules is that new members should not speak casually when they first join a group. Key members would first have private talks with newcomers to provide them with psychological counseling and warn them to stay away from high-risk sexual behaviors. It is also not allowed to share sensational pictures or remarks during working hours. At the beginning, members were not happy with these rules. But Peanut Guru is really like a parent - he cares about his members and scolds them when necessary. Now everyone respects him. Now the QQ group in charged by Peanut Guru has more than 160 members and the group has been running for two years. Members sometimes have quarrels and are friendly towards each other most of the time. And they have developed interdependency. They not only have online interaction but also have offline activities like barbecue, hiking, camping, and so on.

Some cases illustrate that social media such as virtual communities play a very important role in providing HIV-infected persons with care support: (1) psychological counseling for new community members thus rendering psychological support to new members through peer education; (2) building sense of identity and sense of belonging to virtual communities; (3) providing community

members with appropriate guidance, thereby reducing their high-risk behaviors; and (4) encouraging members to receive anti-viral treatments, take testing on a regular basis, and take regular medication.

From the aspect of "follow-up treatment", the dependency theory deems that a person develops a sense of dependency when he/she wants to obtain effective information and has a comprehensive and accurate understanding of the external environment, and to seek peer guidance and advice on his/her decision. The ultimate purpose is to adapt to the surrounding environment and make correct reaction in order to obtain the goal of personal happiness or satisfaction. In this regard, MSM populations might develop media dependency and are willing to continue using certain types of social media. (Morton & Duck, 2000) Making utilization of this kind of "dependency" may realize the goal of effective management, and provision of long-term and effective care services to HIV-infected people, thus improving care and treatment for the target population.

3.3 Promoting the development of civil society

One of the major functions of social media is helping users to form and join their own virtual communities where they could share ideas and information on topics of interest; and then by connecting the virtual communities to the real life, gradually, there will no longer exist a distinctive boundary between real-world communities and virtual communities, or even the two types of communities might be merged, thereby new social organizations are formed.

China-Gates HIV Program attaches great importance to the important role of CBOs in HIV/AIDS prevention, and provides them with large funding to support their capacity building and development. Utilization of social media contributes a lot to this process.

China-Gates HIV Program adheres to the management principles of effect and efficiency, and grants fund according to these principles. Therefore, the Program-supported CBOs make efforts to reach out to more target populations and mobilize them to take HIV testing, and to render care support to more HIV-infected people. The most effective way of expanding mobilization coverage is making full utilization of social media. The use of social media may help CBOs receive more funding, thus directly promoting the development and growth of CBOs in China.

CASE

Xi'an Tongkang Working Group is a grassroots NGO with a long history, but it had neither fixed office premises nor stable funding before joining China-Gates HIV Program. Being lack of sufficient resources, it could not even refer people who were diagnosed with HIV positive to relevant organizations for support and care. Therefore, the Working Group formed its own caring team and hired a full-time staff to provide care services to HIV-infected members. Besides, the Working Group also held lectures, training and other communication activities. The caring team grew quickly, but Tongkang Working Group could not afford the rapid growth of the team because of its poor financial capacity. There were needs, but no sufficient supply. That was a dilemma faced by most grassroots NGOs. Not only that, grassroots NGO are non-profit organizations with very limited financial resources, therefore their staff are usually not paid well, needless to say that grassroots NGOs usually can't afford to buy social insurance for their staff. Furthermore, long-time overloaded work made it even more obvious that grassroots NGO staff are not paid for what they had contributed. Therefore, lack of human resources is also one of the bottlenecks restricting the development of grassroots NGOs.

In 2008, Tongkang Working Group joined the China-Gates HIV Program and enhanced its social influence and mobilization capacity by making full utilization of social media such as websites and QQ groups. In 2011, it mobilized 2,400 people to take testing; and during January to August 2012, it mobilized 1,583 people to take testing, more than one third of the total number in Xi'an. Right now, more than 60 percent of Xi'an Tongkang's funding is from the Initiative. The Working Group first had its fixed office premises in 2009 and hired some stable full-time staff. Thus, the Working Group can contribute more to the local community.

CBOs we visited during the survey are in the similar situation - funds received from the Initiative account for at least 50 percent of the total funding of those CBOs. GZTZ.org is an exception, and it says the funds from China-Gates HIV Program account for about 20 percent of its funding. The responsible person of Chongqing Lan Yu Working Group was very upset about the possible withdrawal of China-Gates HIV Program. He said, "I don't know whether we can survive if the Initiative withdraws next year."

4 Challenges

Social media play a very important role in HIV/AIDS prevention and control among MSM populations. But there are still some problems and difficulties to be tackled with.

4.1 Certain MSM populations do not have access to social media

There is a large MSM population in China, but health administrative departments and researchers are usually more interested in MSM populations in urban areas, and China-Gates HIV Program only covers 15 major cities in China and pays little attention to HIV/AIDS prevention among MSM populations in rural areas. At present, there is no program of using social media for HIV/AIDS prevention in rural areas. This situation, on one hand, is caused by

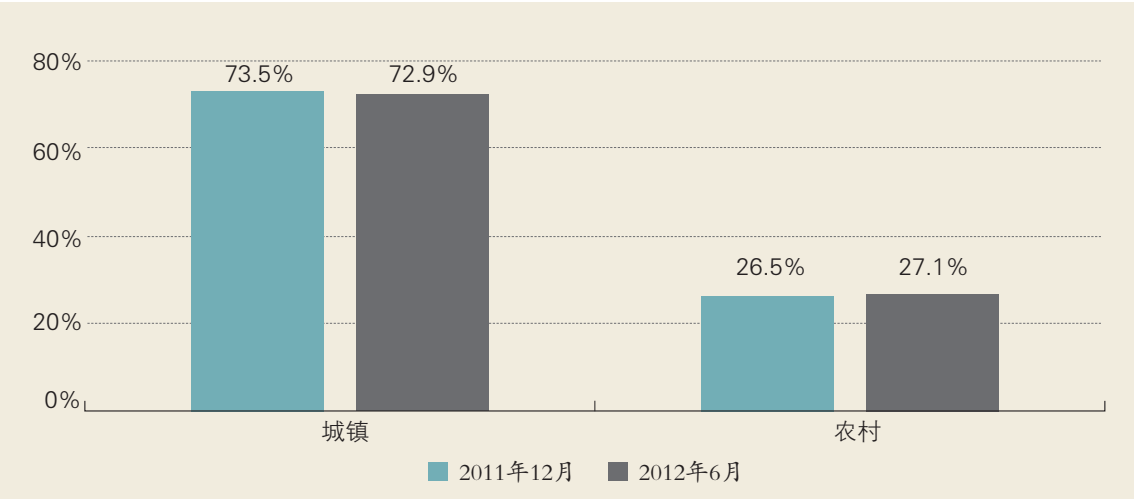


Figure 5 Statistical Data on Internet Users in Urban and Urban Areas (December 2011 to June 2012)

Column in blue represents data in December 2011, and column in red represents data in June 2012; the first two columns are users in urban areas and the latter two are users in rural areas.

the unbalanced resource distribution and development in urban and rural areas, and on the other hand, it is because that only a small number of populations in rural areas use social media.

According to the 30th Statistical Report on the Internet Development in China released in July 2012, as of the end of June 2012, there are 146 million Internet users in rural areas, accounting for 27.1 percent of all Internet users in China, 14.64 million more than that at the end of 2011. (See Figure 5)

In terms of age structure of Internet users, there are more and more users of the age above 40. As of the end of June 2012, Internet users above 40 years old account for 17.7 percent of all users.

We have to realize that it is difficult for MSM populations in rural areas and MSM over the age of 40 to use social media to receive health education and interventions because most Internet users in China are young people living in urban areas.

4.2 Negative impacts of social media

Social media are easy to use and all social media users have the right to share their ideas via online platforms, and meanwhile all users are influenced by information disseminated or published by others. Therefore, social media carry a huge amount of information that could be either positive or negative. Many MSM populations had experiences of receiving negative information through social media, for example, in some QQ groups or chat rooms for HIV-infected persons, some old members seduced new members into having high-risk sexual behaviors.

In fact, all types of social media are like double-edged swords. For instance, Jack'd can be the most effective dating tool for MSM populations, but it can also be an effective testing mobilization and intervention tool for CBOs. With respect to negative information and people with unhealthy intentions in virtual communities, we can set forth rules to screen negative or unhealthy information.

CASE

In social media, anyone can be both the information generator and audience, therefore content posted on the media might not be accurate or complete. In this regard, many CBOs set up "expert counseling" programs in their chat rooms or QQ groups, inviting medical professionals to provide online counseling services to

their target populations on a regular basis. Chongqing Lan Yu Working Group even invited experts from CDCs and hospitals to prepare HIV/AIDS related Q&As to help its staff and volunteers to provide target members with accurate and complete information. Furthermore, CBOs, CDCs and medical institutions may establish closer collaboration in this way.

4.3 On-site intervention is a necessary supplement

Social media can play a significant role in HIV/AIDS prevention among MSM populations, and on-site intervention activities are necessary supplements. Social media alone cannot achieve the goals of effectively managing target population and maintain close contact with them.

First, the diversity of MSM populations makes it necessary to carry out on-site intervention. As mentioned in preceding paragraphs, some MSM populations do not have access to or do not use social media, including people over the age of 40, people living in rural areas, or people with low education. On-site intervention works the best with these populations.

Secondly, with regard to one-time intervention activities, on-site intervention usually achieves better results. More HIV positive people are found through on-site intervention than social media intervention.

5 Social Media-based Model for HIV Testing Mobilization and Intervention

CBOs supported by the China-Gates Foundation HIV/AIDS Initiative made full utilization of social media in carrying out testing mobilization and intervention activities, and achieved great results while most other CBOs are still in the exploratory stage. GZTZ.org and Qingdao Si Hai Working Group achieved outstanding performance in online intervention or online-based comprehensive intervention. I visited nine CBOs supported by the Initiative in four cities and tried to summarize and classify the application of social media for HIV testing mobilization and intervention into three major parts (See Figure 6): (1) relying on mature CBOs to implement social media interventions; (2) integration of online social media intervention with offline services provided by CBOs and CDCs (or hospitals and community health centers) to realize mutual promotion; and (3) comprehensively and systematically using various types of social media to carry out interventions, thereby expanding intervention coverage and improving intervention effectiveness and efficiency.

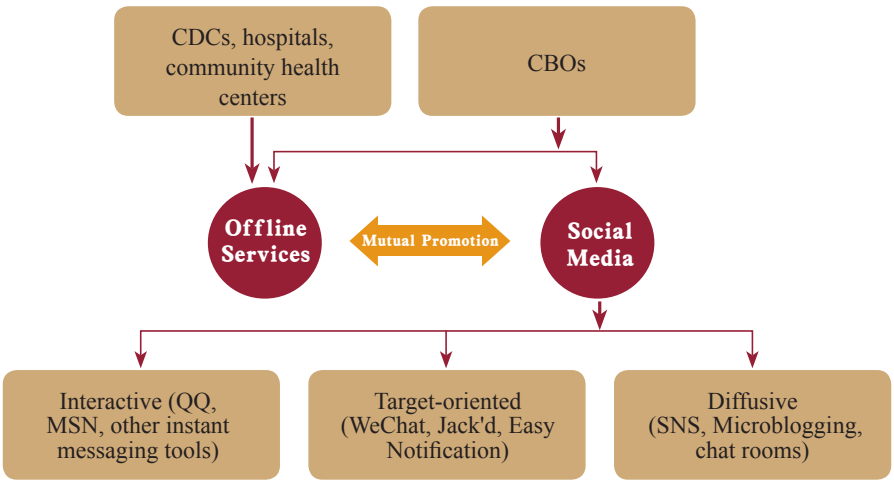


Figure 6 Social media-based model for intervention among MSM populations

5.1 Relying on mature CBOs

After all, social media are tools and they can be functional only when people use them. MSM populations in China are obscure populations with special social networks and interactive ways. Social media can somehow blur the distinction between real-world communities and online virtual communities; therefore, in the online communities created on social media, MSM populations have a strong sense of identity for MSM CBOs, thus are willing to participate in online activities organized by these CBOs. MSM populations trust and support social media interventions carried out by those reputable real-world CBOs. Therefore, social media interventions among MSM populations must rely on mature CBOs that have good reputations in the real world. At present, CBOs that joined the China-Gates HIV Program are reputable among MSM populations and have long history, including GZTZ.org that was established in 1998, Qingdao Si Hai Working Group founded in 2001, Chongqing Lan Yu Working Group in 2006, MANBF.com established in 1998, and Xi'an Tongkang Working Group founded in 1998. On the other hand, these CBOs have been provided with a larger platform and more development opportunities by joining the Program.

5.2 Mutual promotion - online interventions and offline services

Social media based interventions and offline services (e.g. health education, psychological counseling, testing referrals, referral of patients, and care support for HIV-infected persons) should complement each other and work together to achieve the best in supporting HIV-infected people and AIDS patients. First, social media interventions expand the coverage of offline services and encourage more target populations to seek relevant services. But one thing we need to notice is that "excessive mobilization" via social media may only result in negative results or even harm the images and reputations of CBOs when some MSM population actually cannot gain access to services as publicized or services provided do not meet expectations, which would in turn weaken social media intervention effect. I strongly suggest that the Initiative should also pay attention to this issue – while emphasizing on the implementation of social media intervention, we should guarantee that CBOs or CDCs to be able to offer sufficient services to meet the health needs of populations who respond to interventions. In this way, target populations would like to stay long in this kind of virtual communities.

Meanwhile, the close combination between the utilization of social media for HIV testing mobilization and intervention and provision of offline services is in line with the three-in-one work model set forth by the China-Gates HIV Program, which involves CDCs, CBOs and medical institutions.

5.3 Comprehensive and systematic use of a variety of social media

It is encouraged to utilize a variety of social media for HIV testing mobilization and intervention among MSM populations because (1) the China-Gates HIV Program involves a number of processes namely testing mobilization, counseling, fast testing (or testing referral), notification of HIV positive, and care services for HIV-infected people, and each process has different difficulties. Using various social media may help achieve goals of different processes; and (2) MSM populations include different demographic and sociological characteristics, using a variety of social media may implement multiple intervention measures on different target audiences, thereby expanding mobilization and intervention coverage and achieving better results.

In this Report, we classify the present mainstream social media into three types: (1) interactive social media, mainly including instant messaging tools such as QQ, MSN; (2) target-oriented, which can be used as instant messaging tools but are geolocation-based and can push content to specific targets. Specific applications include WeChat, Jack'd and Easy TellTM system; and (3) diffusive type, mainly including QQ groups, chat rooms, SNS and microblogging. The main attribute of this type of applications is individual-generated information that can be shared by all relevant audience. Find the table below as a reference with respect to different functions and roles of different types of social media in carrying out HIV/AIDS intervention among MSM populations.

Type of social media	Specific applications	Pros	Cons	Intervention functions and roles
Interactive	Instant messaging tools such as QQ, MSN	High confidentiality; Push content to users; Strong intervention effects	High human resources consumption	Online counseling; Inform dissemination; Psychological care support
MSM–oriented	WeChat, Jack'd	Push content to specific targets; Geolocation-based; Strong pertinence	Relatively small coverage; Low response rate	Send notifications to sexual partners; Targeting specific groups; Testing mobilization
Diffusive	QQ groups; Chat rooms; SNS; Microblogging	Public; Cost-effective	Fixed target populations; Unstable sources and quality of information	Testing mobilization; Health education; Care support for HIV-infected people

Considering different features and functions of these social media, the comprehensive and systematic use of these media allows us to use different intervention approaches for target groups of different characteristics, thereby significantly expanding the coverage of HIV testing mobilization. Furthermore, using flexible social network interventions to address different situations may also improve the intervention effect.

6 Summary

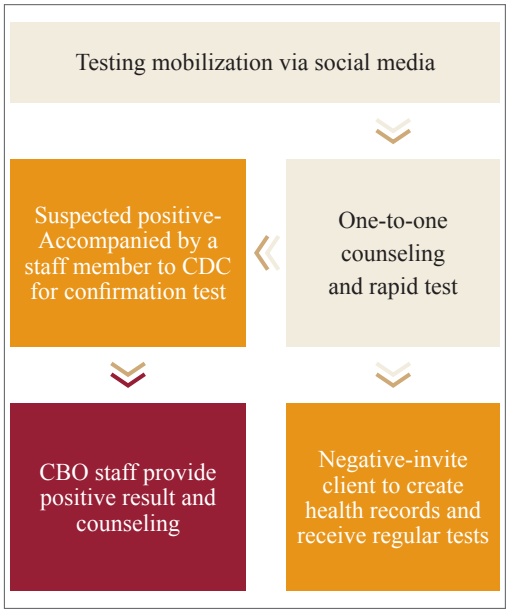
From the social dimension, the target population behavior intervention involves four major aspects: diffusion of innovation, social inoculation theory, social network theory, and empowerment models. (Share-Net, 2003) Social media have unique advantages in the said four areas. First, social media encourage people's creativity by providing platforms where users may create and share their ideas; meanwhile as web-base platforms, social media may quickly convey new ideas to audiences. Secondly, social media provide audiences with information coming from a variety of sources.Thus some correct knowledge about HIV prevention and intervention have been enhanced. Thirdly, social media may quickly expand people's social networks, thereby expanding mobilization and intervention coverage. Furthermore, social media achieve intervention goals by creating public opinions online. And last, social media give every user the equal right to speak and encourage MSM populations to participate in intervention activities, thereby achieving interventional goals. The Bill & Melinda Gates Foundation has been attaching great importance to the use of social media for HIV testing mobilization and intervention. In summary, the China-Gates HIV Program adheres to the principle of using social media for HIV/AIDS testing mobilization and intervention among MSM populations, and encourages and supports CBOs in implementing the principle in their HIV testing mobilization and intervention activities. CBOs' achievements on HIV/AIDS prevention have proven the success of the China-Gates HIV Program in using social media for HIV/AIDS prevention and intervention. Furthermore, we hope this report may provide the Foundation with practical support and theoretical reference in its efforts on the prevention and intervention of other diseases through social media.

Introduction to Testing Mobilization via Social Media and Workflow of Referral Services

China-Gates Foundation HIV Prevention Cooperation Program was launched in 2007 and has involved in and guided a large number of community-based organizations (CBOs) to conduct advocacy and intervention for HIV/AIDS prevention among MSM. In practice, many CBOs leveraged a variety of social media techniques to strengthen the mobilization of HIV testing and the intervention with MSM.

Social media are generally used by CBOs to conduct preliminary interventions because of low cost and high efficiency. In fact, network techniques are only tools. The most important point is to extend service delivery from online sources to offline channels and go beyond from the virtual world to the real world. In other words, the core element of interventions is to enable the provision of offline services by CBOs. Providing timely and high quality services to the target groups mobilized via social media is key to sustainable development of CBOs. After building rapport with target groups, the focus should be transferred from "testing mobilization" to "service delivery". On one hand, efforts should be made to ensure convenient access of target groups to high quality testing services. On the other hand, referral of services should be promoted to meet different needs of target groups. To meet actual needs via offline service delivery, it is essential for CBOs to build close partnerships with CDCs and health facilities, which cannot be achieved through a single source of intervention via social media.

Social media have only been widely leveraged to enhance the mobilization of HIV testing and the intervention with MSM over the past several years. The "three-into-one" working model promoted by China-Gates Foundation HIV Prevention Cooperation Program involves CDCs, CBOs and health facilities. How can the working model be effectively implemented? Particularly, how can close linkage be effectively ensured between testing mobilization and offline service delivery? CBOs have made various explorations in practice. Specific referral workflows developed by CBOs are described below.

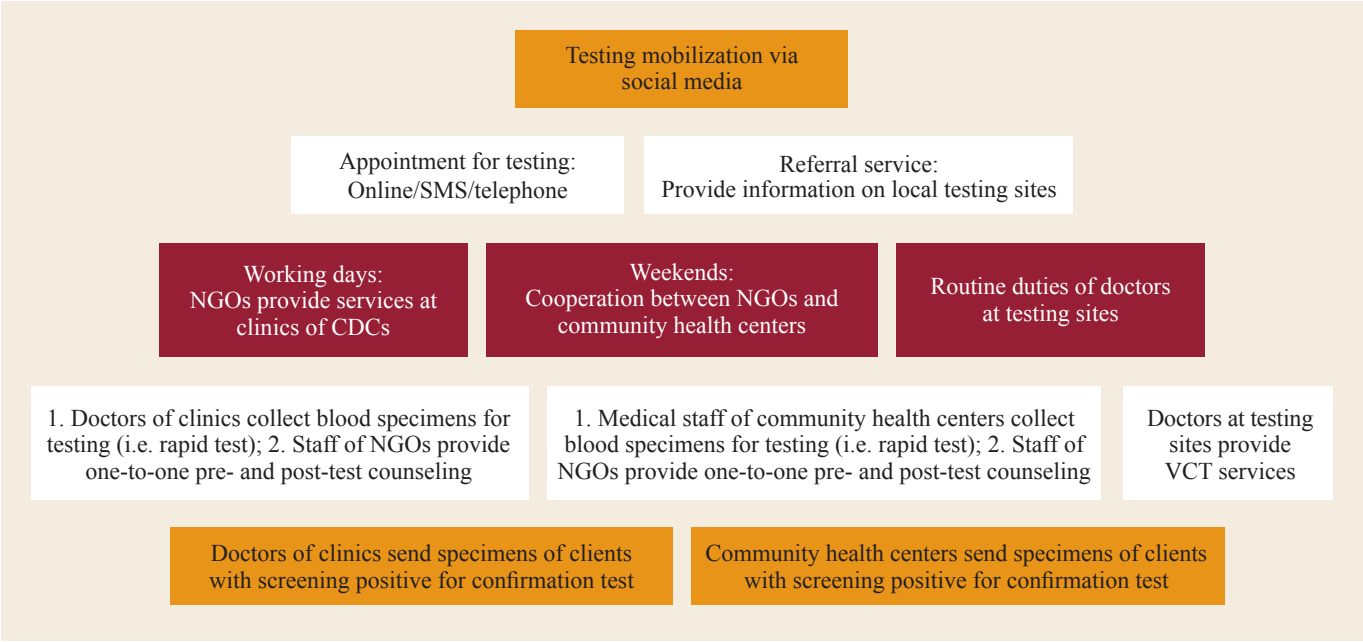


(1) Referral workflow for CBOs capable of providing HIV rapid tests

Some CBOs are capable of providing HIV rapid tests (including rapid tests with saliva and blood specimens). Rapid tests are performed directly by staff of CBOs. Clients with positive screening results are referred to CDCs for blood collection and confirmation test. Some CBOs collect two blood specimens for each client on the site, one for HIV screening and one transported to CDC for confirmation test if the screening result is positive. The workflow is shown below:

(2) Referral workflow for CBOs incapable of providing HIV rapid tests

Due to policy constraints and other factors, some CBOs can not provide HIV rapid tests by themselves and have to spend more time and energy in cooperating with CDCs and health facilities. Under the support of China-Gates Found HIV Prevention Cooperation Program, Lingnan Partner developed an online testing appointment system - "Loving Test". Lingnan Partner cooperates with Guangzhou Caring Health Center, Yuexiu District CDC and some community health centers in providing HIV and syphilis testing services to MSM in Guangzhou. The workflow is a basic service delivery model adopted by such CBOs. This model consists of two components: (1) providing information on referral services during the process of testing mobilization via social media to guide voluntary access of clients to VCT, such as geographical distribution of testing sites and working hours of doctors; and (2) building close linkage between CBOs and clinics of CDCs or community health centers, in which staff of CBOs go to clinics of CDCs or community health centers to provide on-site pre- and post-test counseling according to the timing appointed during testing mobilization via social media, and clinics of CDCs or community health centers collect blood specimens and perform rapid tests. Clinics of CDCs or community health centers send specimens of clients with positive screening result for confirmation test. The workflow is shown below:



These two models have their respective strengths and weaknesses. The former model can increase the effectiveness of testing mobilization. MSM mobilized via social media are highly willing to receive HIV tests. Thus, testing mobilization is very effective. However, this model put extra pressure on the already heavy workload of CBOs. Also, clients with positive screening result need to be accompanied in visiting CDCs for confirmation test, in a bid to avoid loss-to-follow-up. The latter model can reduce the workload of CBOs and improve the effectiveness of "one-stop" service delivery integrating mobilization, testing and treatment. Nevertheless, clients may be nervous for the access to HIV screening at CDCs or community health centers and thus resist HIV testing, which will affect the effectiveness of testing mobilization. Moreover, there is no policy support for the provision of rapid tests by CBOs. Therefore, it is very important to investigate and summarize an efficient model in achieving sound linkage between testing mobilization and referral services.

Brief Introduction to Mainstream Social Media Bodies in China

QQ an Internet-based instant messaging (IM) software developed by Tencent, Inc., Shenzhen. In 2012, the simultaneous online users of Tecent QQ peaked 170 million. It is one of the IM applications most prevalent in China.

WeChat a mobile phone instant messaging communication application developed by Tencent in 2011, enabling the rapid posting of voice messages, video clips, pictures and texts through the Internet, and supporting group chatting. As of January 24, 2013, WeChat had more than 300 million users, and the user population is still rapidly growing.

MSN The Microsoft Service Network (MSN) is the IM service provided by Microsoft. The MSN Messenger is one of the earliest IM applications used by many Chinese users. On March 15, 2013, Microsoft ended its Messenger service and introduced the ability to merge Messenger accounts into new or existing Skype accounts.

Microblog a user interaction-based platform for information sharing, transmission and access. Users can create personal communities via Web, WAP and other clients, and enable instant sharing of around 140 words. The earliest and most notable microblog service is Twitter. The "Sina Weibo" (internal trial edition) launched by the Chinese portal website Sina.com in August 2009 is the first microblog service launched by portals in China, and since then microblog gradually gained popularity among mainstream Chinese Internet users. In October 2011, Chinese microblog users amounted to 249,800,000, the largest microblog user population in the world.

jack'd a gay social networking software. Gays often use it to date. The software can automatically search for nearby users and show their distance information. It also enables convenient sharing of personal photos and friend-making.

MiTalk a free mobile phone IM tool developed by Xiaomi Tech. It supports various mobile operating systems and communication carriers. Users can talk with MiTalk contacts at real time via mobile phone network, and share information and photos.

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