PUBLIC HEALTH

HIV Testing in China

Active testing for HIV among high-risk groups in China, although controversial, is in the best interests of public health.

Zunyou Wu,[1,2] Xinhua Sun,[3] Sheena G. Sullivan,[1,4] Roger Detels[2]*

In the face of an infectious disease epidemic, the primary responsibility of public health is to contain and control the epidemic in order to protect the uninfected. In the area of HIV/AIDS, we have not always remembered that principle.

At the end of 2003, the United Nations and the Chinese Ministry of Health (MOH) estimated that the number of people infected with HIV in China was roughly 840,000, of whom 80,000 already had AIDS (*1*). Experts have expressed fear that these numbers may, in fact, be an underestimation and have warned that, left unchecked, China could have 10 million infected by 2010 (*2*). One of the main barriers to implementing effective prevention and control efforts in the country is that the majority of infected persons are not aware of their serostatus. At the end of 2005, Chinese authorities knew of only 141,241 confirmed HIV cases, 32,263 of whom had AIDS (*3*). It is important for people carrying HIV to know about their serostatus, both to prolong their own lives by accessing treatment and to prevent secondary transmission to others (*4*). Studies in the United States, Zambia, Kenya, Tanzania, Trinidad, Puerto Rico, and India have demonstrated that people who have learned that they are HIV-infected tend to reduce their risk behaviors and to adopt safer sex practices (*5*–*11*).

To gain a better understanding of the numbers and profile of people infected, as well as to identify those in need of treatment, the government of China launched a national program to actively seek out certain groups believed to be at high risk for HIV infection. They considered that voluntary counseling and testing (VCT), a passive approach, had failed to inform many of those who were infected, despite the fact that testing was free. Under the new policy, community health workers invite members of targeted high-risk groups to come for testing through outreach. In institutional settings (such as prisons), HIV testing is conducted as part of a routine health check-up. In communities or institutions, refusal is permissible. Testing is accompanied by a social marketing campaign instead of individual counseling. The campaign promotes HIV awareness and addresses misconceptions through various mechanisms, including slogans on posters and banners, newspaper and television commercials, public announcements by celebrities, and community events.

The increased use of routine testing to identify HIV carriers as part of antiretroviral treatment (ART) scale-up has been controversial and was the subject of debate at last year's International Conference on AIDS in Asia and the Pacific (*12*). Some would argue that the traditional approach to HIV case ascertainment—one that follows a genetic counseling model rather than an infectious disease model and that emphasizes protecting the rights of the infected—is no longer appropriate in this age of ART (*13*). Indeed, we believe that an overemphasis on privacy in the early years of the HIV epidemic in the United States (*14*) may have resulted in HIV infection of thousands of persons receiving unscreened blood, even before an HIV test was available, and overlooked the need to protect the uninfected (*15*).

The Chinese approach has been criticized by the international community and was debated at length at the Third Conference on HIV/AIDS International Cooperation Projects in China, held on 3 to 4 September 2005 (*16*). At that meeting, a representative of the United Nations presented a summary of discussions on surveillance, HIV testing, and VCT programs in China and voiced concerns about the new testing policy. The principal issue of contention was whether active testing of risk groups violates human rights, because it may not always be entirely voluntary and may involve little counseling. The position of the Joint U.N. Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) on HIV testing is that it should be accompanied by informed consent and counseling to promote prevention practices (*17*). The new testing policy theoretically follows the model of voluntary testing, but there is often significant social pressure not to refuse. Pressure comes from local authorities and health workers in the form of the public announcements mentioned above, which strongly encourage HIV testing, and also from other community members who have already undergone testing. For those receiving a routine annual health check-up, such as government workers and detention center inmates, informed consent for the entire health exam is taken, but not specifically for the HIV test and, therefore, no standard HIV pretest counseling is given. Posttest counseling is preferentially provided to those testing positive and includes information about disease progression, treatment, and preventing transmission to partners.

The new testing policy was initially implemented in Henan province, where it was becoming apparent that increasing numbers of former commercial plasma donors who had been infected with HIV by contaminated plasma through donation practices in the 1990s were progressing to AIDS. From June to August 2004, the provincial government of Henan identified and registered 280,307 former plasma donors and invited them to receive HIV-1 antibody testing. It is likely, however, that some former donors hid their identity. Almost 8% of those acknowledging plasma donation refused testing. Of the 258,237 (92.1%) individuals actually tested, 23,157 (9.9%) were identified as HIV-positive (*18*). The number of HIV infections identified over the 3 months of active testing was almost six times that of the previous 10 years. Importantly, among the 23,157 HIV infections, 12,159 were HIV-serodiscordant couples, the uninfected members of which are now able to protect themselves from infection.

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Yijuan Duan, Deputy Director of Ruili CDC in Yunnan, takes a blood sample from a male drug user for HIV testing.

From September to December 2004, the government of Yunnan province launched its own active testing initiative among drug users, spouses of HIV-infected individuals, children under 10 years of age whose mothers were HIV-positive, sexually transmitted disease (STD) patients, sex workers, former plasma donors, pregnant women, patients suffering from infections, and other groups. They invited 424,000 individuals to be tested, of whom 1.3% refused. Of the 418,630 individuals tested, 13,486 (3.2%) were positive for HIV (*19*). This is essentially equivalent to the total number identified in the previous 18 years.

Following these provincial models, the MOH announced plans to implement active testing of

[1]National Center for AIDS/STD Control and Prevention, Chinese Center for Disease Control and Prevention, Beijing 100050, PR China. [2]School of Public Health, University of California at Los Angeles, Los Angeles, CA 90095, USA. [3]Division of AIDS, Department of Disease Prevention and Control, Ministry of Health, Beijing, 100044, PR China. [4]Centre for Human Genetics, Edith Cowan University, Joondalup, Perth, WA 6207, Australia.

*Author for correspondence. E-mail: detels@ucla.edu

Cartoon educational posters are used for an AIDS campaign in a rural community in China.

all former plasma donors in the country from October 2004 to June 2005. Nationwide testing of other high-risk groups using the strategy implemented in Yunnan continues among sex workers, intravenous drug users, men who have sex with men, and STD clinic patients. In coordination with the Ministry for Justice, inmates in detention centers and detoxification centers are also being tested.

China is attempting to provide free health care to its HIV-infected, particularly the impoverished. In December 2003, the Chinese government announced the ambitious "Four Free and One Care" policy, which entails (i) free ART to rural residents and urban residents without insurance; (ii) free VCT; (iii) free prevention of mother-to-child transmission (*20*); and (iv) free schooling for children within families with HIV/AIDS (*1*, *2*). People testing positive are assessed for $CD4^+$ to determine eligibility for the free ART program. Thus, testing is not purely for information gathering and reduction of HIV transmission, but also acts as a gateway to services for those identified with the disease.

At the end of 2005, the free ART program served 20,453 AIDS patients, including approximately 17,000 former plasma donors, 600 drug users, and 100 men who have sex with men. In addition to the social welfare support described above for infected individuals and their families, individuals may also receive a monthly living allowance from their local government, which varies among the different provinces (*1*). Therefore, the Chinese approach benefits both those tested and found to be infected and those at risk for becoming infected.

A major barrier to agreeing to have VCT is the fear of stigma and discrimination. The Chinese government has commissioned several campaigns to reduce stigma and discrimination (*2*) and has introduced new laws to protect the rights and confidentiality of the HIV-infected in an effort to ease their concerns and to increase VCT (*21*, *22*). In particular, Article 3 of the new *Regulations on AIDS Prevention and Control* (1 March 2006), pledges to "protect the legal rights of people living with HIV/AIDS and their relatives. This includes the rights to marriage, employment, medical treatment and education. Any institution or individual shall not discriminate against people living with HIV/AIDS and their relatives (*21*)."

However, stigma and discrimination remain significant obstacles. Routine testing programs implemented on a wider scale—such that most people in the risk groups are tested—can potentially normalize HIV testing and lessen the stigma and discrimination associated with it. Although no formal evaluation of the testing campaigns has been undertaken, certainly, the ancillary effects of wide-scale testing—increased access to VCT, raised public awareness about HIV, as well as normalizing the procedure of HIV testing—may have had a positive effect on reducing stigma in communities where HIV is prevalent. For example, in Henan, the number accepting VCT has increased since active testing was implemented.

Additional benefits that we believe accrue from active testing and its accompanying education campaigns include increased awareness of HIV among the general population, increased use of condoms by discordant couples, and increased availability of HIV and $CD4^+$ testing resulting from the infrastructure that was established to implement the campaigns. In 2006, the MOH, together with UNAIDS and WHO, released a new HIV estimate of 650,000. Nationwide testing contributed in part to this more accurate revision by allowing a better understanding of the epidemic in certain high-risk groups, particularly plasma donors (*3*).

China cannot risk allowing complacency and low reception of VCT among at-risk groups to hinder control of the epidemic. If those at risk remain unaware, they cannot take steps to prevent further transmission of HIV and to seek treatment. China's responsibility for control of the HIV/AIDS epidemic is to protect the uninfected through identifying those who are HIV-infected and providing treatment and social and economic support for the infected and their families.

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20. HIV-positive mothers are given the options of abortion or ART perinatally, cesarean delivery (where available), and free formula milk for 12 months.
21. State Council Regulations on AIDS Prevention and Treatment, Articles 3, 10, 39, 41, 55, 56.
22. The Infectious Diseases Control Act of the People's Republic of China, Articles 12, 16, 68, 69.

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