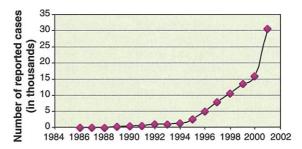
POLICY FORUM: AIDS

China and AIDS— The Time to Act Is Now

Joan Kaufman*† and Jun Jing

he sheer numbers of Chinese citizens and the size of the country make the potential impact of an unchecked AIDS epidemic staggering to consider. New estimates released by the government, based on sentinel surveillance, are that 850,000 Chinese citizens are already infected (1). Most agree that these numbers are too low, as data collection is scant in rural areas and only covers specific risk groups. The United Nations estimates that there are over one million people infected, and both the UN and the Chinese government predict that number could reach 10 million by 2010 (2). Although national prevalence is still low by international standards (less than 0.1% of the population), an acceleration in numbers of newly confirmed HIV cases is evident (Fig. 1). In the first half of 2001, the incidence rate surged 67% compared with the same period in 2000 (3). Thirty-six percent of cases are among ethnic minorities, who make up only 8% of the population (4, 5).

China's AIDS epidemic began in the early 1990s among needle-sharing, injecting heroin users (δ). HIV infection among drug users in some border communities in Yunnan and Xinjiang provinces is now over 70% (2). HIV epidemics among intravenous drug users with trends identical to these border communities are unfolding in nine other provinces. HIV has spread to all 30 provinces, regions, and municipalities. Two years ago, an HIV epidemic among paid blood donors and their families in Henan province also came to light (7, 8). Infection was acquired at paid blood donation stations, some operated by local health officials, where many donors' red blood samples were mixed together, the plasma extracted, and the pooled red blood cells reinjected into the donors. About a million persons, mostly poor farmers trying to supplement their incomes, regularly donated blood at these stations in Henan



Cumulative number of HIV infections reported, China, 1986–2001 from sentinel surveillance (government of China). [Source: China UN Theme Group on HIV/AIDS, 2001]

province throughout the 1990s (9). In one Henan village, Wenlou in Shangcai County, over 60% of the population is HIV infected (7). Seven other provinces have reported HIV acquired through paid blood donations, and the extent of infections as a result is still unclear. In these places and in a number of poor communities on China's western border, the economic and social impact of AIDS is already being felt.

Inevitably, the AIDS epidemic in China is beginning to spread sexually. Sexually transmitted disease (STD) rates have doubled between 1996 and 2000, which suggests a worrisome trajectory for HIV. The 120 million migrant workers, mainly rural men, could provide a ready mechanism for spread to rural communities, where high rates of gynecological infections among rural women will facilitate sexual transmission (10). China's commercial sex industry has exploded in the last 20 years to include more than 3 million sex workers (11, 12). Increasing rates of HIV infection among commercial sex workers in several provinces, many of whom inject drugs, are beginning to provide the bridge to the general population, fueled by low condom use and little knowledge of AIDS. HIV among sex workers tested in Guangxi and Yunnan in 2000 were 10.7% and 4.6%, respectively (2). A recent national survey showed that the main clients of sex workers are middle class men under 35 years old (13). Although migrants are often blamed for STDs, officials and businessmen are 10 times (urban) and 22 times (rural) more likely to buy sex than physical laborers (13). Men with income in the highest 5% were 33 times as likely as those in the bottom 40% to have bought sex.

Many of China's 210 million youth aged 15 to 24 are no longer waiting for sex until marriage (14). Nevertheless, outside of pilot projects mainly in urban areas, students receive little formal sex education beyond abstinence promotion in schools and have limited access to reproductive health counseling and services.

China's mostly hidden and highly

marginalized population of gay men is also increasingly becoming infected through unsafe sexual practices. In 2000, gay men made up one-third of hospitalized AIDS patients in one of the only two Beijing hospitals that accept AIDS patients (15). Eighty percent of gay men in China are married, and less than 10% report regular condom use with their homosexual partners or spouses (16, 17).

There have been positive moves at the national level over

the last year including a new 5-year plan to combat AIDS that includes modest increased budget allocations [\$12 million annually (100 million yuan) for AIDS prevention and more than \$117 million (950 million yuan) to improve blood safety], the first national conference on HIV/AIDS, and strengthened laws to protect the blood supply. Although overdue and important, these actions alone will be insufficient to reverse the epidemic. China's battle against AIDS must mainly take place at the local level. Local governments must fund health and other services out of their locally generated budgets, and this fiscal devolution has weakened their ability to undertake prevention and care efforts. Extra-budgetary resources must be made available to these local governments to do what is urgently required. Local complicity in practices such as private blood collection, previous inaction, and fear of scaring off direct foreign investment are contributing to continued stonewalling and deemphasizing the seriousness of epidemics by local officials. Without the highest level of national leadership and directives by the Chinese Communist Party and the state, it is unlikely that local governments will implement prevention and care programs.

An AIDS action program for China should include the following international "best practices." The government should mount a multisector response and bring in the methods and approaches of social science to the design and evaluation of AIDS policies and programs. Legislation is needed to protect the rights and confidentiality of HIV-infected persons and to set up a nationwide confidential testing and counseling program.

J. Kaufman is at the Radcliffe Institute for Advanced Studies, Harvard University, Cambridge, MA 02138, USA. J. Jing is at Tsinghua University, Beijing, 100084, China.

^{*}Present address: 50 Woodridge Road, Wellesley, MA 02482, USA.

[†]To whom correspondence should be addressed. Email: joankaufman@levineonline.com

SCIENCE'S COMPASS

At the same time, a national HIV/AIDS public education program should be directed at every citizen of China, especially those at highest risk, regarding routes of transmission and how to protect themselves through safe sex and safe injection practices. Forceful messages to protect HIV-infected persons from stigma and discrimination should be included. The media and the propaganda infrastructure should be deployed and could take advantage of the comprehensive propaganda infrastructure used by the family planning program, which has personnel, equipment, and technical capacity in every village.

Youth sexual education on HIV/AIDS should be initiated as soon as possible and will require support from conservative education officials, teachers, and parents, who have resisted sex education beyond narrow abstinence messages. Recent evidence from Uganda attributes the remarkable decline of HIV there mainly to delays in onset of sexual activity among youth, along with reductions in numbers of sexual partners, resulting from President Musaveni's "zero grazing" message (18). In Uganda, primary school children were targeted with explicit sex education and HIV messages while they were still forming their own attitudes and values about sex. China's situation is hopeful in this regard because onset of sexual activity is still fairly late. Abstinence should continue to be encouraged, but educational messages must also include accurate and explicit messages about safe sex, empowering girls to refuse sex and teaching boys appropriate sexual attitudes and behaviors. Youths should be involved in these efforts, rather than just being the targets.

HIV prevention efforts for drug users and prostitutes require partnership with China's public security bureau and police at all levels, as well as a major attitude change. Previous efforts have been hampered by a focus on law enforcement over protecting the public's health. There is consensus on the positive impact of clean needle programs (19): Such programs should be rapidly scaled up from pilot project endeavors in selected provinces (20, 21).

Thailand's 100% condom program has been successful in reducing new infections among commercial sex workers and military recruits (22). Their HIV prevention efforts directed at sex workers have also involved bar owners and intermediaries, promoted peer support among sex workers, and required STD checkups and treatment for sex workers—these approaches should also be used. A pilot 100% condom program in several sites in China has recently been launched. Efforts must also target clients of sex workers. Safe-sex education for gay men by gay men averted a major epidemic in the United States in the early stage of the AIDS epidemic (19). There are promising pilot projects in China demonstrating some of these best practices (20). It is now time for the government to rapidly scale up these efforts into comprehensive government services.

Preparing health services and workers for the HIV epidemic must also begin. Universal medical precautions (including safe injection practices to prevent disease) must be taught to all health workers, both traditional and western. Health workers must learn basic treatment protocols for the opportunistic infections associated with HIV/AIDS and for preventing mother-tochild transmission.

Required drugs should be added to formularies and essential drug lists [following the new World Health Organization (WHO) guidelines] and made available at reasonable prices. Chinese companies have said they will provide AIDS antiretroviral drugs for \$360 per year (23). Especially now, while overall national infection levels remain under 1%, a plan should be developed for access to treatment and care for all HIV-infected individuals in China. Brazil did so through its national health services and won international praise (24).

Much of the best practice worldwide has been driven by civil society and community-based nongovernmental organizations. Although there has been notable progress in China in the last decade in the emergence of nongovernmental and quasigovernmental social organizations (25), China's government remains the main policy and program source. The development of civil society in China will continue at its own pace, affected by much more than the AIDS epidemic. The government of China needs to reach out to new civil society organizations working on AIDS, as well as to people living with AIDS, and to include them routinely in policy and evaluation.

Twenty years of pursuing economic over social development has undermined equity throughout the country. But there are few countries in the world with a comparable level of governmental infrastructure and control, or that have experienced such steady and dynamic economic growth. China must muster the political will and resources to prevent this progress from quickly unraveling as a result of AIDS.

References and Notes

- Xinhua (New China News Agency), "Number of HIV carriers in China reaches 850,000," *China Daily*, 12 April 2002.
- China UN Theme Group on HIV/AIDS for the UN Country Team in China, *HIV/AIDS: China's Titanic Peril* (2001 Update of the AIDS situation and Needs Assessment Report, UNAIDS, Beijing, 2001).

- 3. Q. Chuan, "State ups the ante in war on AIDS" *China Daily*, 14 November 2001 [report on the First China AIDS/STD Conference, 13 to 16 November 2001, Beijing].
- Y. Xin, "HIV/AIDS-related mental health problems" posted on www.xinqiao.net in April 2002, Web site run by the Mental Health Research Institute of Beiing University.
- J. Jing, Y. Zhang, "HIV/AIDS and China's Ethnic Groups," paper presented at Workshop on Changing Health Needs and Reproductive Health Services, Beijing, China, 4 June 2002 (organized by China Health Economics Institute, Ministry of Health).
- 6. C. Beyrer et al., AIDS 14, 75 (2000).
- Southern Weekend (Nanfang Zhoumo), issue devoted to AIDS in China, 30 November 2000.
- E. Rosenthal, "In rural China, a steep price of poverty: Dying of AIDS," *New York Times*, 28 October 2000, p. A1.
- A. He, "Revealing the 'blood wound' of the spread of HIV AIDS in Henan province" (D. Cowhig, Transl.), 28 November 2000; available in Chinese at www.bbscity.com/ news/rdxw/forum.html
- J. Kaufman, L. Yan, T. Wang, A. Faulkner, *Stud. Family Planning* 30(2), 112 (1999).
- China UN Theme Group on HIV/AIDS and China Ministry of Health, "China responds to AIDS: HIV/AIDS situation and needs assessment report" (China UN Theme Group on HIV/AIDS and China Ministry of Health, Beijing, 1997).
- W. Zhong, "A close look at China's sex industry" (D. Cowhig, Transl.), *Lianhe Zaobao* (Singapore), 2 October 2000.
- S. Pan, "AIDS in China: How much possibility is there in sexual transmitting?" (unpublished paper, First China Conference on AIDS/STDs, Beijing, November 2001).
- Proceedings of the International Symposium on Reproductive Health Research and Policy Issues of Adolescent and Unmarried Young Adults, Shanghai, China, 19 to 21 October 2000 (Shanghai Institute for Planned Parenthood Research/WHO, Shanghai, China, 2000).
- China Health News (Jiankang Bao), 26 July and 28 August 2000.
- B. Zhang, "A surveillance and investigation report on male homosexual/bisexual behaviors in the year 2000" [in Chinese, Special Issue on Homosexuality and AIDS, Friends Exchange (no. 19/20), April 2001].
- B. Zhang, D. Liu, X. Li, T. Hu, "A survey on HIV/AIDSrelated high-risk behaviors and affecting factors of men who have sex with men (MSM) in mainland China" (unpublished paper, Affiliated Hospital of Medical College, Qingdao University, 2000).
- V. Nantulya, E. Green, What Accounts for Uganda's Remarkable HIV Prevalence and Incidence Decline?, seminar at Harvard University Center for Population and Development Studies, Cambridge, MA, 9 May 2002.
- National Institutes of Health, Consensus Conference on Interventions to Prevent HIV Risk Behaviors, Bethesda, MD, 11 to 13 February 1997, NIH Consens. Statem. 15, 1 (1997).
- UNAIDS China, "We care, do you?" listing of AIDS Projects by international agencies, China UN Theme Group on HIV/AIDS as of May 2000, UNAIDS, Beijing.
- W. Liu, Peer education for HIV/STD prevention among community-based drug users in Guangxi province, Southern China, 12th International AIDS Conference, Durban, South Africa, 12 July 2002, oral abstract WeOrC500.
- 22. UNAIDS, "HIV prevention needs and successes: A tale of three countries: An update on the HIV prevention success in Senegal, Thailand and Uganda" (UNAIDS/ 01.15E, UNAIDS Best Practice Collection, Geneva, April 2001); available at www.unaids.org/whatsnew/ speeches/eng/wearsit280499.html
- 23. E. Chan, "China firms offer drugs and hope to AIDS victims," *Reuters*, 15 November 2001.
- Ministry of Health of Brazil, National Program for STD/AIDS, "HIV/AIDS control: The Brazil experience, 1994–1998" [booklet produced by Ministry of Health, Brazil; World Bank; and UNESCO (date unknown)].
- 25. T. Saich, China Q. (March, no. 161), 124 (2000).