Emerging HIV Epidemic Among Older Adults in Nanning, China

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Abstract

The HIV/AIDS surveillance data indicates that the proportion of people living with HIV/AIDS (PLWHAs) who were 50 years old or older increased to 42.7% in 2011 from 16.5% in 2007 in Nanning, the capital city of Guangxi Province. A greater number of newly diagnosed HIV cases compared to clinical AIDS cases were identified from older adults. The dominant HIV transmission mode among older PLWHAs was heterosexual although approximately 30% of all PLWHAs acquired HIV through heterosexual contacts.

Introduction

CHINA'S POPULATION is aging rapidly in recent years, as is HIV infection. According to a recent report made by the Chinese Ministry of Health, the proportion of people living with HIV/AIDS (PLWHAs) who were aged 50 years or older rose dramatically from 1.9% in 2000 to 21.1% in 2011, an 11-fold increase.¹ Recognizing this significant public health problem, the Chinese Ministry has called for more HIV interventions, treatment, and care for older adults.² However, few epidemiologic data are available to examine the nature, trend, and contexts of HIV infection among older adults in China.

We reviewed and analyzed the HIV/AIDS sentinel surveillance data in Nanning, the capital city of Guangxi Province. Guangxi is located along a drug trafficking route, which originates from the Golden Triangle, passes through northern provinces of Vietnam, and finally into Hong Kong and the rest of the world.³ Guangxi ranked second among China's 31 provinces in terms of the estimated number of PLWHAs in 2011. The major HIV transmission routes are needle sharing and heterosexual intercourse.¹ The HIV/AIDS sentinel surveillance system was set up to monitor trends of the HIV epidemic in the city. The regular surveillance covers eight groups of people: drug users, female sex workers, men who have sex with men, tuberculosis patients, sexually transmitted disease patients, pregnant women, migrant workers, and college students.

A total of 8003 PLWHAs were reported between 2007 and 2011 in the city of Nanning. The proportion of PLWHAs who

were 50 years old or older increased to 42.7% (874/2046) in 2011 from 16.5% (159/961) in 2007. The numbers of both older male and female PLWHAs increased during that 5-year period, while the numbers of male and female PLWHAs 49 years old or younger plateaued or slightly decreased (Fig. 1). The average ratio of male to female older PLWHAs was 3.3:1 in that period. The majority of older PLWHAs were farmers or rural-to-urban temporary migrants. Specifically, 74% were farmers or rural-to-urban migrants, 10% retirees, 4% home maids, 4% employed individuals, and 8% were engaged in other occupations in 2011.

In each of the 5 years, a greater number of newly diagnosed HIV cases compared to clinical AIDS cases were identified and reported from older adults through the surveillance system. For example, 64.5% older PLWHAs were new cases of HIV and 35.5% were clinical AIDS cases in 2011 (Table 1). Although approximately 30% of all PLWHAs in Nanning acquired HIV through heterosexual intercourse and 45% through needle-sharing, 90% of older PLWHAs were infected with HIV through the heterosexual transmission mode and approximately 1% through needle-sharing.

The increase in HIV prevalence among older adults may be attributed primarily to two factors. First, new HIV infections have increased in older adults, with an average proportion of 60% among PLWHAs between 2007 and 2011. Second, effective treatment with antiretroviral therapy (ART) may have led to an increase in survival among persons who were infected in their younger age and are now living into older age. We believe that the first factor is dominant because, in each of the recent 5 years, more new HIV-infected cases than clinical

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FIG. 1. Distribution of persons living with HIV/AIDS (PLWHAs) in Nanning, China.

AIDS cases were reported through the HIV/AIDS surveillance system. However, as Chinese authorities promote free ART treatment, the proportion of PLWHAs who are clinical AIDS cases will be increased in the future.

The alarming finding is that, in contrast to younger PLWHAs who acquired HIV through both needle-sharing and heterosexual contacts, heterosexual transmission is the dominant HIV transmission mode in older adults. Cheap commercial sex may be the primary transmission route since the majority of older PLWHAs reported having had a history of commercial sex at low-end venues and with older female sex workers (FSWs).^{4,5} Sex work in China can be categorized into high, middle, and low levels, according to workplace, income from sexual transaction, and socioeconomic background of clients.^{6,7} FSWs at the low-end venues are old, with a low level of education and income. They usually solicit clients on streets, in parks, or at construction sites. In contrast, FSWs at the high or mid level are usually young and well-educated. They usually provide commercial sex at hotels, dancing halls, karaoke bars, or other night entertainment centers. HIV prevalence among low-level sex workers in some regions is very high. According to a study among FSWs at the low level in a city of China, HIV prevalence was 26% among 31 street-based FSWs, 22% among 51 FSWs in temporary sublets, and 16% among 17 FSWs at roadside beauty salons.⁸ Supported by a National Institutes of Health (NIH) grant, we are now conducting a social network study among older fe-

male sex workers in Nanning. The findings of qualitative studies document that the main clients of older female sex workers were older males and that condom use was infrequent. In Nanning, domestically made drugs for treating erectile dysfunction (with a similar effect as Viagra® [Pfizer, New York, NY]) are inexpensive, approximately 0.35 US dollar per pill. Research has documented that drugs for erectile dysfunction treatment have been associated with increased risky sex.⁹

The population in China is rapidly aging. The population aged 65 and above grew from 7% in 2000 to 17% in 2010. The proportion of the elderly population is expected to reach 20% and 25%, respectively, in the periods 2015–2035 and 2040–2050.¹⁰ With the availability of medications for erectile dysfunction that prolong older men's sexual activities, easy access to cheap commercial sex, and inconsistent condom use, HIV will continue to spread among the older population. In order to control the HIV epidemic in the elderly population and improve older PLWHAs' quality of life and well-being in China, studies are needed to examine sexual risk determinants of HIV infection at environmental, intrapersonal, and interpersonal levels among this population. Furthermore, the relationships among HIV infection and treatment, aging physiology, and other biologic and psychosocial co-occurring conditions need to be investigated. These approaches should aid in refining our understanding of the complex comorbid diseases and chronic conditions in the setting of long-standing treated HIV infection.

TABLE 1. HIV/AIDS AMONG OLDER PLWHAS IN NANNING, 2011

Age group	HIV		AIDS	
	No.	%	No.	%
50–54	73	63.5	42	36.5
55–59	99	59.3	68	40.7
60–64	99	60.4	65	39.6
65–69	103	71.5	41	28.5
≥70	190	66.9	94	33.1
Total	564	64.5	310	35.5

PLWHAs, people living with HIV/AIDS.

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Author Disclosure Statement

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