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The Socio-Economic Impact of HIV/AIDS at Individual and Household Level in China

Chinese Center for Disease Control and Prevention
National Center for AIDS/STD Control and Prevention
(NCAIDS)

Beijing Institute of Information and Control
(BIIC)

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The Socio-Economic Impact of HIV/AIDS at Individual and Household Level in China

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Foreword

Over the past several years, the Chinese government has affirmed its continuing commitment to effectively respond to HIV and AIDS, including issuing the Regulations on AIDS Prevention and Control and the new Five Year Action Plan for Reducing and Preventing the Spread of AIDS (2006-2010), which are all crucial measures reinforcing the country's fulfillment on the Millennium Development Goals (MDGs). The UN and Chinese Foreign Ministry co-authored report on China' s progress on MDG shows China is on track to control HIV/AIDS by now and with good hopes for achieving the MDG target by 2015. Furthermore, top country leaders have continuously demonstrated their strong commitment and concern to people living with HIV (PLHIV), as well as families and communities affected by AIDS.

With all these achievements, there are still persistent challenges ahead in our collective response to HIV in China. The latest joint estimation by the Ministry of Health (MoH) and UN shows that by the end of 2009, 740,000 people are living with HIV in China. Although China's HIV epidemic remains low in general, the epidemic is continuing to spread from high-risk groups to the general population, with more than 70 percent of new infections contracted through sexual transmission in year 2009. Meanwhile, the country contains many simultaneous epidemics with pockets of high infection among specific sub-populations and in some regions, which further entangles an effective response.

Conducted in the five high prevalence provinces of China, the Socio-Economic Impact of HIV/ AIDS study is an important initiative to assess the impact of HIV and AIDS at individual and household levels in the country and make due policy and programmatic response. The study is featured in its scale of survey and dimension of analysis. About 2000 households were surveyed in the five provinces. The spectrum of the analysis covers an unprecedented extent to present a comprehensive overview of the social and economic consequences of HIV and AIDS in China.

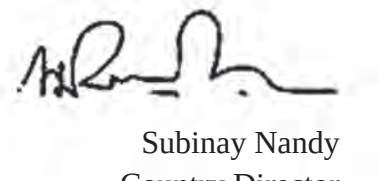
HIV presents a major challenge to human development rather than merely a public health issue. The survey enriched on knowledge of the magnitude of HIV at the household and individual levels in China. The socio-economic burden of PLHIV is significantly higher compared to the non-HIV households by demonstrating the following:

- Reduced workforce participation of adults at productive age and additional burden on older people and children are significantly higher among HIV-households.
- Discrimination is extensive and has a wide-ranging impact and directly contributes to higher income loss than poor health conditions.
- Medical expenditure of HIV-households is two times higher than that of non-HIV households.
- HIV also led to school drop-outs, which is higher among girls, and considerable household burden on women, and so on.

These facts remind us that tremendous tasks are in front of us towards creating and sustaining an enabling environment for PLHIV.

I would like to congratulate the National Center for AIDS/STD Control and Prevention of the Chinese Center for Disease Control and Prevention (NCAIDS), and the Beijing Institute of Information and Control (BIIC) for conducting this important survey and producing this comprehensive report. This report is published at a critical stage. While UN is preparing for the UN Development Assistance Framework for the next five years, China is formulating its strategic and action plan to combat HIV/AIDS for the new decade. I believe this study would place its unique contribution to an evidence-informed policy making process by both Chinese Government and UN.

Finally, I hope through our joint actions, the vulnerabilities of PLHIV and stigma/discrimination attached to PLHIV as indicated in the report would be reduced and ultimately be eliminated. With strong leadership, commitment and action both at national and local levels, the HIV epidemic will be effectively contained.



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Foreword

In 1985, the first HIV case was reported in China. The cumulative number of HIV cases reported in China at the end of Oct. 2009 was 319,877, including 102,323 AIDS cases and 49,845 recorded deaths. Currently, the HIV epidemic in China remains one of low overall prevalence, with pockets of high infection among specific sub-populations and in some localities. Therefore, although the macroeconomic impact of HIV is relatively small, the impact at the household and individual levels is still likely to be significant and the local impact in high prevalence areas may also be high. Until recently it has been difficult to quantify the impact of and response to HIV at the household and individual levels due to a lack of data and relative research. However, from the HIV situation of some higher prevalence countries, we have learned that HIV would have a serious impact not only on the health and life of individuals, but also on the politics, economy and stability of society as a whole. Furthermore, the HIV epidemic could impede social development and human advancement. All the above demonstrate that HIV is not only a medical problem but also a socio-economic issue.

It is crucial to reduce the impact, prevalence and reduce stigma associated with of HIV in China. Increased effort is needed from not only the public health department of the Chinese Government and civil society but also from relevant national and international departments and organizations. With the support of UNDP, the National Center for AIDS/STD Control and Prevention (NCAIDS) under the Chinese Center for Disease Control and Prevention and the Beijing Institute of Information and Control (BIIC) conducted a survey entitled *The Socio-Economic Impact of HIV/AIDS at Individual and Household Level in China*. NCAIDS is the professional department responsible for providing overall guidance and technical support for HIV prevention and control in China. BIIC has abundant experience in conducting HIV related surveys by using a comprehensive and integrated approach that is a combination of qualitative and quantitative analysis.

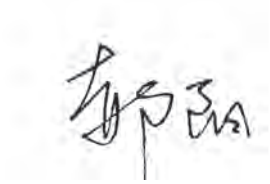
Thanks to the cooperation of these two institutes, with the strong support of UNDP, the research was conducted over two months in nearly 2,000 households in five of China's higher prevalence provinces. Due to the large sample and cover, the result is an influential and credible survey about the impact of HIV in China. The survey analyzed the socio-economic impact of HIV and at household and individual levels in the following areas: the socio-economic characteristics of persons living with HIV (PLHIV), stigma and discrimination, income and employment, household consumption, coping mechanisms, availability of a support system, education, health care seeking behavior, marriage and household structure, quality of life, and social gender.

The key findings of this 13-chapter report resulted from comparing and analyzing the statuses of HIV households and non-HIV households in different areas. The expenditures of HIV households are mostly for the purpose of meeting basic needs. HIV households have to spend more on medical expenses, and therefore have less disposable income for education and durables. Some adult PLHIV

needed to be looked after by their parents. Other family members, especially children and the elderly, have to assume more responsibility for generating family income. The traditional household structure has changed and the household function has been weakened. Stigma and discrimination against PLHIV is still widespread and serious. For those PLHIV who disclosed their status, they and their family members have suffered discrimination in the community, in health facilities and in schools. HIV results in both a decrease in the enrollment rate and an increase in the dropout rate of children in household affected by HIV. In particular, the impact on the education of children from poor families is serious. At the same time, HIV can also lead to a worsening of broader social and economic problems, such as increasing the gap between rich and poor, widening gender inequality, reducing the educational opportunities of children from poorer families, and increasing the burden on public health resources.

In June 2009, the second round of the National AIDS Comprehensive Prevention and Treatment Demonstration Area project began. Also, the Global Fund AIDS Rolling Continuation Channel Program will start in Jan. 2010. At the same time, the Chinese Government is formulating new long-term action plans to combat HIV. This timely report could be an important tool for governmental departments at various levels to establish and carry out HIV prevention and control policies and measures, and to ultimately reduce the impact of HIV.

Finally, I would like to congratulate the United Nations Development Programme (UNDP), the National Center for AIDS/STD Control and Prevention (NCAIDS) of the Chinese Center for Disease Control and Prevention, and the Beijing Institute of Information and Control (BIIC) for their excellent contribution to this study.



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Contents

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Anti-retro Viral
CBO	Community Based Organization
CDC	Centers for Disease Control
CICETE	China International Center for Economic and Technical Exchanges
CSO	Civil Society Organization
DALY	Disability-adjusted life years
DFID	Department for International Development
FSW	Female Sex Worker
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	Human immunodeficiency virus
IDU	Injecting Drug User
IEC	Information, Education and Communication
M&E	Monitoring and Evaluation
MARP	Most-at-Risk Population
MDG	Millennium Development Goals
MLSA	Minimum Living Standard Assistance
MSM	Men who have Sex with Men
MOCA	Ministry of Civil Affairs
MTCT	Mother-to-child transmission
NCAIDS	National Center for AIDS/STD Control & Prevention
NGO	Non-government organization
OI	Opportunistic Infections
PLHIV	People Living with HIV
RCMS	New Rural Cooperative Medical System

STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNDP RCC	UNDP Regional Center Colombo
UNGASS	United Nation General Assembly Special Session
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
WFPR	Work force participation rate

Abstract

Currently, even though the overall prevalence of the HIV/AIDS epidemic is low in China, the prevalence rate is fairly high in certain areas. Hence, although the macroeconomic impact is likely to be relatively small the impact at the household and individual levels is still likely to be very large, and the local impact in high prevalence areas may also be high. Until recently it has been difficult to quantify the impact of and response to HIV/AIDS at the household and individual levels due to a lack of data. In response to this situation, in order to identify the forms and extent of the socio-economic impact of HIV/AIDS, research was conducted in five high prevalence provinces of China, involving 931 HIV households and 995 non-HIV households (the control group) selected at the county level. Using research data and multivariate regression analysis, the survey analyzed the socio-economic impact of HIV/AIDS at individual and household levels in the areas of household structure, income, employment, consumption, health care seeking behavior, education, quality of life, discrimination, and so on. Based on these findings, this report then offers some recommendations to reduce the impact of HIV/AIDS.

It was found that the impact of HIV/AIDS on PLHIV and their families can be very severe. This impact can take many forms. HIV/AIDS has a large impact on the household economy, due to increased absence from work or the loss of jobs, the loss of work opportunities, and the reduction of personal income. HIV households are far more likely than non-HIV to fall in the low income category. Household consumption structure is frequently forced to change due to the loss of income and the deteriorating health of PLHIV. The expenditures of HIV households are mostly for the purpose of meeting basic needs. HIV households have to spend more on medical expenses, and therefore have less disposable income for education and durables. The main coping mechanism used by HIV households to deal with the economic impact of the disease is borrowing money. At the same time other family members, especially children and the elderly, have to assume more responsibility for generating family income. As a result, some children have to sacrifice their education and their long-term well-being. HIV/AIDS also destroys marriages -- the number of PLHIV who are divorced, widowed and unmarried is significantly higher than for non-HIV individuals. Some adult PLHIV need to be looked after by their parents due to marital problems

and stress caused by HIV/AIDS. The traditional household structure has changed and the household function has been weakened.

Stigma and discrimination against PLHIV are still widespread and serious. For those PLHIV who disclosed their status, they and their family members have suffered discrimination in the community, health facilities and schools. HIV/AIDS results in both a decrease in the enrollment rate and an increase in the dropout rate of children in HIV households. In particular, the impact on the education of children in poor families is very serious.

Beyond HIV/AIDS' impact on PLHIV and their families, it can lead to a worsening of broader social and economic problems, such as increasing the gap between rich and poor, making gender inequality more serious, reducing the educational chances of children in poor families, and increasing the burden on public health resources. The findings of this report demonstrate more clearly than ever that there is an urgent need for effective policies and measures to reduce the socio-economic impact of HIV/AIDS.

Executive Summary

Although China is a low HIV/AIDS prevalence country, because of its large population China still has a large absolute number of PLHIV. Estimation results suggest that by the end of 2007 approximately 700,000 Chinese people were HIV positive, and the estimated number of AIDS cases was 85,000. From a macroeconomic point of view the impact in China is, for the moment, small compared to many higher prevalence countries. But the number of households being affected is very large and the need to deal with the impact of the disease is great. This study builds on work done in other parts of the world to take a close look at one critical aspect of HIV in China; the social and economic impact it is having on the individuals and households affected by the disease. It does so by analyzing the results of a survey conducted in 2008 of more than two thousand individuals from 1,926 households, located in 14 counties in five provinces: Guangxi, Hubei, Shanxi, Sichuan and Yunnan. Approximately half of those surveyed were PLHIV. The survey was conducted in poor rural areas, and therefore focused on rural PLHIV who were infected by IDU, commercial blood donation and heterosexual sexual behavior between spouses.

This summary presents a number of the key findings of this report. For a much fuller presentation of findings please refer to the chapters that follow.

Stigma and discrimination, disclosure and access to health

Stigma and discrimination are present in virtually all interactions of PLHIV and their households with other people. The survey analyzes stigma and discrimination in the following areas; within the family, in the community, in healthcare facilities, in school and elsewhere. The report then presents suggestions regarding improved public education and other efforts to reduce stigma.

One of the most insidious ways in which stigma and discrimination manifest themselves is in the unwillingness of PLHIV to disclose their status. The study found that a significant number of PLHIV do not disclose their status even within their own households. Nearly 17 percent of male PLHIV have not disclosed to their spouses after one year, and 8 percent have not disclosed even

after five years.

In other arenas the disclosure rate is much lower. Only half of PLHIV have disclosed their status in their communities, which is not surprising, given that one third of PLHIV who have disclosed their status report that they have faced discrimination in their communities. This ranges from verbal abuse and teasing to having children's marriages being broken off. Over 20 percent of PLHIV report that their children's marriage and employment prospects were negatively affected as well.

Obtaining proper health care requires disclosure of status, but nearly 30 percent of PLHIV report that they have not disclosed their status even in health care facilities. Again, this fear has a rational basis; one striking finding of the survey was that 12.9 percent of male PLHIV and 13.8 percent of female PLHIV reported that after disclosure they had encountered discrimination at health care facilities, including refusal of staff to treat them.

Table I Percentage of PLHIV who disclosed their HIV status at health care facilities

(Percent)

Disclosure status	Male	Female	Total
Did not disclose	30.5	28.3	29.7
Disclosed	69.5	71.7	70.3
For those who disclosed, reporting discrimination	12.9	13.8	13.2

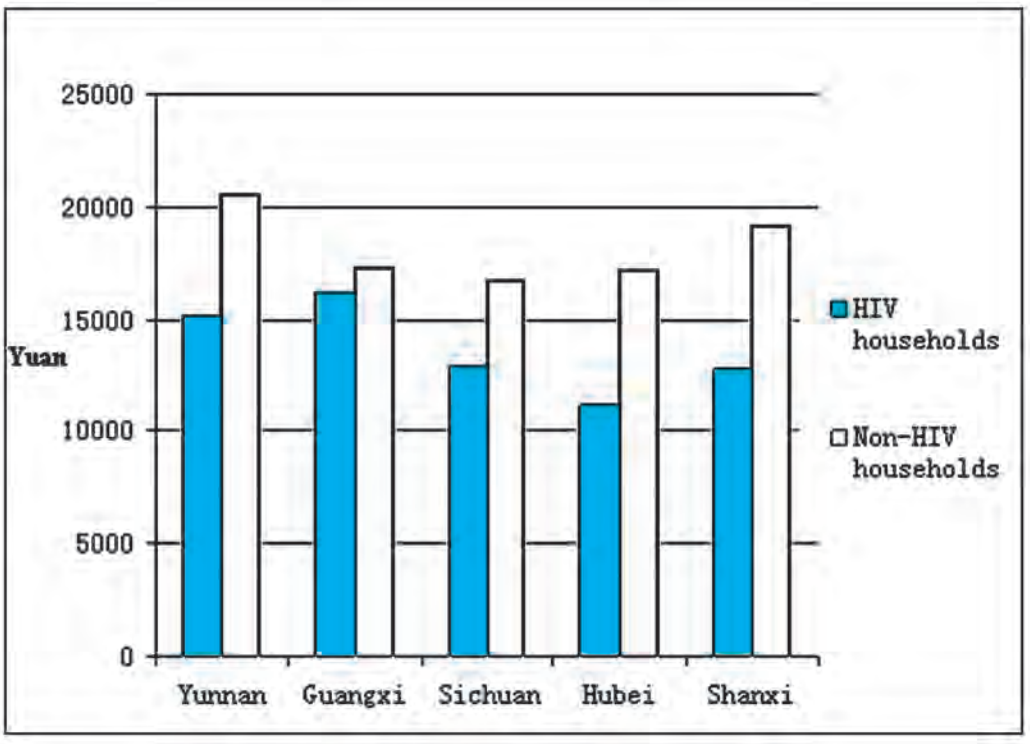
A full 90 percent of PLHIV report that they have not disclosed their status in the children's schools, because of their fear of discrimination against their children. As many as 80 percent of those who disclosed their status reported that their children did encounter discrimination, mostly when other children refused to play or sit together with them, and in some cases including verbal or physical abuse.

The need for greater public awareness of HIV is vividly demonstrated in these findings, as inter-provincial comparisons show that provinces where awareness is highest are the ones with the least stigma and discrimination. Older and less educated groups in the population are those with the lowest awareness levels but, again, comparisons between provinces show that in some areas there has been considerable success in raising awareness. Useful lessons can be learned from practices around the country.

Impact on household income and employment

The survey found that household income of HIV households is markedly lower than that of non-HIV households. The average annual household income of HIV households is 14,910 Yuan and of non-HIV households is 18,875 Yuan. These results were found in all five surveyed provinces.

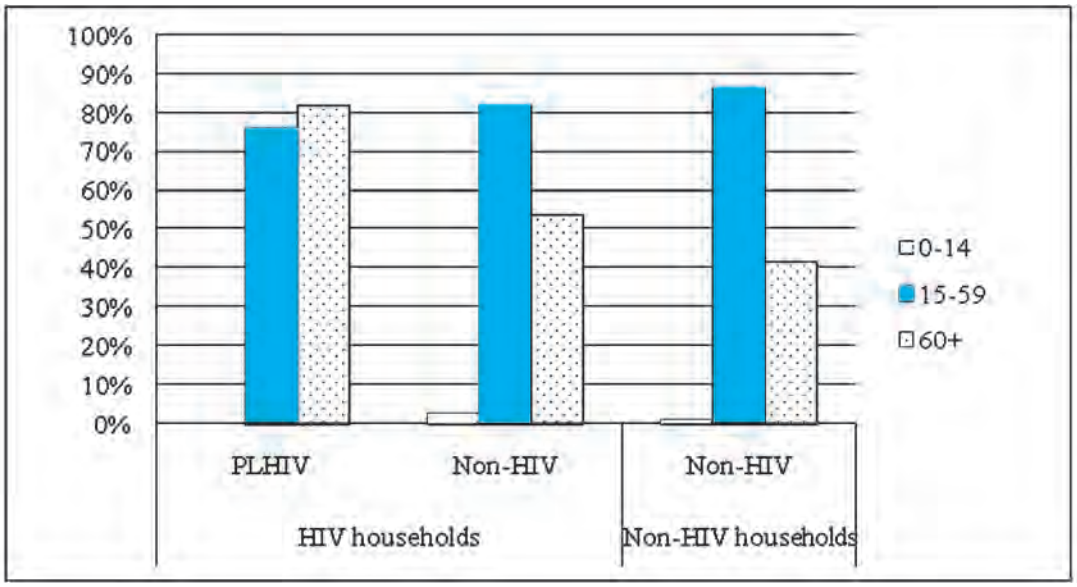
Figure I Average annual household income by province



Nearly half of the HIV households fall in the low income category, compared to only one third of non-HIV. 19.3 percent of the HIV households live under the relative poverty line, much more than the 11.5 percent of non-HIV.

The Workforce Participation rates of PLHIV and their family members are markedly different from those in non-HIV households. While the rate is lower for PLHIV and their household members during the peak work years of 15-59, it is higher among the very young and the old in HIV households. Although only 41 percent of people over 59 in non-HIV households work, that number is 81.6 percent for PLHIV and 53.7 percent for their household members. This is a clear reflection of the economic stress that AIDS places on households.

Figure II Work force participation rate by age group



PLHIV are more likely to change or lose their jobs than non-HIV individuals. Unemployment increases sharply when PLHIV discover their illness; from 18.2 percent to 26.0 percent, and the proportion who take work elsewhere drops from 24.0 percent to 17.9 percent. As a result of these changes in employment, the income, and the contribution to family income, of PLHIV falls substantially once HIV is detected. While they contributed 44.4 percent of their family's income before being found positive, this share drops to 38.9 percent after detection. Income drops for PLHIV by an average of more than 23 percent, and for their family members by an average of 11 percent.

Impact on household consumption

Consumption levels, rather than income, are increasingly viewed as the key financial determinant of human welfare. Although the average income of HIV households is markedly lower than that of others, the survey found that on average consumption levels are not lower for PLHIV, suggesting that HIV households save less, borrow more and receive more government support than others in order to maintain their consumption expenditures. At the same time this survey found clear evidence that consumption by HIV households is dramatically different from that of others. Compared to non-HIV households, HIV households spend more on food and health care – expenditures that just allow them to get by -- and less on education and durables, which create longer term benefits for the households. Furthermore, despite the fact that most of the surveyed PLHIV are still in good condition, the burden of medical expenditures on HIV households is significantly greater than non-

HIV households. This burden is certain to increase as their health turns worse, which will produce an even heavier shock for the household.

While the increase in medical expenditures for HIV households is predictable, there is marked reduction in spending on education and it is highly disturbing. Unless actions are taken to correct this trend, the illnesses of one generation could severely impair the opportunity to develop of the next generations as well. It is not only individual PLHIV whose consumption is affected by their illness; the wellbeing of their entire households, and future generations, as reflected in consumption spending patterns, is also undermined.

Coping mechanisms

The survey found that most PLHIV have no life insurance and no pension. The great majority of the PLHIV surveyed have medical insurance, mostly through participation in the new Rural Cooperative Medical Service (RCMS). However, RCMS generally excludes HIV related treatments, only covers a relatively small amount of daily medical expenses. It thus falls far short of adequately covering the medical expenditures incurred by PLHIV. Because the official safety net for PLHIV is still incomplete, most HIV households still have to resort to borrowing from friends and relatives when facing economic difficulties. However the survey found many PLHIV are having difficulty borrowing from these traditional sources of support, as there is doubt about their ability to ever repay. Far more HIV households have to resort to the most desperate last resort of liquidation of assets to get by (10.9 percent vs. only 5.2 percent of non-HIV households), sacrificing the economic future of their family members in order to cope with their heavy burdens.

The survey's findings in one respect are quite encouraging: government medical care programs targeting PLHIV are having a clear positive impact. 63.4 percent of the PLHIV surveyed had received free ARV or traditional Chinese Medicine treatment, and that this proportion goes up with the drop in the CD4 count. 83% of PLHIV having CD4 count below 200 had received at least one form of free treatment. In addition, government financial support programs, especially the MLSA, are also making a difference. 40.4 percent of HIV households receive some form of financial assistance, whereas the proportion of non-HIV households is only 12.9%. The average amount of assistance received by HIV households is more than double support received by non-HIV households. Although some non-government sources of support exist, they are not nearly as significant as government programs; more than 80 percent of total support came from government

sources. All in all, this support makes a clear contribution to closing the income gap between HIV and non-HIV households. When the values of the free medical services received by PLHIV are included in income the gap almost disappears.

However the dependence of PLHIV on government and social assistance poses problems, because the coverage of these programs is incomplete – many poor HIV households do not receive the MLSA – and because as the number of PLHIV increases the fiscal burden on local governments may be impossible to manage. An important and promising alternative to direct financial aid is income generation activities, allowing PLHIV who are in good health to continue to engage in productive activities and support themselves. Many useful examples from around the country of successful and less successful income generation programs are available. One critical lesson of experience to date is that income generation programs targeting PLHIV and their households are less likely to achieve positive results than broader reaching programs targeting all needy households, including those affected by HIV. Broad programs tend to be more professional and sustainable, and have greater impact. In general, the best way to address poverty among HIV households is to incorporate them firmly in a broad and effective national anti-poverty program.

Impact on agriculture

Most of those surveyed worked in the agricultural sector, and cultivation is the main source of income for both HIV and non-HIV households. The survey found that this economic foundation of rural life for households is notably disrupted by HIV. Two key findings include:

- The share of income earned in agricultural activities is substantially lower for HIV households (31.0% than for non-HIV households 39.0%). Since total income is also lower, as noted above, the absolute amount of agricultural income earned by HIV households is much lower than for non-HIV.
- Whereas the average non-HIV household surveyed was a net renter of others' fields, using 108.4 percent of their own assigned area, HIV households are net renters out of their own land, using on average only 91.3 percent of their assigned plot. In some provinces, such as Guangxi and Sichuan the average HIV household uses only around 80 percent of the land that they have contracted.

Impact on education

There are presently about one million children affected by HIV/AIDS in China, including children

who are PLHIV, children of whom at least one parent has HIV/AIDS and children who have lost at least one parent to HIV/AIDS. The survey found that the education of children in HIV households is being severely weakened by the disease, especially among poorer households. The school enrollment rate among 10-14 year old children (all still eligible for free education) in non-HIV households was 97.2 percent, but among HIV households it was only 88.9 percent. In the poorest households the effect is particularly grave; children from poor HIV households had only a 71 percent enrollment rate, while those from non-HIV still had a 100 percent rate. Girls' education receives the greatest impact; suggesting that schooling for girls is one of the first places that poor HIV households cut spending to manage their financial difficulties. The drop-out rate for girls in HIV households was 13.8 percent, whereas for girls in non-HIV families it was less than one percent. Among older children, beyond the coverage of free compulsory schooling, in HIV households only 48.9 percent continue to receive education, while in non-HIV households this proportion is 69.7 percent. Impact on children's education is one of the most powerful examples of how the disease is affecting not only those who contract it, but the future welfare of the next generation of China's population.

Health-care seeking behavior

PLHIV seek health care more often, and spend more on it. They tend to visit higher level medical facilities, such as those at the county level, because these are more likely to have special facilities for them, but treatment there is more expensive and transportation costs are greater. Another striking difference is that members of HIV households who didn't seek health care while ill were far less likely to treat themselves at home than those from non-HIV. As PLHIV are vulnerable to opportunistic infections, the failure to treat an illness can be very dangerous for them. But OI treatment is precisely the greatest challenge for PLHIV, because it is often expensive and it is in general not covered by existing government programs in both rural and urban areas. For the floating population of internal migrant workers, a vulnerable group, there is even less hope at present of receiving insurance to cover HIV treatment. Even for PLHIV who could afford commercial medical insurance the current options are not good; no commercial insurance covers HIV-related expenditures.

China is currently engaged in a sweeping effort to reform its health care insurance, to broaden coverage and gradually increase the reimbursement rate to make adequate health care accessible to all. In order to make essential health care available to PLHIV one policy priority should be ensuring

that treatment for HIV/AIDS is covered better by these national social insurance programs, and that these programs are adequately funded. In the immediate future, as so many PLHIV and their household members require urgent medical care that they cannot afford, an expansion of the free ARV program to cover OI treatments will be of great help.

Impact on marriage and family structure

A much higher proportion of PLHIV are single, widowed or divorced, compared to their cohorts in non-HIV households. In comparison with non-HIV, a higher percentage of the grown PLHIV respondents are still living with their parents as they need day to day assistance from their parents, in part due to their difficulty in maintaining their own marriages, imposing economic and physical stress on the elderly that they may no longer be capable of bearing. When people in the prime of their lives, who should be supporting their children and their parents, instead are dependent on others for their livelihood, the basic functioning of the household is disrupted. Current programs to assist PLHIV and their families focus on economic support, which is important, but neglects the effect that the disruption of the family has on all members' lives. There is a need for expanded grass roots based support programs in communities and through NGOs that address the psychological and social problems that are a side effect of HIV.

Quality of life

This report utilized the World Health Organization's quality of life methodology to analyze and compare the quality of life of respondents from HIV and non-HIV households. This methodology assesses quality of life by the following criteria: physical, psychological, social, environmental, self-confidence and independence. Key findings are that; a) the quality of life of PLHIV is markedly lower than for others; b) the quality of life of male PLHIV has decreased more than female; c) impact on life quality is particularly harsh for unmarried and unemployed PLHIV. Regression analysis found that the single biggest influencing factor on PLHIV quality of life is discrimination, with income also a major factor.

Impact on women

The survey identified a number of important ways in which the impact of HIV is disproportionately received by women and young girls. As already mentioned above, the school drop-out for girls is much higher than for boys. When the elderly members of households are forced to continue

working to support family members with HIV, it is elderly women who take on most of this burden, with a higher work force participation rate (WFPR) than for elderly men. This pattern is found in other age groups as well. Although the WFPR for women in non-HIV households is 6 percent lower than for men, women PLHIV's WFPR is 6 percent higher than for male PLHIV, and their average hours worked are reduced by less than for male PLHIV. While they take on this heavier income-earning burden outside the home, women continue to be responsible for most housework as well. As the following table illustrates, women PLHIV, the work burden on women PLHIV is much heavier than for men.

Table II Time use pattern of family members aged 15-59

(Hours/day)

Time use pattern	HIV household				Non-HIV household	
	PLHIV		Non-HIV			
	Male	Female	Male	Female	Male	Female
Work time	4.6	4.8	7.1	5.8	8.0	6.7
House work time	1.1	3.1	0.8	2.8	0.7	2.7
Total productive time	5.7	7.9	7.9	8.6	8.7	9.4
Non-working time	18.3	16.1	16.2	15.4	15.3	14.6

Note: Non-working time includes personal health time, relaxation and sleep time, etc.

One striking finding was that a higher percentage of women -- both among PLHIV and non-HIV family members -- sought medical treatment at the local village level clinic, while men are more likely to go to higher level, better medical facilities. As a result, on an average the male spends considerably more money on health care than his female counterpart. While most gender-based studies of HIV to date have focused on epidemiological issues, the survey findings suggest the need for a broader social gender approach to understanding and mitigating the socio-economic impact of HIV.

Key recommendations of the report

Based on these findings the report presents several policy recommendations:

1. The expansion of anti-discrimination education and its integration into all IEC activities should be a high priority both in high prevalence areas and elsewhere in the country. The aim of HIV/AIDS awareness education should not only be to strengthen the knowledge of HIV/AIDS, but also

to change the attitude and behavior of people towards PLHIV. Appropriate legal steps should be undertaken, including through new legislation, to protect PLHIV from stigma and discrimination, with a particular focus on institutional discrimination and healthcare settings.

2. The needs of PLHIV and their households should be integrated into social security/protection schemes and food programmes. By doing this and funding these crucial programs adequately to cover all in need including, but not only PLHIV, the government will achieve greater impact and equity. Specifically;

- Efforts to improve medical care for PLHIV should focus on including them in the new social insurance initiatives that the government is already pursuing; the New Rural Cooperative Medical System (RCMS) in the rural areas, and basic medical insurance and others in urban areas.
- Life support for PLHIV should be incorporated into broader existing government support programs by advising the Ministry of Civil Affairs to expand the scope of the Minimum Living Standard Assistance (MLSA) to cover PLHIV.
- Income generation activities for PLHIV should be combined with broader anti-poverty and development programs, in order to advance HIV households' own abilities to cope with the burdens of the disease themselves.

3. Strengthen intervention in the education of HIV-affected children, especially for girls. Establish a targeted education support system for HIV families. Renew and consummate the contents of the "Four Frees and One Care" policy to provide education support and free skill training for older children.

4. Combine various efforts to provide day to day support to HIV households, especially households with single parents and elderly.

5. Pay more attention to female PLHIV. Take up targeted measures to reduce their vulnerability. Special steps should be undertaken to strengthen the access of women living with HIV to services, credit and livelihood options. Focused efforts are also needed to ensure access to health care service.

Chapter 1 Background

1.1 The HIV/AIDS situation in China

The cumulative number of PLHIV reported in China at the end of 2008 was 276,300, including 82,000 AIDS cases and 38,100 recorded deaths (Chen Zhu, 2009). Estimation results suggest that by the end of 2007 approximately 700,000 Chinese people were HIV positive (range 550,000-850,000). Women account for 30.8 percent of the reported cases. The estimated number of AIDS cases is 85,000 (range 80,000-90,000). Of the approximately 700,000 PLHIV still living, 40.6 percent were infected through heterosexual transmission, 11 percent through homosexual transmission, 38.1 percent through Intravenous Drug Use (IDU), and 9.3 percent through commercial plasma donation and transfusion of infected blood and blood products. Just 1 percent of the total was infected through Mother to Child Transmission (MTCT) (SCAWCO et al, 2007).

Currently, the HIV epidemic in China remains one of low overall prevalence, with pockets of high infection among specific sub-populations and in some localities. Although the epidemic continues to spread, the rate of growth is slowing. Sexual transmission is now the main mode for the spread of HIV, closely followed by IDU; these two causes together account for nearly 80 percent of all cases. The geographic distribution of the disease is highly varied, across regions, provinces and the urban/rural divide. The epidemic continues to be driven by high-risk behavior within particular sub-populations (SCAWCO et al, 2007).

The research for this report was conducted in five HIV high prevalence provinces in China, namely Yunnan, Guangxi, Sichuan, Hubei and Shanxi. By the end of 2008, in Yunnan, the cumulative number of PLHIV reported was 63,322, including 9,752 AIDS cases and 7,015 recorded deaths. The number of HIV cases in Yunnan accounts for one fourth of the total reported number in China, and Yunnan has more PLHIV than any other province in China (Liu Jingjing, 2008). In Guangxi the cumulative number of PLHIV reported was 43,046, including 9,174 AIDS cases; Guangxi, with more than 40,000 PLHIV, ranks third among provinces in terms of the number of cases (Zhang Ruofan, 2008). In Sichuan, the cumulative number of PLHIV reported as of 2008 was 19,375 (Li

Qing, 2008). In Hubei, the cumulative number of PLHIV reported as of 2008 was 4,610, including 2,932 AIDS cases and 1,479 recorded deaths (Tang Xiaoan, 2009). In Shanxi, the cumulative number of PLHIV reported as of 2008 was 2,938, including 1,316 AIDS cases and 762 recorded deaths (Wang Xiaoyan, 2008).

1.2 Literature review

HIV/AIDS is not only a health challenge. The majorities of PLHIV are in their most productive years and generally belong to the most active group of society and the economy. HIV/AIDS results in exceptional levels of illness and death in this population group, which will lead to socio-economic problems. Tony Barnett and Alan Whiteside pointed out in their "Guidelines for Studies of the Social and Economic Impact of HIV/AIDS" that it is necessary and important to conduct surveys about the socio-economic impact of HIV/AIDS (Tony Barnett and Alan Whiteside, 2000). Such surveys can serve the following purposes:

- By measuring and predicting its impact, help to convince people of the seriousness of the problem;
- Help ascertain the location, scale, and form of the epidemic's impact in order to begin planning for it;
- Provide a further rationale for both prevention and mitigation of the epidemic.

The conceptual framework introduced in "Guidelines for Studies of the Social and Economic Impact of HIV/AIDS" included assessment of the epidemiological and demographic impact, social impact, economic impact, susceptibility, and vulnerability. Yuan Jianhua et al pointed out in "The Retrospect and Prospect of the Socio-Economic Impact of HIV/AIDS in China" that the survey of socio-economic impact of HIV/AIDS should include three levels and two aspects. The three levels are: first, the impact on individuals and households; second, the impact on the community and local social and economic activities; and third, the impact on the macro-economy and the entire society. The two aspects are the analysis of the socio-economic factors which facilitate the spread of the HIV/AIDS epidemic and the economic analysis of prevention and control activities (Yuan Jianhua et al, 2001).

In recent years there have been a number of studies related to the socio-economic impact of HIV/AIDS in China, which have served as background for this survey. These included:

Impact of HIV/AIDS on life expectancy

In some African countries with high prevalence of HIV/AIDS, life expectancy has fallen back to the level of ten years earlier. For example, in 1996, life expectancy in Burkina Faso was 46 years -- a decrease of 11 years compared to before the outbreak of HIV/AIDS (World Bank, 1997). Yu Xuejun estimated that China's average life expectancy will decrease by about 2 years due to impact of HIV/AIDS. According to these estimations, the average life expectancy of males will decrease about 3 years, while that of females would decrease 1 year, reflecting a significant difference in life expectancy impact between males and females.

However, the impact on PLHIV goes beyond earlier mortality. During their long illness PLHIV must overcome the health effects of the disease, the reduction in their capacity to lead a full life, and harsh stigma and discrimination.

The concept of disability-adjusted life years (DALY) has been used to measure the total loss of life caused by diseases in the world, combining the years lost to earlier mortality with the years lost to coping with the effects of a disease. A global survey conducted by Murray in 1996 about the burden of diseases showed that an average adult contracting HIV would lose 20 DALY (Murray, 1996). In a survey conducted in China by Guo Jinling in 2006, it was found that there would be 20.72 DALY lost for each PLHIV in a HIV high prevalence area (Guo Jinling et al, 2006).

Impact of HIV/AIDS on households

Song Lijun et al conducted a survey in Yunnan in which they found that the rate of unstable marriages and the chance of children becoming orphans are significantly higher in HIV households than in non-HIV households, and that HIV/AIDS is a factor that leads to family instability (Song Lijun et al, 2007). Another qualitative analysis of the impact of HIV/AIDS on the elderly conducted by Xu Qin found that HIV/AIDS changes the household structure and the direction of generational support, and makes the elderly much poorer. The elderly suffer social discrimination due to HIV/AIDS, and they are more marginalized (Xu Qin et al, 2005).

Impact on the household economy

Liu Kangmai et al conducted a discussion survey with 282 PLHIV in 9 provinces to analyze the degree of the decrease in their standard of living and the reasons behind it (Liu Kangmai, 2004). Tan Hongzhuan et al conducted a retrospective survey of PLHIV in You An hospital in Beijing in which

they analyzed the relationship between the PLHIV's annual per capita expenditures on outpatient services and hospitalization and their per capita disposable income (Tan Hongzhuan et al, 2005). These surveys found that the PLHIV and their families faced great and varied economic hardship, including lower work capacity, loss of income, and increased medical costs. In order to deal with these troubles, HIV households have adopted some coping mechanisms, which Yang Hongmei et al presented in qualitative terms (Yang Hongmei et al, 2001).

Stigma and discrimination

Stigma and discrimination do not only create huge psychological pressure on PLHIV and their families, but can also block their access to treatment and care activities. UNAIDS defines AIDS-related stigma and discrimination not only as discrimination against PLHIV and associated groups of people and types of behavior, but also the stigma and self-discrimination of high-risk population groups and their family members (UNAIDS 2002). Wang Yanjun et al found through discussion that PLHIV suffer passively when facing discrimination. Long-term discrimination leads to many negative emotions, such as despair, thoughts of suicide, withdrawal, escape and passivity. PLHIV can become depressed and get trapped in a vicious cycle, which would not only prevent them from looking for help initially, but also stand in the way of participating in social life and realizing self-worth. This survey also found that besides their physical needs, the most exigent need of PLHIV is to reduce social discrimination (Wang Yanjun et al, 2007).

Another survey conducted by Liu Kangmai et al showed that more than one third of the PLHIV thought that their family members have faced discrimination due to their HIV status; 51.6 percent of the PLHIV reported they have felt a change in attitude and pressure from other people once they had revealed their HIV status. A majority of the PLHIV reported they would not disclose their HIV status initially, mostly due to fear of social stigma. At the same time, 40.1 percent of the PLHIV thought of retaliation when they suffered discrimination and unfair treatment (Liu Kangmai et al, 2003).

Lack of knowledge about HIV/AIDS is one of the main causes of stigma and discrimination. According to the results of a survey conducted in 2008, 80.9% of respondents correctly answered 13 questions about the routes of HIV transmission. However, more than 48% of the respondents thought HIV could be transmitted through mosquito bites; more than 18% thought HIV could be transmitted through sneezes or coughs, and 31.7% percent of the respondents thought that PLHIV

who were infected by sexual contact or IDU deserved it (UNAIDS, GBC et al, 2008). The results indicate that negative attitudes and misapprehension toward HIV/AIDS and PLHIV still persist.

Quality of life

The quality of life of PLHIV could diminish due to a variety of reasons, such as disease, psychological stress, economic difficulties, and stigma and discrimination. Xie Jing et al surveyed 64 PLHIV in Henan province using the Quality of Life-HIV (QOL-HIV) questionnaire introduced by the World Health Organization (WHO). They found that the score of PLHIV is lower than the national average in physical fitness, psychological well-being, independence and social categories. However, there is no statistically significant difference in the categories of environment and belief (Xie Jing et al, 2006). Furthermore, Li Jin et al interviewed 71 PLHIV and 162 relatives of PLHIV and non-HIV; they found that the quality of life of PLHIV was quite low, because of its direct effect on their health and because of a lack of social support (Li Jin et al, 2004).

Impact on women and children

Women and children are more vulnerable when facing HIV/AIDS. Surveys targeting women and children are therefore vitally important to identify and assess the socio-economic impact of HIV/AIDS. In coming years there will be more and more children affected by HIV/AIDS, both through the disease and through the loss of family members who die from it. They have to face numerous difficulties, such as poverty, poor nutrition, high drop-out rates from school, discrimination, psychological stress, and the risk of contracting HIV/AIDS. A study in Thailand found that in HIV households, there are many children who have lost the chance to obtain an education or have had to delay their enrollment, due to poverty or the need for these children to find employment in order to compensate for the loss of income of the adult family members (Pitayanon S, Kongsin S, 1997). Ji Guoping et al conducted a demand survey in Anhui province in 2006, aimed at children affected by HIV/AIDS and their families. They found that the nutrition, mental health and academic scores of children affected by HIV/AIDS were significantly worse than for others, and that the families were facing severe difficulties in their daily lives (Ji Guoping et al, 2007). Currently, the epidemic of HIV/AIDS is growing more and more serious for women, but gender-based quantitative analysis of its impact is still lacking in China. Xia Guomei thought that HIV/AIDS would strengthen the vulnerable status of women (Xia Guomei, 2002). Qian Xin thought that gender inequality leads to differences in the impact of HIV/AIDS on women and men, while the different impact of HIV/AIDS on women and men would further widen gender inequality (Qian Xin, 2006).

1.3 Policy review

The HIV/AIDS epidemic is not only a public health problem, but is also a major socio-economic problem. It has direct impact on the health of PLHIV, and also leads to lower work capacity, increasing poverty, an increase in the number of orphans, and stigma and discrimination. Furthermore, the epidemic of HIV/AIDS may even have an impact on local socio-economic development. Having recognized the large impact of HIV/AIDS, the Chinese Government gives high priority to HIV/AIDS prevention and treatment, and has been working on numerous measures to reduce the epidemic's impact. Prevention and treatment policies and measures have been strengthened greatly since 2003.

On 1st Nov. 2003, Premier Wen Jiabao announced the policy of "Four Frees and One Care" in Beijing, that is: free anti-retro viral (ARV) drugs for AIDS patients who are rural residents or people with financial difficulties living in urban areas; free Voluntary Counseling and Testing (VCT); free drugs to HIV-infected pregnant women to prevent mother-to-child transmission, and HIV testing of newborn babies; free schooling for children orphaned by AIDS; care and economic assistance to the households of people living with HIV/AIDS (SCAWCO et al, 2004).

In March 2006, the State Council issued the Regulation on AIDS Prevention and Treatment. The Regulation was the first legal framework developed in China for a specific disease or epidemic. This provides a legal framework for AIDS initiatives, and emphasizes the accountability of government and ministries at all levels. It also sets out the rights and responsibilities of PLHIV, ensures the funding of AIDS measures and provides the legal foundations for AIDS policy formulation and its effective implementation (SCAWCO et al, 2007). The Regulation on AIDS Prevention and Treatment established the legal basis for the "Four Frees and One Care" policy.

In order to implement the policy of "Four Frees and One Care" comprehensively, all related sectors have introduced many policies and measures, and all China's provinces have introduced local action plans and packages of implementation measures for reducing and preventing the spread of HIV/AIDS.

In the area of testing and treatment, in 2004, the Ministry of Finance and the Ministry of Health issued the "Management Measures of Free Voluntary Counseling and Testing (for Trial Implementation)". The measures ordained that VCT work should be conducted by the local CDC

and medical facilities selected by the CDC, and that free services included voluntary counseling and first testing. People who tested positive in two tests would be advised to do a further confirmation test. The local government could provide appropriate assistance for the people who could not afford the confirmation test. The Ministry of Labor and Social Security issued a document "Regarding the Implementation of ARV Treatment" in May 2004, which stated: first, PLHIV should be assured of receiving basic medical insurance and enjoy medical care like all other urban patients entitled to receive the basic medical insurance system from their local government. Second, the list of free ARV medications introduced by the Ministry of Health and the Ministry of Finance should be included in the List of Medicines in the Basic Medical Insurance System, so as to ensure the PLHIV who are covered in basic medical insurance could get effective ARV treatment. Third, PLHIV who are covered in the basic medical insurance system should have expenditures for ARV treatment included in the paid coverage of mutual assistance funds, so as to reduce the medical burden on these PLHIV. Furthermore, in order to protect the rights of women and children and to reduce transmissions from mother to child, the Ministry of Health issued its "Plan for the Prevention of Transmission from Mother to Child (revision)"in October 2004.

In order to support PLHIV in times of difficulty, the Ministry of Civil Affairs issued "Information on Strengthening the Support for PLHIV, Their Relatives and Orphans Who Are in Difficulty" in April 2004. This document pointed out that whenever the per capita income of a family is less than the standard of the Minimum Living Standard Allowance (MLSA), because of HIV/AIDS, this family should be enrolled in the MLSA program. In the areas where the rural MLSA has been established, the HIV households who met the standard should be included in its coverage. In the areas where the rural lowest insurance guarantee system has not yet been established, the PLHIV and their relatives in difficulty should receive basic life support and they should be provided fixed and periodic support. At the same time, the PLHIV in economic difficulty should be provided necessary medical support.

In March 2006, the Ministry of Civil Affairs and 14 other agencies issued a specific "Suggestion on Strengthening Care to Orphans (including children orphaned by AIDS)", providing favorable conditions in nine aspects of life, including education, medical care, recovery, housing and employment.

In addition, many local governments have complied with national policy and conducted local

prevention and treatment policies according to their specific local situations. For example, Yunnan province established "Prevention and Treatment Measures for HIV/AIDS in Yunnan Province", and Jiangsu province introduced "Prevention and Treatment Regulations for HIV/AIDS in 2004". Every province has introduced a local action plan for reducing and preventing the spread of HIV/AIDS or implementation measures from 2006 to 2010.

Today, after years of effort, HIV/AIDS prevention and control in China has made remarkable progress, and to some extent, reduced the impact of HIV/AIDS. The Chinese Academy of Social Sciences Social Policy Research Centre pointed out in their "Analysis of Policies on HIV/AIDS Prevention and Treatment in China" that the quality of life of PLHIV has improved significantly in the areas where the policy of "Four Frees and One Care" has been fully implemented (Chinese Academy of Social Sciences Social Policy Research Centre, 2008). The survey this time attempted to find out the socio-economic impact of HIV/AIDS under these new conditions--- with prevention and treatment efforts underway and with the more advanced characteristics of the epidemic.

1.4 Objectives of this study

Although the macroeconomic impact of HIV/AIDS is not serious in most countries, the impact on the health sector and on the poor is very severe in high prevalence countries (World Bank, 1997). Tony Barnett and Alan Whiteside have stated in the "Guidelines for Studies of the Social and Economic Impact of HIV/AIDS" that the impact of the epidemic has not yet been very detectable, much less catastrophic at the macro level. For this reason, analysis of the impact requires methods that detect it at the meso (middle) and micro level (Tony Barnett and Alan Whiteside, 2000). Currently, even though the overall prevalence of the HIV/AIDS epidemic is low in China, the prevalence rate is fairly high among special population groups and in certain areas. Hence, the macroeconomic impact is likely to be not significant; however, the impact at the household and individual levels is likely to be very large in some areas, as is the social impact in some localities. As a result, this survey mainly focused on the socio-economic impact of HIV/AIDS at individual and household levels.

In order to analyze the socio-economic impact of HIV/AIDS at the household level, a large-scale household survey was conducted by UNDP, National AIDS Control Organization (NACO) and National Centre for Applied Economic Research (NCAER) in India. This was the largest household survey about HIV/AIDS yet undertaken in the Asia and Pacific area. The survey in India included

8,000 households of which 2,000 were HIV households. The survey contents included household income, consumption, savings, education of children, health, stigma and discrimination, and gender. It was found in the India survey that the impact of HIV/AIDS on health, welfare, income, savings, occupation and social cohesion can be very severe.

The study in India had many advantages, such as a wide scope, the combination of quantitative and qualitative analysis and comprehensiveness of the survey contents. The study in India made up for the lack of socio-economic impact data in the Asia and Pacific area, and provided an important resource for people to understand the impact of HIV/AIDS on households. However, it is regrettable that there is no statistical analysis in the India report due to the survey time limit.

Based on the experiences of the India survey and with the support of UNDP, BIIC conducted research in collaboration with NCAIDS in 14 counties in five HIV high prevalence provinces, namely Shanxi, Sichuan, Guangxi, Hubei and Yunnan from February 2008 to April 2008. The present study is an attempt to assess the socio-economic impact of HIV/AIDS at both the individual and household levels in the areas of household structure, income, consumption, health care seeking behavior, quality of life, and stigma and discrimination. The objective of the study is to provide evidence to the government to introduce or improve its policies aimed at addressing the impact of the growing HIV/AIDS epidemic.

Chapter 2 Data and Methodology

2.1 Survey objects and sample methodology

The survey objects included both HIV households and non-HIV households (the control group). The sample households were selected by using a combination of multi-stage and systematic sampling methods. The sample included three stages. Firstly, five HIV high prevalence provinces were selected, namely Shanxi, Sichuan, Guangxi, Hubei and Yunnan. The primary transmission modes in Yunnan, Guangxi and Sichuan are IDU and sexual contact, while the primary modes in Hubei and Shanxi are commercial blood donation and sexual contact. Second, two or three high HIV prevalence counties (cities) were selected in each province. Finally, the selection of sample households was based on systematic sampling. The methodology is presented as follows:

(1)HIV/AIDS Households (target group)

Taking the county (city) as the unit, select the PLHIV who could be contacted through systematic sampling methods. Investigate their families. The sample number should achieve the target of the survey. According the local status, two investigation modes for HIV/AIDS households were adopted--household investigation and third location investigation.

(2)Non-HIV Households (control group)

Two sampling methods were used when selecting the non-HIV households. First, if the sample HIV households were interviewed at their homes, investigators then moved clockwise (i.e. east) and selected non-HIV neighbors who were the main labor force in the family and whose sex and age (less than five years' difference) were almost the same as PLHIV. Second, if the HIV households were interviewed as part of a third location investigation, then investigators selected non-HIV people who were the main labor force in the family and whose sex and age (less than 5 years' difference) were almost the same as the PLHIV from the community of the PLHIV.

2.2 Sample results

Research teams conducted the questionnaire survey and data collection in Shanxi, Sichuan,

Guangxi, Hubei and Yunnan from Feb. 29th to Apr. 30th 2008. From the 9,083 reported cases of PLHIV who were reachable in 2007 in the selected counties, 11.3% of the total, i.e. 1,027 people in 931 households, were selected for the survey. In order to compare and analyze the results, nearly the same number of non-HIV neighbors or community members (995 in total) of the PLHIV whose ages were almost the same as PLHIV (less than 5 years' difference) were selected as the control group. The sample ratio is highest at 68.2% in county G and lowest at 4.5% in county D. The sample size and sample ratio are presented in Table 2.1 and Table 2.2.

Table 2.1 Sample size

Province	HIV Households		People Interviewed		
	HIV Households	Both Spouses HIV positive and interviewed	Total	PLHIV	Non-HIV
Yunnan	230	30	510	260	250
Guangxi	201	9	424	210	214
Sichuan	191	7	377	198	179
Hubei	151	21	341	172	169
Shanxi	158	29	370	187	183
Total	931	96	2,022	1,027	995

Table 2.2 Sample ratios

Province	County	Number of PLHIV who could be reached	PLHIV Interviewed	Sample Ratio (%)
Yunnan	A	2,542	120	4.7
	B	1,753	140	8.0
	C	612	60	9.8
Guangxi	D	1,328	60	4.5
	E	1,061	90	8.5
	F	395	80	20.3
Sichuan	G	88	60	68.2
	H	192	58	30.2
	I	89	28	31.5
Hubei	J	226	58	25.7
	K	342	86	25.2
	L	136	62	45.6
Shanxi	M	83	40	48.2
	N	236	85	36.0
Total		9,083	1,027	11.3

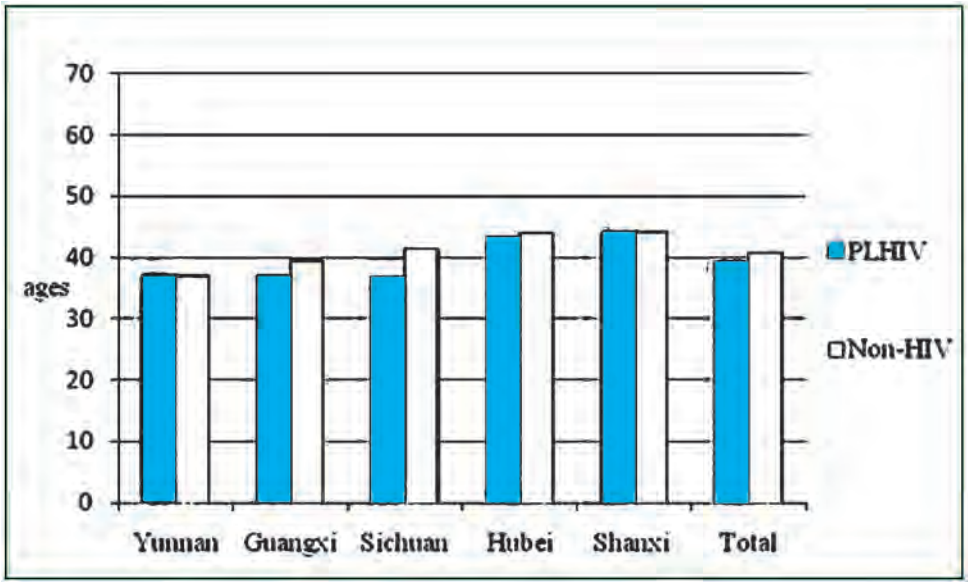
In this survey, the average age of PLHIV is 39.3 while of non-HIV it is 40.9. The difference between PLHIV and non-HIV is only 1.6 years, and the difference in each province is less than 5 years, which is in accordance with the survey design.

Table 2.3 Average age of respondents

(Years old)

Respondents	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	37.2	36.9	36.7	43.3	44.0	39.3
Non-HIV	37.0	39.6	41.4	44.0	44.2	40.9

Figure 2.1 Average age of respondents



The range of the ages of respondents is presented in Table 2.4 and Table 2.5. In Yunnan, Hubei and Shanxi the range of ages is almost the same for PLHIV and non-HIV. However, there is some difference in the range of ages in Guangxi and Sichuan -- the PLHIV in these areas are mainly between the ages of 31 to 40, while the non-HIV are mainly between the ages of 41 to 50. This situation is mostly due to the fact that these two provinces are labor export areas and most of the non-HIV aged 31-40 in these two provinces were migrant workers in other parts of the country and thus unreachable. This may have some impact on the findings, as migrant workers tend not only to be younger; they also tend to be more entrepreneurial and active.

Table 2.4 Age distribution of PLHIV

(Percent)

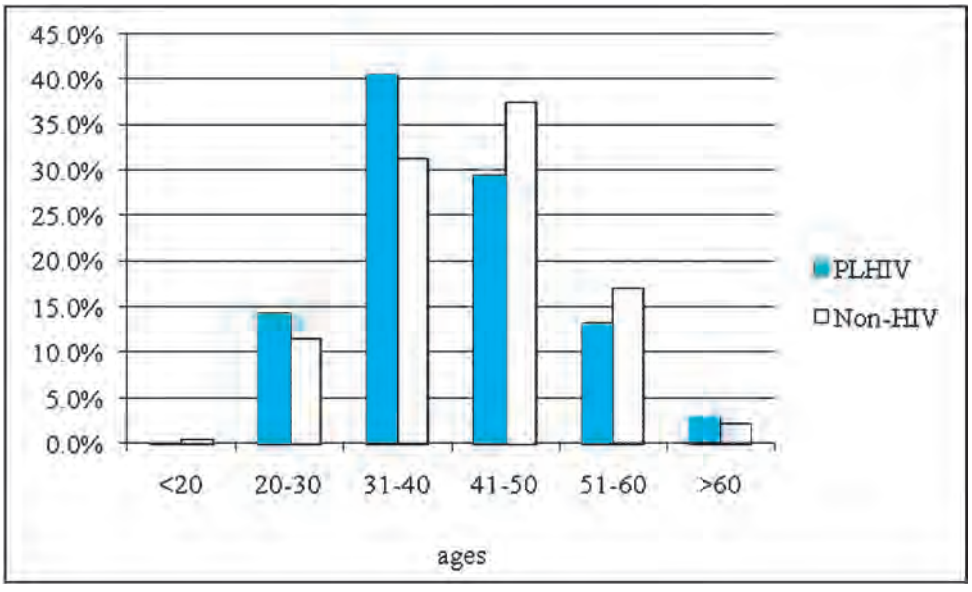
Age	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
<20	0.0	0.0	0.0	0.6	0.0	0.1
20-30	20.8	23.9	14.7	5.2	2.1	14.2
31-40	42.7	45.2	56.6	25.6	28.4	40.5
41-50	28.1	17.6	21.7	40.7	41.7	29.3
51-60	6.5	8.1	3.5	25.6	26.7	13.1
>60	1.9	5.2	3.5	2.3	1.1	2.8

Table 2.5 Age distribution of non-HIV

(Percent)

Age	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
<20	0.8	0.8	0.0	0.0	0.0	0.4
20-30	20.1	13.3	9.9	7.4	3.6	11.5
31-40	44.4	33.3	28.9	22.3	23.5	31.4
41-50	25.7	36.9	42.6	41.4	45.0	37.5
51-60	6.5	14.9	16.8	23.8	26.8	17.0
>60	2.5	0.8	1.8	5.1	1.1	2.2

Figure 2.2 Age distribution of respondents



2.3 Socio-economic and epidemic status of the areas surveyed

The socio-economic status, epidemic status, and HIV/AIDS projects conducted in the areas surveyed are presented in Table 2.6 and Table 2.7.

Among the 14 surveyed counties, the highest average annual net income of farmers is 4,497 Yuan and the lowest is 2,004 Yuan. There are 8 counties where the net income of farmers is higher than the average in China, while 6 counties are lower. The prevalence of HIV/AIDS is serious in each of the counties; as a result, most of the areas have China Comprehensive AIDS Response (China CARES) projects or Global Fund projects.

Table 2.6 Socio-economic and epidemic status of the areas surveyed

Province	County/City	GDP per capita (Yuan)	Net income of farmers (Yuan per capita)	Population (ten thousands)	Number of PLHIV Reported as of 2007
Yunnan	A	15,250	2,957	12	4,137
	B	6,964	2,218	28	2,933
	C	6,551	3,483	115	1,022
Guangxi	D	5,405	3,319	141	2,213
	E	13,250	4,027	48	1,694
	F	9,327	4,072	107	1,315
Sichuan	G	16,257	4,497	60	170
	H	18,700	4,338	57	481
	I	4,772	4,375	50	150
Hubei	J	6,617	3,749	60	383
	K	7,565	3,017	251	561
	L	2,657*	2,004*	36	220
Shanxi	M	10,714*	2,209*	28	186
	N	14,000*	2,630*	39	459
China		7,037	3,054	46	---

Note: 1) The per capita GDP, net income of farmers and population are selected from local Statistical Yearbook 2007.
2) * indicates data taken from local Statistical Yearbook 2005.

Table 2.7 Projects by county

Province	County/City	China CARES	Global Fund Project
Yunnan	A	No	No
	B	Yes	Yes
Guangxi	C	Yes	Yes
	D	No	No
	E	No	Yes
Sichuan	F	Yes	Yes
	G	Yes	No
	H	No	Yes
Hubei	I	Yes	Yes
	J	Yes	Yes
	K	Yes	Yes
Shanxi	L	Yes	Yes
	M	No	Yes
	N	Yes	No

2.4 Main contents of the research

Data collected included the number, age and other basic information regarding family members, household income, household consumption, the education of children, amount of support received, and stigma and discrimination. The analysis mainly focused on 11 questions as follows:

- Change of household structure due to HIV;
- Migration status of PLHIV and the relationship between migration, occupation and HIV/AIDS;
- Economic status and roles of the family members in both HIV and non-HIV households;
- Impact of HIV/AIDS on household income, consumption and occupation;
- Impact of HIV/AIDS on physical and psychological health of PLHIV. Whether and under what terms ARV treatment and other treatment has been received;
- Awareness of HIV knowledge and the use of related services;
- Impact of HIV/AIDS on education of children;
- Impact of HIV/AIDS on gender;
- Status of support received by HIV households;
- Interpersonal relationships, stigma and discrimination caused by HIV/AIDS;
- Impact of HIV/AIDS on quality of life.

2.5 Methodology and quality control

(1) Research methods

The research methods included questionnaire surveys, focus group discussions, and case studies.

1) Questionnaire Survey

Surveys were conducted face to face. The researchers designed two questionnaires, for the control group and the target group. During the survey, the interviewers used the questionnaire and recorded the information in accordance with the requirements.

2) Focus Group Discussion (FGD)

In the survey, the researchers conducted focus group discussions with local leaders and staffs who are responsible for HIV/AIDS prevention and control activities. Sector-specific FGD guidelines were utilized.

3) Case Studies

As part of the survey, researchers conducted in-depth investigations of some respondents, so as to further understand the impact of HIV/AIDS. Some typical cases were identified and summarized.

4) Data Collection

Local socio-economic data, HIV/AIDS epidemic data, and documents about HIV prevention and care activities for PLHIV were utilized in the survey in order to assess the living conditions of respondents. Some related data were also selected from the China Statistical Yearbook and the internet.

5) Participation of PLHIV

The participation of PLHIV as investigators was found to be very helpful in selecting the most useful information. In Yunnan, Sichuan and Shanxi, in cooperation with local NGOs, some PLHIV were included in the research team as interviewers. They received thorough training together with local staff before they participated in the research as investigators.

(2) Investigation mode

While conducting the questionnaire survey two investigation modes were adopted—household investigation and third location investigation.

1) Household investigation

In Yunnan, the survey was conducted through household investigation, because most of the PLHIV have disclosed their HIV status. During household investigations, the interviewers could directly observe the impact of HIV on living conditions, household facilities, hygiene, etc.

2) Third location investigation

Third location investigation was conducted in Guangxi, Sichuan, Hubei, and Shanxi, where most of the PLHIV have not disclosed their HIV status. At first, the respondents were selected by sampling methods, and then the respondents were contacted through telephone and told the location and time of investigation by local staff. Generally speaking, the investigations were held in the CDC or the consultation room of the VCT.

(3) Quality control

The following measures were adopted to ensure the quality of the research:

1) Participation of local staff as translators or investigators

Some of the respondents in this survey were minorities, and there were differences of language and cultural background among the five provinces. In order to communicate with respondents and ensure the proper conduct of the research, local staff members were included in the research team as interviewers or translators. Since the local staffs were familiar with the status of PLHIV, they could help the respondents to clarify information such as the date of detection or the organizations from which they receive support.

2) Training of investigators

Training for all investigators was conducted before the research and covered survey contents, survey methods, investigative techniques, and accidental event handling. After the training, the investigators could use the questionnaire to interview the respondents, double-check the questionnaire results, and modify mistakes in a timely fashion. Investigators were also taught to respect and show no discrimination against PLHIV during the investigation and to avoid conflicts with other interviewers.

3) Researchers participated in the investigation and checked the questionnaire on the spot.

The researchers participated in the field survey from beginning to end. They checked the

questionnaire on the spot, and modified the mistakes and omissions in a timely way. The respondents could leave only after the accuracy of the questionnaire was confirmed. For the respondents who could speak Mandarin, the researchers would interview the respondents themselves.

(4) Research ethics

Since the research was of a sensitive nature, the research strictly followed principles of respect, informed consent, voluntary participation, confidentiality, no harm or benefit, etc.

1) Informed consent

The informed consent statement was read to each respondent before the survey began, to make sure that the respondents knew the benefits received, the confidential nature of the survey, and to ask the respondents to agree with the investigation. The investigation could be conducted only after it was confirmed that the respondents were participating on a voluntary basis and was fully informed about the survey.

2) Selection of the site of the investigation

Respondents were consulted regarding the choice of site of interview; home or in a third location.

3) Exit voluntarily

At any time during the survey, the respondents could exit voluntarily.

2.6 Data processing

In order to input and analyze the data more conveniently, the researchers conducted some preliminary data processing work, such as creating the database, recoding the questionnaire, data input and logical checks, etc.

(1) Questionnaire recode and data cleaning

The researchers have recoded the questionnaire according to the location of the investigation and household character. At the same time, the researchers checked every question in each questionnaire to finish the data cleaning; so as to make sure which questionnaires could be input directly, which questionnaires should be modified or annotated, which questionnaires should be affirmed again through contacting interviewers or respondents, and which questionnaires should not be used. The data cleaning was to be conducted only by researchers who participated in the field work.

Although the questions and possible responses are clearly structured and the responses of the respondents could be classified accordingly in almost all cases, there were still some cases where information was not included in the categories which were provided before and annotated by the interviewers. In these cases the researchers had to recode this information, so as to input it into the database for analysis.

(2) Creation of the database

The household questionnaire database was built up with EXCEL by the researchers. The database was designed to allow ease of searching and viewing data, ease of calculation, summarizing and exporting data to other statistical software.

(3) Data input

Data input staff were thoroughly trained before they started their work. The training included the contents of the questionnaire, principles of data inputting, the structure of the database and data input skills. The researchers were in contact with the input staff to answer any questions that arose. When data inputting was complete, the researchers checked each questionnaire to ensure the consistency of database and questionnaire, and corrected any input errors. When the check was finished, the researchers selected 30 household questionnaires at random to compare and check. The results indicated that the data input and questionnaires were consistent.

(4) Logical checking

As one final step aimed at catching errors in questionnaire completion and data entry, the researchers have developed hundreds of logical check programs by SPSS or EXCEL to catch and correct logical mistakes according to the questionnaire.

(5)Data weighting

This survey was a ranging proportion sample survey. Hence, the data had to be weighted according to the indicators of each of the provinces and counties that were included. The weighted multiple of each county is presented in Table 2.8.

Table 2.8 Weight multiple for each county

Province	County/ City	Number of PLHIV living and possible to contact	PLHIV interviewed	Multiple	Weighted times
Yunnan	A	2,542	120	21.18	21
	B	1,753	140	12.52	13
Guangxi	C	612	60	10.20	10
	D	1,328	60	22.13	22
	E	1,061	90	11.79	12
Sichuan	F	395	80	4.94	5
	G	88	60	1.47	1
	H	192	58	3.31	3
Hubei	I	89	28	3.18	3
	J	226	58	3.90	4
	K	342	86	3.98	4
Shanxi	L	136	62	2.19	2
	M	83	40	2.08	2
	N	236	85	2.78	3

(6) Data analysis

The SPSS statistical package and Microsoft Excel were used for analyzing the data. The statistical analysis methods included: descriptive statistics, table analysis, mean comparison, correlation analysis and regression analysis.

(7) Limitations of the research and suggestions for future studies

The project research was based on a survey which was conducted in poor rural areas, and the survey focused on PLHIV who were infected by IDU, commercial blood donation and heterosexual sexual behavior between spouses. As a result, other significant groups of PLHIV, such as commercial sex workers, men who have sex with men (MSM) and IDUs in large cities were not investigated at this time, and the impact of HIV/AIDS on these groups was not included in the project research. Although in China HIV/AIDS is still primarily a rural problem, the urban share of China's PLHIV is growing, and their conditions should also be thoroughly investigated. At the same time, another high HIV prevalence province, Henan, was not included in this survey. As a result of all these limits on the surveyed PLHIV the applicability of the survey results to broader or different groups of PLHIV should be interpreted with caution.

This survey has investigated the situation of PLHIV and their families in 2007, and presents a

snapshot of the situation at one moment in time. However the impact of HIV/AIDS on individual and households evolves over the long term, due to the characteristics of HIV/AIDS--long latency period, high morbidity rate and huge and sustained medical expenditures. In order to assess the impact on individuals and households systematically, it would be necessary to have conducted the survey from the time that the PLHIV was infected to the moment of death. Unfortunately this survey is unable to capture the impact over a longer period of time due to its one-time nature.

Since 2003, the Chinese government has placed a high priority on HIV/AIDS prevention and treatment, introduced a lot of new policies and measures, and increased its investment in this effort. As a result, the impact of HIV/AIDS on individuals and households has been reduced, or at least contained, to some extent. The survey findings regarding the impact of HIV/AIDS on households and individuals, as presented in this report, reflect the impact of this growing government and NGO care and support activities. At the same time, the current impact was also affected by drug use and other behaviors so the results of the survey were not totally caused by HIV/AIDS.

It is difficult to design a scientific, representative and nation-wide sample scheme for many reasons. As discussed in Chapter 4, most PLHIV are reluctant to disclose their HIV status in public, and a great many PLHIV took their tests anonymously. There is also a high rate of outward migration among PLHIV. The survey this time used a multi-stage sampling method and an associated systematic sampling method; firstly, the sample sizes in each county in five provinces were fixed, and then weighted the data according with the numbers of PLHIV who could be connected with in each county. Although this method is easy to conduct, the precision of the survey is reduced to some extent.

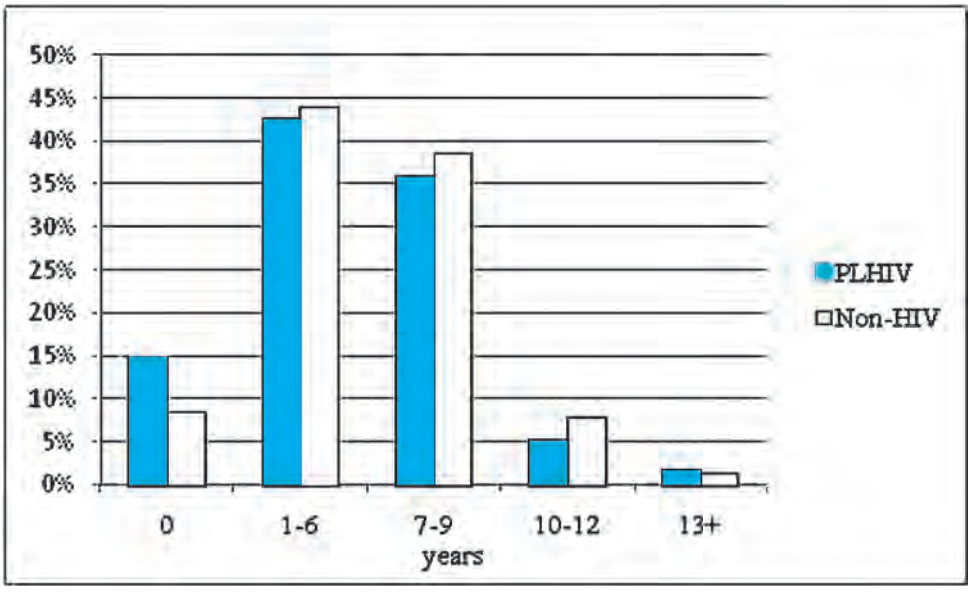
Chapter 3 Socio-Economic Characteristics of the Sample Respondents

This section describes the basic characteristics of the survey respondents in terms of their level of education, occupation, and mode of transmission of HIV, and complements the data already presented in Chapter 2 regarding age of respondents and socio-economic characteristics of the surveyed regions.

3.1 Level of education

Most of the respondents interviewed live in economically underdeveloped areas where education also is not very developed. In general, the level of education is almost the same for both PLHIV and non-HIV. Most of the respondents have had some primary education; the numbers of respondents who have only finished elementary school is the highest, followed by those who finished junior high school. The number of respondents with more than 10 years of education is very low (Figure 3.1). The level of education of PLHIV is marginally lower than that of respondents from non-HIV households, and a much higher percentage of the PLHIV (14.7%) are illiterate as compared to those from non-HIV households (8.4%). The average number of schooling years of PLHIV is 6.0 years while that of non-HIV is higher at 6.6 years.

Figure 3.1 Respondents by years of education



The education level of respondents in different areas is presented in Table 3.1 and Table 3.2. In Yunnan, Hubei and Shanxi, the level of education of PLHIV is marginally lower than that of respondents from non-HIV households, and most of the respondents have only finished elementary school or junior high school. However, in Guangxi and Sichuan, the level of education of PLHIV is higher than non-HIV. This situation may be due to the fact that the age of PLHIV in these two provinces is lower than respondents from non-HIV households, as described in Chapter 2.

Table 3.1 Education of PLHIV

(Percent)

Education years	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
0	27.5	1.4	4.1	10.5	2.2	14.7
1-6	50.7	34.2	20.8	49.0	43.4	42.5
7-9	20.4	53.2	56.4	32.8	43.0	35.9
10-12	1.4	7.5	16.2	5.7	11.4	5.3
13+	0.0	3.7	2.5	2.0	0.0	1.6

Table 3.2 Education of non-HIV

(Percent)

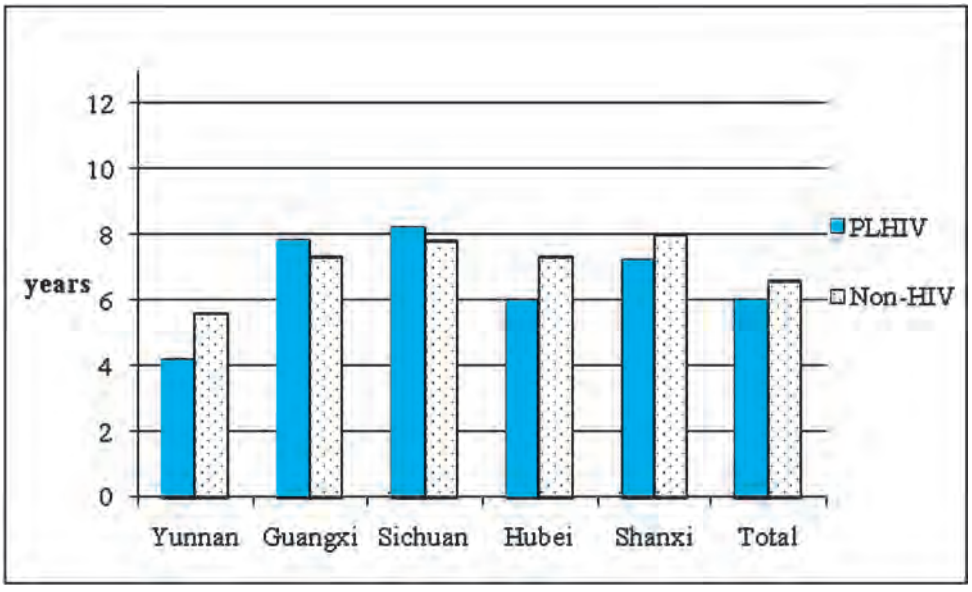
Education years	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
0	15.2	1.5	3.3	7.3	1.6	8.4
1-6	48.2	44.9	38.4	29.9	24.4	43.9
7-9	28.9	46.0	36.4	50.0	61.5	38.5
10-12	6.5	7.6	12.3	11.1	12.5	7.9
13+	1.2	0.0	9.6	1.7	0.0	1.3

Table 3.3 Average years of schooling of respondents

(Years)

Respondent	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	4.2	7.8	8.2	6.0	7.2	6.0
Non-HIV	5.6	7.3	7.8	7.3	8.0	6.6
t	17.978	-8.576	-1.979	6.868	4.779	11.251
P	0.000	0.000	0.048	0.000	0.000	0.000

Figure 3.2 Average years of schooling of respondents

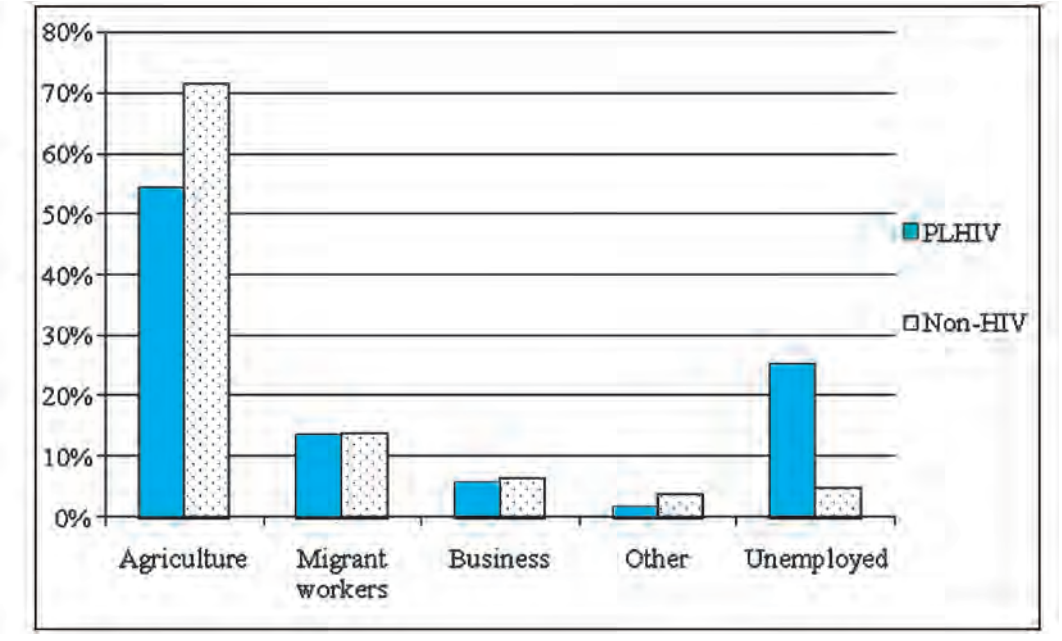


3.2 Occupation of respondents

This survey targeted rural PLHIV, which at present constitute the majority of HIV/AIDS cases in China. A high percentage of the respondents from both HIV and non-HIV households work in the

agricultural sector, followed by those who are migrant workers, and those in business and other jobs. Compared with respondents from non-HIV households, the percentage of PLHIV who are working in the agricultural sector is lower, and the percentages of migrant workers, business and other jobs are almost the same. However, a much higher percentage of PLHIV are unemployed (25.2%); the percentage of non-HIV is significantly lower (4.7%) (Figure 3.3). This situation may be due to lower work capacity of PLHIV, their unwillingness to work and to real or perceived stigma and discrimination.

Figure 3.3 Respondents by occupation



The occupation of respondents in the provinces under study is presented in Table 3.4 and Table 3.5. It is interesting to note that in Guangxi and Sichuan the percentage of PLHIV who are working in the agriculture sector is very low (Guangxi 28.1% and Sichuan 6.5%) compared to the other three provinces, but the number of unemployed PLHIV (Guangxi 40.4% and Sichuan 74.8%) is significantly higher than that of non-HIV (5.75% and 19.4% respectively). This situation is mostly due to the fact that the majority of the PLHIV in these two provinces are IDU and live in the city/ town (where people do not have land for agriculture), and these people may have been somewhat marginalized even before becoming infected. These characteristics are also relevant to findings presented in later chapters of the report, in which impact of the disease on household income and employment is analyzed.

Table 3.4 Occupation of PLHIV

(Percent)

Occupation	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Agriculture	73.9	28.1	6.5	78.9	69.4	54.2
Migrant workers	10.7	18.2	8.9	7.6	21.2	13.4
Business	3.4	10.3	5.8	0.6	3.3	5.6
Other	0.3	3.0	4.0	1.8	0.4	1.6
Unemployed	11.7	40.4	74.8	11.1	5.7	25.2

Note: "Agriculture" includes farming and animal husbandry;
"Migrant workers" includes migration, temporary outside work and skilled labor;
"Other" includes salaried jobs in government, companies, etc.

Table 3.5 Occupation of non-HIV

(Percent)

Occupation	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Agriculture	78.0	71.8	28.3	67.8	66.0	71.5
Migrant workers	8.9	16.2	28.3	10.6	28.0	13.7
Business	7.3	3.2	10.8	13.7	2.7	6.3
Other	3.5	3.1	13.2	3.7	0.4	3.8
Unemployed	2.3	5.7	19.4	4.2	2.9	4.7

Note: "Agriculture" includes farming and animal husbandry;
"Migrant workers" includes migration, temporary outside work and skilled labor;
"Other" includes salaried jobs in government, companies, etc.

Distribution of occupation by the level of education is presented in Table 3.6, and as can be seen, the level of education plays a significant role in occupation. The number of respondents who are working in the agriculture sector decreases with the years of schooling, and this trend is particularly obvious for PLHIV. Interestingly, the number of unemployed PLHIV increases along with an increase in education. At the same time, the number of unemployed PLHIV is higher than non-HIV even when they have the same amount of education. In particular, for the respondents who have finished more than 13 years of school (through senior high), unemployment is at 50.4% for PLHIV while the rate for non-HIV is 0. During focus group discussions, it was found that these highly educated PLHIV had lost their jobs due to health issues, psychological stress, or fear of discrimination, all of which result in an increased burden on society and the loss of highly educated human resources.

Table 3.6 Occupation of respondents by education

(Percent)

Respondent	Occupation	Years of Education				
		0	1-6	7-9	10-12	13+
PLHIV	Agriculture	71.6	65.0	38.4	35.0	2.9
	Migrant workers	17.3	10.3	14.9	19.5	0.0
	Business	3.5	2.9	9.4	7.2	15.8
	Other	0.0	0.9	1.1	5.4	30.9
	Unemployed	7.6	20.9	36.2	32.9	50.4
Non-HIV	Agriculture	87.9	81.3	64.1	44.9	30.9
	Migrant workers	6.3	9.3	19.1	16.5	4.5
	Business	0.5	4.0	8.5	14.8	0.0
	Other	0.0	2.3	1.6	18.7	64.6
	Unemployed	5.3	3.1	6.7	5.1	0.0

3.3 Economic status of the household

The distribution of households by level of income is presented in Table 3.7. As can be seen from this, the economic status of HIV households is significantly worse than that of non-HIV households. Nearly half of the HIV households belong to the lowest income group, while this percentage is higher at one-third for the non-HIV households, with an annual household income of less than 10,000 Yuan. Within these poorer households, 19.3 percent of HIV households and 11.5 percent of non-HIV households are living under the relative poverty line, with an annual household income of less than 4,193 Yuan. The number of households belong to the highest income group (annual household income of more than 40,000 Yuan) is very small.

Table 3.7 Households by level of income

Annual Income (in Yuan)	HIV household			Non-HIV household		
	HHs (%)	Population. (%)	Household size	HHs (%)	Population. (%)	Household size
0-9,999	49.5	44.4	3.6	33.3	32.0	4.2
0-4,193	19.3	15.5	3.3	11.5	10.1	3.9
10,000-19,999	28.2	30.2	4.3	32.8	32.0	4.3
20,000-29,999	11.6	12.0	4.2	17.8	18.6	4.6
30,000-39,999	5.3	6.3	4.8	6.2	6.9	4.9
40,000-49,999	2.0	3.0	6.0	3.4	3.5	4.7
50,000+	3.4	4.1	4. 8	6.5	7.0	4.7
Total	100.0	100.0	4.0	100.0	100.0	4.4

Note: The national relative poverty line (1,067 per Yuan per capita in 2007), is multiplied by the appropriate household size to obtain the household poverty line as 4,193 Yuan per year.

Housing conditions are generally an indicator of the economic status of a household (Table 3.8). The data shows that only 27.5 percent of HIV households and 29.3 percent of non-HIV households live in multi-story homes, while most of the households live in brick houses (HIV households 42.2%, non-HIV households 44.6%). 68.9% of HIV households own their own homes as compared to 87% of non-HIV. A higher percentage of HIV households are living in houses that are rented or belong to their parents (31.1%). The ownership of assets and other consumer durables in the households also indicate that in comparison with non-HIV households, HIV households are less likely to own such goods (Table 3.9). The percentage of households having consumer durables such as TVs, tractors and motor bikes is lower for HIV households.

Table 3.8 Housing

(Percent)

Housing	Categories	HIV household	Non-HIV household
Type	Building	27.5	29.3
	Brick house	42.2	44.6
	Mud house	16.8	12.2
	Grass house	10.2	11.6
	Others	3.3	2.3
Ownership	Own themselves	68.9	87.0
	Hired	6.4	1.6
	Parent's	23.6	10.1
	Other relative's	1.1	1.3

Figure 3.4 House type

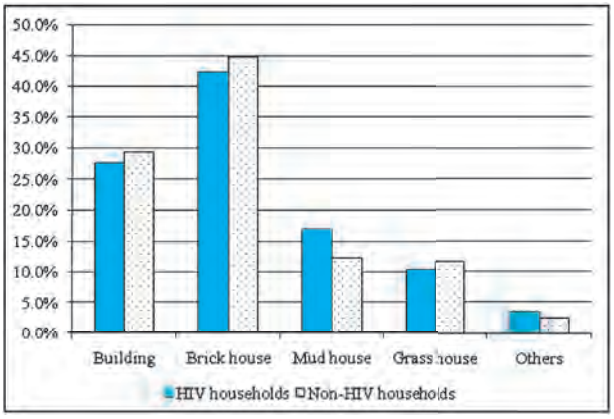


Figure 3.5 Ownership

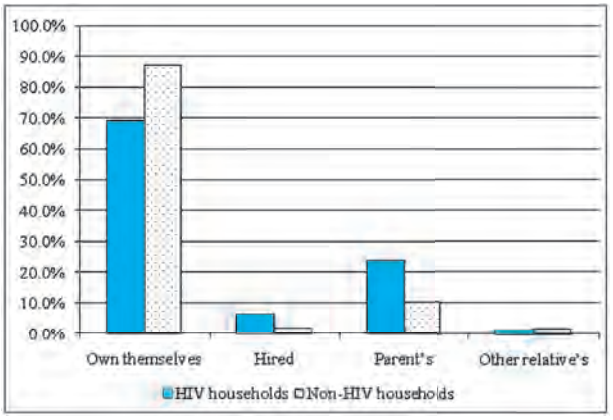


Table 3.9 Ownership of assets and other consumer durables

(Percent)

Assets and consumer durables	HIV household	Non-HIV household
Electric lights	95.6	97.5
Phone	46.5	44.2
Mobile phone	65.0	76.5
Color TV	81.7	90.4
Black and white TV	6.6	5.3
Washing machine	18.7	14.7
VCD	45.9	54.0
Refrigerator	18.7	18.3
Electric fan	45.4	55.6
Tractor	17.4	27.5
Productive tools	15.4	22.7
Bicycle	42.2	49.7
Electric bicycle	7.4	10.6
Motor bike	45.6	62.0
Tricycle	6.1	6.3
Car	0.9	1.4
Truck	3.4	3.4

3.4 Profile of the PLHIV

Most of the PLHIV interviewed were between 20 and 50 years of age, with an average age of 37.6 years; female PLHIV are slightly younger than male (35.6 years old and 38.7 years old respectively) (Table 3.10). More than half of the PLHIV interviewed are married (57.8%). Compared to female PLHIV, a higher percentage of HIV positive males have remained single or been divorced, while the

number of widowers and those who have remarried is lower among male PLHIV (Table 3.11). The level of education of the PLHIV is quite low, most of the interviewees have only finished elementary school (male 44.7%, female 39.2%) or junior high school (male 35.2% and female 36.9%) (Table 3.12).

Table 3.10 Age of PLHIV

(Percent)

Age	Male	Female	Total
<20	0.0	0.1	0.0
20-30	14.0	29.9	19.8
31-40	45.2	39.5	43.2
41-50	27.4	22.0	25.4
51-60	10.2	6.8	8.9
>60	3.2	1.7	2.7

Figure 3.6 Age of PLHIV by gender

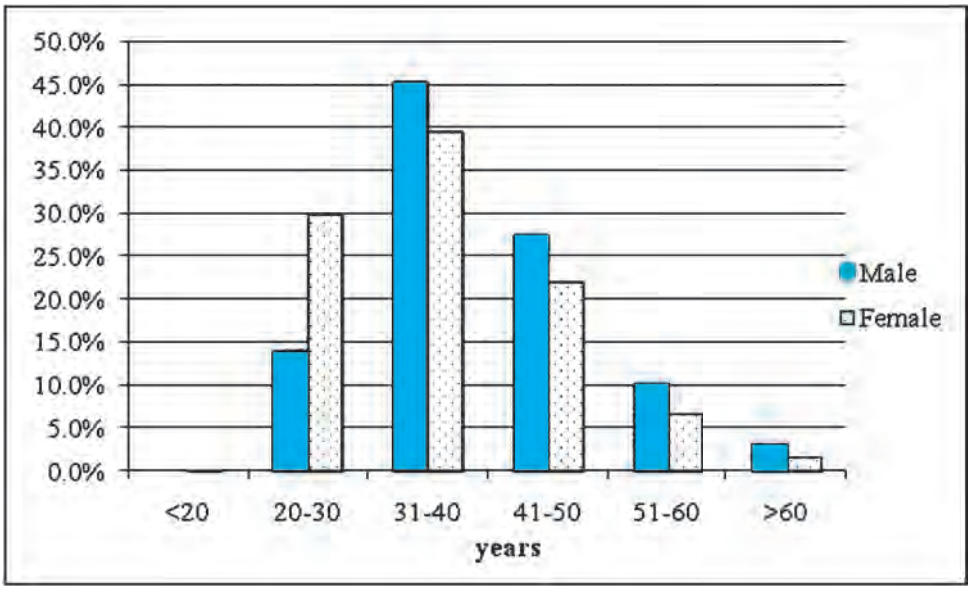


Table 3.11 Marital status of PLHIV

(Percent)

Marital status	Male	Female	Total
Single	24.4	7.2	18.1
First marriage	58.9	55.6	57.8
Divorced	9.3	6.1	8.1
Widowed	4.3	21.0	10.4
Remarried	3.1	10.1	5.6

Table 3.12 Years of education of PLHIV

(Percent)

Years in School	Male	Female	Total
0	11.6	20.0	14.7
1-6	44.7	39.2	42.5
7-9	35.2	36.9	35.9
10-12	6.3	3.5	5.3
13+	2.2	0.4	1.6

Figure 3.7 Years of education of PLHIV by gender

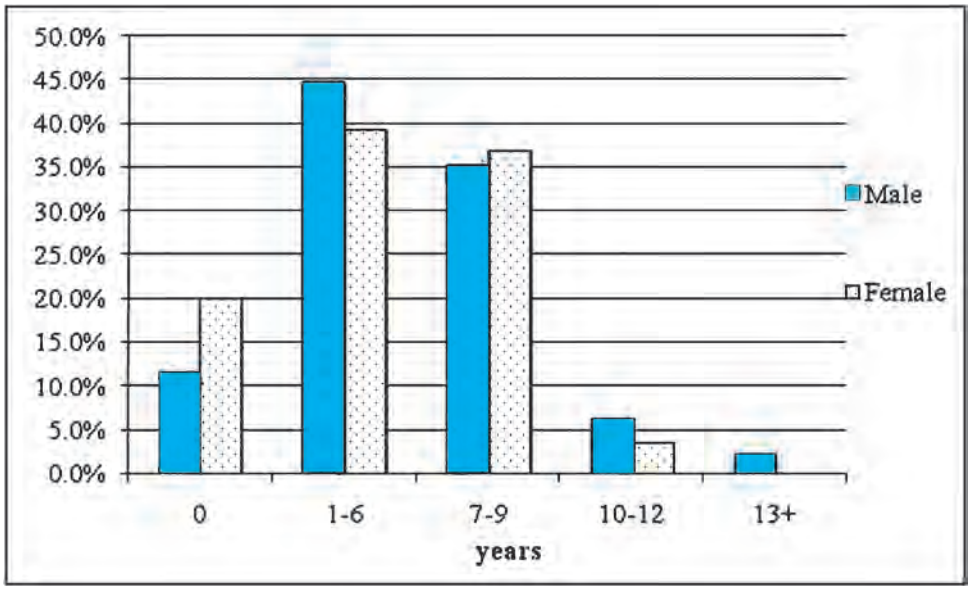


Table 3.13 presents the mode of transmission of the HIV infection and shows that 43.3 percent of the PLHIV interviewed were infected through IDU while 39.0 percent were infected through sexual contact. However, there are significant differences of transmission modes between males and

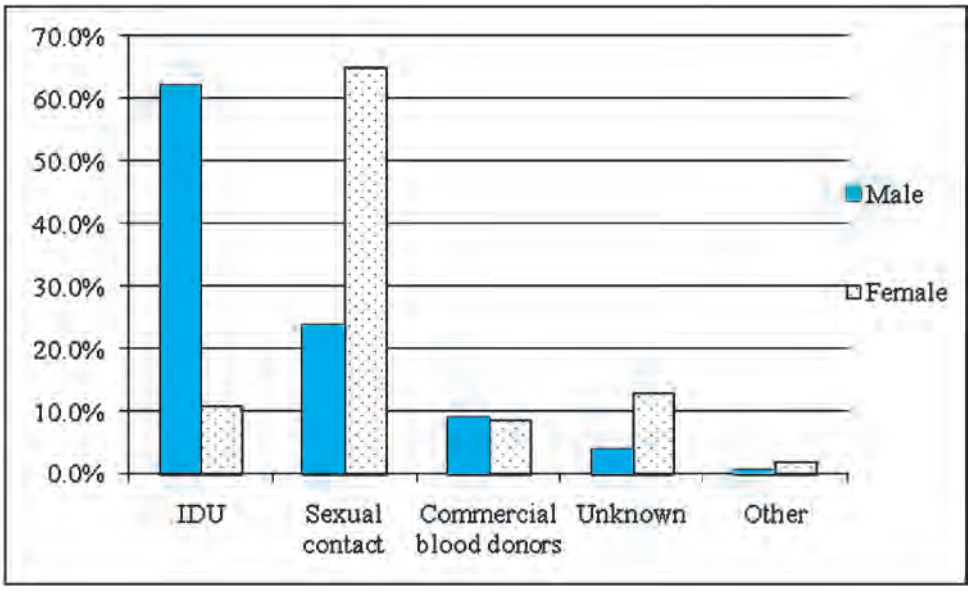
females -- in the case of male respondents; IDU is the most common mode of transmission (61.9%). The main mode of transmission for female PLHIV is through sexual contact (65.0%).

Table 3.13 Mode of transmission of HIV

(Percent)

Transmission Mode	Male	Female	Total
IDU	61.9	11.0	43.3
Sexual contact	24.0	65.0	39.0
Commercial blood donors	9.3	8.7	9.1
Unknown	4.1	13.2	7.4
Other	0.7	2.1	1.2

Figure 3.8 Mode of transmission of HIV by gender



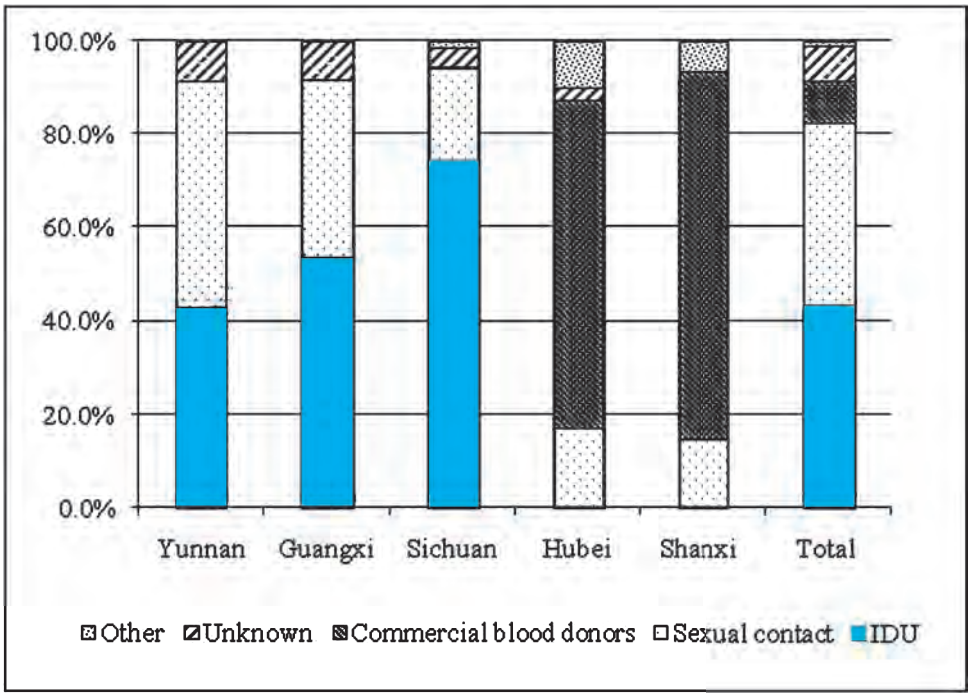
The mode of transmission in different areas is presented in Table 3.14. In Yunnan, Guangxi and Sichuan, the primary transmission mode is IDU; second is sexual contact. In Hubei and Shanxi, the primary transmission mode is commercial blood. However, the number of women infected through sexual contact is higher than men in all the provinces surveyed. In Sichuan and Guangxi provinces, the number of females infected through IDU is quite high (60.0% and 21.6% respectively).

Table 3.14 Mode of transmission of HIV by province

(Percent)

Province	Transmission Mode	Male	Female	Total
Yunnan	IDU	70.8	3.4	42.9
	Sexual contact	26.3	79.6	48.4
	Commercial blood donors	0.0	0.0	0.0
	Unknown	2.9	17.0	8.7
	Other	0.0	0.0	0.0
Guangxi	IDU	66.4	21.6	53.5
	Sexual contact	27.4	64.4	38.1
	Commercial blood donors	0.0	0.0	0.0
	Unknown	6.2	14.0	8.4
	Other	0.0	0.0	0.0
Sichuan	IDU	79.9	60.0	74.0
	Sexual contact	12.8	36.8	20.0
	Commercial blood donors	0.7	0.0	0.5
	Unknown	4.1	3.2	3.8
	Other	2.5	0.0	1.7
Hubei	IDU	0.0	1.3	0.6
	Sexual contact	10.2	23.9	16.5
	Commercial blood donors	82.5	55.5	70.0
	Unknown	3.1	2.3	2.7
	Other	4.2	17.0	10.2
Shanxi	IDU	0.0	0.0	0.0
	Sexual contact	12.2	18.7	14.6
	Commercial blood donors	83.6	70.2	78.6
	Unknown	0.0	0.0	0.0
	Other	4.2	11.1	6.8

Figure 3.9 Mode of transmission of HIV by province



Chapter 4 Stigma and Discrimination

In the field of public health, stigma and discrimination against the ill have existed for a long time, especially for malignant and infectious diseases. However for many reasons the stigma and discrimination toward people suffering from HIV/AIDS is particularly serious. The lack of a cure for HIV/AIDS, ignorance about how it is transmitted, and the association of HIV/AIDS with drug use, homosexuality and prostitution, all contribute to this problem.

This chapter analyses the stigma and discrimination experienced by PLHIV in different settings, such as in dealings with their own families, in the community where they live, in health facilities, work places and schools. At the same time the chapter examines the awareness of respondents about HIV/AIDS and services related to HIV/AIDS, as well as attitudes towards PLHIV.

4.1 Stigma and discrimination in the family

Care and support from family members play an important role in helping PLHIV maintain normal daily life and in reducing the stress caused by HIV/AIDS. The survey examined the attitude and behavior of family members towards PLHIV, the status of care and support received by PLHIV from their families and the nature and extent of any stigma and discrimination they experienced in their own homes.

Because they feared that their spouse or sex partner (for the remainder of this section we will just refer to “spouse” to include both) would not understand, not accept, or even abandon them, a quite large percentage of PLHIV choose not to immediately disclose their HIV status to their spouse or sex partner. Male PLHIV are more likely than female to not disclose immediately, with 25.2 percent choosing not to, compared to 14.5 percent of female PLHIV. However, over time more and more PLHIV tend to disclose their status, and within five years 92.8 of PLHIV have done so. However even after that time 7.2 of the PLHIV surveyed had not disclosed their HIV status to their spouse.

The share of PLHIV who disclosed their HIV status to their spouses varies significantly between

provinces, and seems to be linked to transmission mode. In Hubei and Shanxi, where most PLHIV were infected by commercial blood and detected during group tests, the immediate disclosure rate is the highest; 99.0 percent in Hubei and 91.5 percent in Shanxi, for male PLHIV, and even higher rates for female. The share in these provinces who have not yet disclosed their HIV status is extremely small. However, in Yunnan, Guangxi and Sichuan, only about 70 percent of the male PLHIV immediately disclosed their status, and the percentages for female PLHIV were from 80-95 percent. The higher disclosure rate for women may be due to the fact that most of them were infected through sexual contact with their husbands or tested positive during pregnancy check-ups. 19.3 percent of male PLHIV in Guangxi and 10.9 percent of male PLHIV in Sichuan have not disclosed their HIV status to their spouse even now, a serious threat to the health of their spouse.

Table 4.1 Disclosure rate of HIV status to spouse/sex partner

(Percent)

Time	Male	Female	Total
Immediately	74.8	85.5	79.0
Within six months	8.4	5.9	7.3
Within one year	2.9	1.2	2.2
Within two years	2.7	1.6	2.3
Within five years	3.2	0.0	2.0
Not informed	8.0	5.8	7.2

Table 4.2 Disclosure rate of HIV status to spouse/sex partner in Yunnan

(Percent)

Time	Male	Female	Total
Immediately	72.5	83.5	77.1
Within six months	10.7	6.4	8.9
Within one year	4.4	1.4	3.1
Within two years	4.4	2.8	3.7
Within five years	5.2	0.0	3.1
Not informed	2.8	5.9	4.1

Table 4.3 Disclosure rate of HIV status to spouse/sex partner in Guangxi

(Percent)

Time	Male	Female	Total
Immediately	70.4	80.1	73.7
Within six months	5.2	7.7	6.0
Within one year	1.7	1.9	1.8
Within two years	1.7	0.0	1.1
Within five years	1.7	0.0	1.1
Not informed	19.3	10.3	16.3

Table 4.4 Disclosure rate of HIV status to spouse/sex partner in Sichuan

(Percent)

Time	Male	Female	Total
Immediately	70.9	95.7	79.6
Within six months	16.2	3.6	11.8
Within one year	1.6	0.0	1.0
Within two years	0.0	0.0	0.0
Within five years	0.4	0.0	0.3
Not informed	10.9	0.7	7.3

Table 4.5 Disclosure rate of HIV status to spouse/sex partner in Hubei

(Percent)

Time	Male	Female	Total
Immediately	99.0	100.0	99.5
Within six months	1.0	0.0	0.5
Within one year	0.0	0.0	0.0
Within two years	0.0	0.0	0.0
Within five years	0.0	0.0	0.0
Not informed	0.0	0.0	0.0

Table 4.6 Disclosure rate of HIV status to spouse/sex partner in Shanxi

(Percent)

Time	Male	Female	Total
Immediately	91.5	92.4	91.9
Within six months	5.7	4.4	5.1
Within one year	0.8	0.0	0.5
Within two years	0.0	1.3	0.5
Within five years	0.0	0.0	0.0
Not informed	2.0	1.9	2.0

The survey studied initial reactions of the spouse and other family members when PLHIV disclosed their HIV status. The initial reactions reported most often were shock, sympathy, support, and denial. Stigma and discrimination are also displayed within the families of PLHIV, as can be seen from the fact that 2.7 percent of male and 3.0 percent of female PLHIV were deserted by their spouses, and 1.3 percent of males and 2.0 percent of females were disowned by their families. The levels of understanding and sympathy tend to be higher towards women PLHIV than toward men, because most of them contracted HIV after their husbands got infected and in all probability got infected through sexual interaction with their husbands. At the same time, the proportions of male PLHIV who reported that family members displayed denial and disappointment, or embarrassment were higher than for female.

Table 4.7 Initial reaction of spouse/family members

(Percent)

Initial reaction	Male	Female	Total
Shock	38.0	34.0	36.5
Denial/disappointment	21.2	14.8	18.8
Sympathy	31.5	40.8	35.0
Embarrassment	20.2	17.5	19.2
Supportive	29.9	41.2	34.2
Disowned by the family	1.3	2.0	1.6
Spouse abandoned	2.7	3.0	2.8

Case study 1：A female PLHIV tried to recollect her own initial reaction and that of other family members when her HIV status was discovered. She said “I felt terrible and could not believe that I could get this disease at such a young age. I wanted to kill myself. When my family came to know, although they were supportive, they also got very angry. My daughter said she would rather see me lose an arm or leg rather than to get this disease. My parents felt very embarrassed.”

As can be seen in Table 4.8, after some time passed the attitude of the family members of PLHIV improved and is now quite encouraging. 63.4 percent of male PLHIV and 69.0 percent of female report that their families are quite supportive now, giving them more care, courage and comfort, and better nutrition. This is a large improvement over the initial reactions reported in Table 4.7, which showed that only 34.2 percent of PLHIV found their families supportive at the time of disclosure. This greater acceptance is most likely due to the reemergence over time of traditional family feelings toward the PLHIV, but may also reflect ongoing public education programs and the promotion of free ARV by Chinese government. However, some PLHIV still reported that they faced stigma and discrimination within their families; for example, 6.7 percent of males and 4.8 percent of females reported feeling neglected and isolated; 1.3 percent of males and 1.4 percent of females were verbally teased, and 3.6 percent of males and 2.3 percent of females could not get support from other family members except their spouse. Table 4.8 presents all these findings.

Table 4.8 Current attitude of spouse/family members

(Percent)

Current attitude	Male	Female	Total
Neglected, isolated	6.7	4.8	6.0
Given one bowl and set of chopsticks to use	10.2	3.2	7.5
Verbally/physically teased	1.3	1.4	1.3
Deprived of using basic amenities at home	1.6	1.1	1.4
Assets are taken away	0.3	0.7	0.4
Asked to leave home	2.7	0.9	2.0
All are supportive	63.4	69.0	65.5
More care	48.3	48.7	48.5
Encourage and comfort	54.7	57.0	55.5
Strengthen the nutrition	41.6	40.8	41.3
Family is not but spouse is supportive	3.6	2.3	3.1
Initial hesitation, but then supportive	7.2	4.3	6.1
Want to divorce	2.3	0.4	1.6
Divorced	1.7	1.9	1.8

Case study 2：A male PLHIV felt desperate and depressed when he was diagnosed as HIV positive. He lost the courage and confidence to face the world and even to live. He didn't go out for 5 months and frequently went days without eating anything. During this difficult period, his family gave him courage, and his wife and daughter always encouraged and comforted him. They all did their best to support him. The care and affection shown by his family helped him to come to terms with his HIV status. Now this man says he has no reason to give up on life. This case study clearly illustrates that PLHIV need moral and physical support of the family members in order to get through their difficulties and need encouragement to lead as normal a life as possible.

4.2 Stigma and discrimination in the community

Eliminating discrimination in the community is a key part of HIV/AIDS prevention and control activities in China. The community's perception of the disease not only affects the psychological health of PLHIV, but also influences the family's responses to the affected individual. There are signs of progress in this respect. A survey by Liu Kangmai et al in 2002 found that only 33.3

percent of PLHIV had disclosed their status publicly. However the current survey found that 49 percent of PLHIV had disclosed their status in the community, as can be seen in Table 4.9. This improvement is a result of a public education campaign by the government, aimed at reducing discrimination against PLHIV. Still, half of the surveyed PLHIV have not disclosed their HIV status, probably fearing stigma and discrimination, so much work remains to be done.

About one third of PLHIV who have disclosed their status report that they have faced discrimination in their communities, with a slightly higher share of female PLHIV (37.9 percent) than male (32.4 percent) having this experience. Some common types of discrimination were that people would not visit them in their homes, people would gossip about them, ignore PLHIV who say hello, and they would be subject to verbal abuse and teasing. In focus group discussions, many of the PLHIV who have disclosed their HIV status reported that they have faced a lot of difficulties when reentering society, such as not being invited a party given by their relatives or friends in their villages. Some reported that their children's marriages were broken off.

Table 4.9 Percentage of PLHIV who have disclosed their HIV status in the community

(Percent)

Discrimination in the community	Male	Female	Total
Not disclosed	51.9	48.6	50.6
Disclosed	48.1	51.4	49.4
For those who disclosed, reporting discrimination	32.4	37.9	34.5

Table 4.10 Types of stigma and discrimination faced by PLHIV in the community

(Percent)

Types of stigma and discrimination	Male	Female	Total
Do not go to their house	56.7	55.5	56.2
Refuse to lend them things	21.1	13.7	18.0
Ignore when PLHIV says hello	40.1	33.6	37.4
Do not buy something from PLHIV	6.9	2.8	5.2
Verbally abused, teased	17.5	17.8	17.6
Gossip	53.9	55.6	54.6
Not allow children to play together	8.8	22.3	14.4
Do not drink with PLHIV	29.9	20.9	26.1
Not allowed to participate in meeting	1.0	0.6	0.8

As can be seen in Table 4.11, discrimination in the community has different patterns in the five surveyed provinces. In Yunnan only 32.2 percent of the PLHIV interviewed have not disclosed their HIV status in their community. Of those who disclosed a relatively low share, only 21.2 percent, report that they encountered discrimination. In Guangxi and Sichuan the trends are precisely the opposite of Yunnan's with 82.9 percent and 71.2 percent of PLHIV having not disclosed their status in the community. Of those who disclosed more than half indicated that they encountered discrimination. This suggests that to a certain extent PLHIV decide whether to disclose based on an accurate assessment of the likelihood that problems will result, and that public health policy aimed at encouraging disclosure should aggressively confront stigma and discrimination.

Table 4.11 Percentage of PLHIV who have disclosed their HIV status in their community, by province

(Percent)

Province	Discrimination in the community	Male	Female	Total
Yunnan	Did not disclose	32.7	31.6	32.2
	Disclosed	67.3	68.4	67.8
	For those who disclosed, reporting discrimination	16.3	28.0	21.2
Guangxi	Did not disclose	79.5	90.9	82.9
	Disclosed	20.5	9.1	71.1
	For those who disclosed, reporting discrimination	71.1	84.6	73.1
Sichuan	Did not disclose	69.8	75.5	71.2
	Disclosed	30.2	24.5	28.8
	For those who disclosed, reporting discrimination	44.7	100.0	58.0
Hubei	Did not disclose	23.7	21.2	23.4
	Disclosed	75.3	78.8	76.6
	For those who disclosed, reporting discrimination	57.8	63.8	60.1
Shanxi	Did not disclose	24.7	21.2	23.4
	Disclosed	75.3	78.8	76.6
	For those who disclosed, reporting discrimination	57.8	63.8	60.1

The presence of a PLHIV in a family can affect the marriage and occupation of other family members. When asked whether their HIV status would affect the marriage and occupation of other family members, 21.4 percent of PLHIV said that it would affect family members' marriage chances, and 21.2 percent thought the infection would affect family members' work opportunities. Some PLHIV reported in the focus group discussions that the impact of HIV/AIDS on their children's marriage prospects was very severe -- matchmakers would not propose marriage to a member of a HIV household. Children from HIV households often have to lower their standards in searching for a partner.

Table 4.12 Impact of HIV/AIDS on marriage of family members

(Percent)

Whether it affects marriage chances	Male	Female	Total
Affects	22.7	19.1	21.4
Doesn't affect	50.6	45.2	48.6
Don't know	7.7	8.3	7.9
Not applicable	19.0	27.4	22.1

Table 4.13 Impact of HIV/AIDS on work chances of family members

(Percent)

Whether it affects work chances	Male	Female	Total
Affects	21.6	20.6	21.2
Doesn't affect	55.2	56.3	55.6
Don't know	7.3	5.6	6.7
Not applicable	15.9	17.5	16.5

Case 3：Mr. Zhou is the leader of a PLHIV group in a county. The group established a rabbit breeding operation in 2005 along with other PLHIV from the area. With household income of 50,000 Yuan his family is one of the wealthiest in their county. The son of Mr. Zhou planned to be married and had already found his future wife. However, the day before the wedding the family of the girl found out about Zhou's HIV status, and broke off the marriage. Mr. Zhou said to the researchers that his greatest worry in life now is his son's marriage. He said that once his son gets married he would like to speak out actively to educate the public about HIV/AIDS.

4.3 Stigma and discrimination in health facilities

PLHIV understandably find it much easier to disclose their status when visiting health care facilities. The health facilities here include village clinics, town hospitals, county and above hospitals and Centers for Disease Control.

As presented in Table 4.14, approximately 70 percent of the PLHIV interviewed for this study disclosed their status at health care facilities. However one striking finding of the survey was that 12.9 percent of male PLHIV and 13.8 percent of female PLHIV reported that after disclosure they had encountered discrimination at health care facilities. 45.9 percent of male PLHIV who encountered discrimination said that staff at the facilities refused to treat them, and 30.9 percent of the female PLHIV group had this problem. Other types of discrimination that they reported are neglect and isolation, being referred to another health facility and even being refused entrance to the facility. Also striking is the fact that about 30 percent of the PLHIV did not inform the health facilities about their HIV status. This action, reflecting fear of discrimination and the desire to keep their status completely confidential, can have very serious repercussions for the health of both PLHIV and the health personnel who are treating them.

Table 4.14 Percentage of PLHIV who disclosed their HIV status at health care facilities

(Percent)

Disclosure status	Male	Female	Total
Did not disclose	30.5	28.3	29.7
Disclosed	69.5	71.7	70.3
For those who disclosed, reporting discrimination	12.9	13.8	13.2

Table 4.15 Types of stigma and discrimination faced by PLHIV in health care facilities

(Percent)

Type of discrimination	Male	Female	Total
Neglected and isolated	43.0	36.4	40.5
Verbally abused, teased	9.8	13.8	11.3
Refused medical treatment	45.9	30.9	40.2
Referred to another hospital	20.1	23.6	21.4
Unnecessary use of protective gear	4.6	9.5	6.4
Refused entry	15.1	1.8	10.1
Shifting responsibilities by doctors and nurses	5.0	0.7	3.4

Less than half of the PLHIV interviewed in Guangxi and Sichuan disclosed their HIV status in health care facilities there, the lowest proportions of the five provinces surveyed. These two provinces also had the highest share of PLHIV who encountered discrimination after disclosing their HIV status. This result gives further confirmation that discrimination against PLHIV in Guangxi and Sichuan is very serious. In Yunnan, Hubei and Shanxi the share of PLHIV who disclosed their status when receiving medical treatment was higher, and the share who encountered discrimination after doing so was smaller. This further supports the idea that a PLHIV's decision not to disclose his or her HIV status may be based on well-founded concerns about negative consequences; regions where discrimination is greatest are precisely the regions where PLHIV are most likely to keep their status secret.

Table 4.16 Percentage of PLHIV who have disclosed their HIV status at health facilities, by province

(Percent)

Province	Disclosure Status	Male	Female	Total
Yunnan	Did not disclose	17.1	13.9	15.7
	Disclosed	82.9	86.1	84.3
	Of those who disclosed, share who encountered discrimination	4.3	8.8	6.2
Guangxi	Did not disclose	47.1	62.6	51.6
	Disclosed	52.9	37.4	48.4
	Of those who disclosed, share who encountered discrimination	26.5	16.0	24.2
Sichuan	Did not disclose	54.2	39.4	49.9
	Disclosed	45.8	60.6	50.1
	Of those who disclosed, share who encountered discrimination	24.0	41.0	30.3
Hubei	Did not disclose	15.5	25.2	20.0
	Disclosed	84.5	74.8	80.0
	Of those who disclosed, share who encountered discrimination	12.7	24.5	17.8
Shanxi	Did not disclose	6.9	0.0	4.4
	Disclosed	93.1	100.0	95.6
	Of those who disclosed, share who encountered discrimination	15.3	21.1	17.6

Case study 4：This is a case of a male PLHIV who encountered discrimination at the hospital in his home town. According to him, PLHIV were entitled to receive a free liver and kidney check-up once every three months in their hometown. But when he showed the free bill which mentions his HIV status to the hospital, the doctors often looked down upon him. As a result he had to get the check-up done at his own expense and then apply for reimbursement from CDC, to avoid facing discrimination.

A PLHIV's status could be discovered by other patients when the PLHIV is in the hospital. The attitude of other patients towards PLHIV is reported in Table 4.17. 38.5 percent of the male PLHIV and 59.5 percent of the female PLHIV disclosed their status to other patients, and of those who did, 22.1 percent of the males and 19.3 percent of the females reported that they had faced discrimination from other patients.

Table 4.17 Percentage of PLHIV who have disclosed the HIV status to other patients at health facilities

(Percent)

Discrimination in the health facilities	Male	Female	Total
Did not disclose	61.5	40.5	53.4
Disclosed	38.5	59.5	46.6
Of those who disclosed, share who encountered discrimination	22.1	19.3	20.8

Table 4.18 Attitude of other patients towards PLHIV

(Percent)

Type of discrimination	Male	Female	Total
Neglect and isolation	68.6	78.0	72.9
Verbal abuse, teasing	7.1	22.0	14.0
Refusal to seek treatment with PLHIV	67.1	20.3	45.7
Limits on movement in the facility	0.0	6.8	3.1

The analysis above has assessed the prevalence of discrimination faced by PLHIV when receiving medical treatment. However, this survey did not distinguish between incidents of discrimination that occurred several years ago, and those that occurred more recently, and therefore do not reflect the results of recent efforts to increase HIV/AIDS awareness and sensitivity of medical personnel.

4.4 Stigma and discrimination at school

Another aspect of stigma and discrimination is problems encountered by the children of HIV households. Children's lives outside of home revolve around their schools, and in order to protect their children, most (89.9 percent) of the PLHIV surveyed for this report have not disclosed their status at their children's schools because of their fear of discrimination against their children. As many as 80% of those who disclosed their status reported that their children did encounter discrimination, mostly when other children refused to play or sit together with them, and in some cases including verbal or physical abuse. Such unfair treatment, isolation and discrimination suffered by children at school can create problems for their emotional well-being that could affect them for their whole lives, including maladjustment, immaturity and anti-social behavior.

During focus group discussions a number of PLHIV stated that in order to ensure the schooling of their children they had to send their children to schools far from home, or even to some costly private school, which would be an additional economic burden for the household. Many HIV households cannot afford such an expense, and therefore see their children's education being affected or even sacrificed because of unfair discrimination and stigma.

Table 4.19 Discrimination at school

(Percent)

Categories	Yes	No
Informed or not at school	10.1	89.9
After informed, reporting stigma a nd discrimination or not	79.2	20.8

Table 4.20 Types of discrimination at school

(Percent)

Types of discrimination	Yes	No
Refused to sit together	67.0	33.0
Refused to play together	72.8	27.2
Less questions asked by teachers	4.5	95.5
Children were verbally or physically abused	29.9	70.1
Children were not allowed to play in public	4.5	95.5

Case study 5：With the support and encouragement of CDC, an HIV positive couple took part in a play to promote HIV/AIDS awareness. The couple became famous in the locality and often their photograph appeared in the newspapers. But this had a serious impact on their child. Ever since the child's teachers and classmates came to know about the HIV status of the parents, they made the child's life miserable. They often talked about it and the child could not bear the pressure. The situation became so bad that the child chose to leave the school. This explains why most of the parents decide not to disclose their HIV status in their children's school.

4.5 Stigma and discrimination in the work place

The work place here is defined as the places where PLHIV were doing agriculture work, migrant work, business and so on. For the PLHIV who were working in the agriculture sector, the probability of them facing discrimination is low, mostly because the household is the productive unit of agriculture work and contact with the outside is limited. However PLHIV who were doing migrant work and business outside have a greater opportunity as well as a greater desire to hide their HIV status. The survey shows that 4.4 percent of PLHIV interviewed reported discrimination in the work place (Table 4.21).

Table 4.21 Discrimination in the work place

(Percent)

Discrimination in the work place	Male	Female	Total
Have faced discrimination	4.8	3.7	4.4
Not have	95.2	96.3	95.6

4.6 Impact on migration

Table 4.22 shows that 2.6 percent of PLHIV interviewed have migrated due to HIV/AIDS (The PLHIV who have migrated out of the research areas are not included here). And 1.1 percent of the PLHIV have migrated in order to receive ARV treatment conveniently. 1.5% of them have migrated because of fear of discrimination or making trouble to their families.

Table 4.22 Migration due to HIV/AIDS

(Percent)

Reason for migration	Male	Female	Total
For receiving treatment	1.7	0.2	1.1
Stigma and discrimination	1.3	1.7	1.5
Total	3.0	1.9	2.6

4.7 Impact on socializing

Socializing of PLHIV with relatives and friends can be affected by HIV/AIDS. Due to fear of discrimination, 45.5 percent of the PLHIV reduced socializing with their relatives and 43.0 percent reduced their contact with outside world, such as friends, neighbors, etc (Table 4.23).

Through analysis of the socializing pattern of PLHIV by occupation, household income and education level, it is found that the impact of HIV/AIDS on socializing with relatives and friends is most serious for PLHIV belong to three categories; PLHIV who were doing off-farm work or business; PLHIV who were unemployed or belong to the low income category; and PLHIV who were well educated. Those belonging to the low income category, whose life is already in difficulty because of economic pressures, are more likely to be marginalized when their socializing with relatives and friends is also reduced.

Table 4.23 Percentage of PLHIV who have reduced contact with relatives and outside world due to HIV/AIDS

(Percent)

Categories		Reduce contacts with relatives due to fear of discrimination	Reduce contacts with outsiders due to fear of discrimination
Occupation	Cultivation	36.6	32.9
	Migrant workers	46.0	42.4
	Business	50.8	55.9
	Others	48.7	48.7
	Unemployed	66.5	66.0
Household income level (Yuan)	<10,000	49.8	47.2
	10,000-30,000	42.5	39.7
	>30,000	36.7	36.4
Education years	0	22.0	17.2
	1-6	42.7	41.4
	7-9	59.8	55.4
	10-12	48.1	50.0
	13+	49.4	53.2
Total		45.5	43.0

4.8 Awareness of HIV/AIDS and familiarity with HIV/AIDS services

(1) HIV/AIDS awareness

Lack of knowledge about HIV/AIDS, in particular about the mode of transmission of the infection, is an important cause of fear of HIV/AIDS and discrimination against PLHIV. Increasing HIV/AIDS awareness can be extremely helpful in improving the environment for PLHIV and reducing discrimination. This section presents findings regarding the level of HIV/AIDS awareness of respondents, in accordance with the definition of public awareness introduced by SCAWCO in April, 2008.

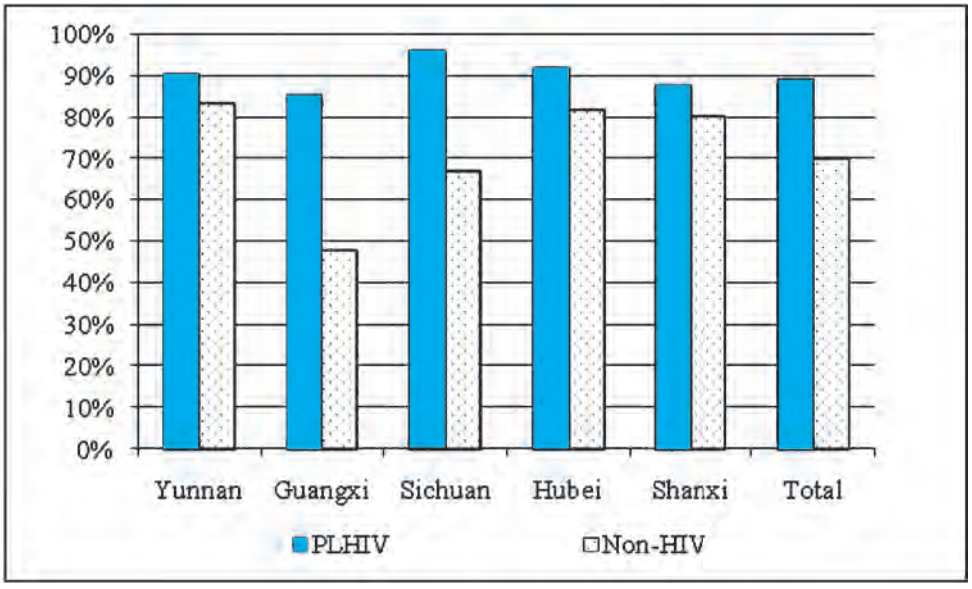
The awareness rate of PLHIV is quite high at 88.9 percent (Table 4.24), while the awareness rate of non-HIV is lower, at 69%. In Yunnan, Sichuan and Hubei the awareness rate of PLHIV was over 90 percent. The awareness rate for non-HIV is highest in Yunnan, at 83.3%, and much lower at 48.1% in Guangxi and 67.1% in Sichuan. We see again the strong link between ignorance and discrimination; the provinces with lowest levels of HIV/AIDS awareness are the ones where discrimination is most serious.

Table 4.24 HIV/AIDS awareness

(Percent)

Respondent	Sex	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	Male	92.2	86.0	96.6	91.5	86.0	89.9
	Female	87.3	83.4	94.3	91.9	89.8	87.2
	Total	90.2	85.2	95.9	91.7	87.4	88.9
Non-HIV	Male	85.4	46.3	70.2	83.1	78.7	69.0
	Female	81.7	50.3	65.0	80.6	81.1	70.8
	Total	83.3	48.1	67.1	81.7	79.9	69.9

Figure 4.1 HIV/AIDS awareness



HIV/AIDS awareness by education level of respondents is presented in Table 4.25. The awareness rate is highest for more educated respondents, and lowest for the illiterate. In focus group discussion our surveyors found that it was difficult for respondents with a low education level to acquire knowledge about HIV/AIDS, even if they had attended a lot of public education activities. They said that the content was too deep for them to understand. Public education efforts can be more effective at increasing HIV/AIDS awareness in the future if they use training materials that are designed according to the cultural and ethnic characteristics of their targeted audience, and use formats and patterns that are easy for the public to accept.

Table 4.25 HIV/AIDS awareness by level of education

(Percent)

Province	Respondent	Education years			
		0	1-6	7-9	>10
Yunnan	PLHIV	84.6	89.6	97.6	100.0
	Non-HIV	69.8	82.1	89.9	84.7
Guangxi	PLHIV	62.5	78.2	89.6	86.7
	Non-HIV	---	31.6	60.5	80.9
Sichuan	PLHIV	88.5	88.5	97.7	100.0
	Non-HIV	44.4	51.2	71.7	89.9
Hubei	PLHIV	76.1	90.1	96.2	100.0
	Non-HIV	76.6	72.9	84.1	95.1
Shanxi	PLHIV	60.0	80.9	92.2	96.1
	Non-HIV	42.9	63.0	86.0	85.5
Total	PLHIV	83.5	86.1	93.3	92.5
	Non-HIV	64.9	61.5	75.7	85.5

In general, HIV/AIDS awareness declines with an increase in the age of the respondents, as seen in Table 4.26. However there are differences among the surveyed provinces. In Hubei and Shanxi awareness is highest among people aged 30-40, while awareness is considerably lower for people below 30 years in age. This may reflect the fact that commercial blood sales, the main source of the disease in those provinces, is more likely to involve somewhat older people, and so people in the age group 30-50 have been the targets of a great deal of public education there, whereas in most provinces HIV/AIDS awareness campaigns target younger people. Even in Hubei and Shanxi, now that the commercial blood problem is under control and sexual contact has become the major transmission mode, the teenagers who are active in sex should be the major target group of the public education.

Table 4.26 HIV/AIDS awareness by age

(Percent)

Province	Respondent	Age (years old)			
		<30	30-40	40-50	50+
Yunnan	PLHIV	95.3	90.1	91.8	70.4
	Non-HIV	86.4	82.2	82.4	82.6
Guangxi	PLHIV	94.9	91.6	72.5	60.0
	Non-HIV	76.5	51.2	40.5	25.4
Sichuan	PLHIV	97.1	97.0	98.4	73.0
	Non-HIV	66.7	65.9	69.0	63.9
Hubei	PLHIV	89.2	97.6	93.0	85.0
	Non-HIV	92.0	97.3	80.4	68.5
Shanxi	PLHIV	75.0	92.7	88.0	82.5
	Non-HIV	81.3	92.7	82.2	66.2
Total	PLHIV	95.0	91.7	87.7	71.1
	Non-HIV	82.8	72.9	65.6	54.0

(2) Awareness of basic HIV/AIDS services

Public education about HIV/AIDS aims not only at scaling up knowledge about HIV/AIDS, but also at making the public more aware about how to get HIV/AIDS-related services such as VCT, free condoms, free clean needles and methadone. Table 4.27 presents the survey results covering this form of awareness. The proportion of PLHIV who know how to get free condoms is quite high at 71.5 percent. However, the awareness rate about other services, such as free clean needles and methadone, is quite low, even in Yunnan, Guangxi and Sichuan where the major transmission mode is IDU. The awareness rate of non-HIV regarding these services is lower in all provinces and with respect to all services, suggesting considerable need for more and better public education in this area.

Table 4.27 Awareness about basic HIV/AIDS services

(Percent)

Respondent	HIV/AIDS services	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	Free condoms	78.3	56.2	79.4	84.5	77.1	71.5
	Free clean needles	43.8	36.8	76.8	36.0	7.8	41.5
	Methadone	55.6	44.8	83.7	15.6	2.5	48.5
Non-HIV	VCT	48.7	24.0	44.7	48.0	48.5	39.8
	Free condoms	63.0	17.5	38.3	29.0	33.8	41.8
	Free clean needles	26.7	6.8	23.7	18.2	0.5	17.8
	Methadone	43.3	6.2	32.1	6.9	0.0	25.1

4.9 Attitudes among non-HIV

At present, China has conducted a great deal of activities aimed at controlling the spread of HIV/AIDS. There has been widespread and active participation in these programs and the awareness of HIV/AIDS has increased. About 37.8 percent of respondents in non-HIV households have attended public education programs on HIV/AIDS; the proportion of women who have attended such programs is marginally higher than men. More than one third of the respondents in non-HIV households know who in their community is HIV-positive, and who has died due to HIV/AIDS. These results reflect a relatively high level of attention to HIV/AIDS among the non-HIV population. The proportions of non-HIV who have attended public education activities and who are aware of HIV status of PLHIV in their communities are relatively high in Yunnan, Hubei and Shanxi, while the relevant shares are lower in Guangxi and Sichuan.

Table 4.28 Non-HIV rates of attendance in public education activities and awareness of PLHIV in the community

(Percent)

Categories	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Attended public education activities	52.1	17.7	21.0	43.3	53.7	37.8
Percentage of people who know someone suffering from HIV/AIDS	56.2	6.7	8.1	46.3	72.5	36.3
Percentage of people who know anyone who died of AIDS	61.8	6.7	4.8	47.2	68.5	38.6

The survey assessed the attitude of the general public towards PLHIV and their family members. Findings are mixed, and are presented in Table 4.29. More than half of the respondents reported that they are ready to accept PLHIV and maintain normal daily contact with them. More than 60 percent of men and 65 percent of women would allow their children to play with children from HIV positive households, and 57 percent of male and 67 percent of female respondents do not mind sharing food with the PLHIV. These are encouraging, but still indicate that significant numbers of people maintain negative attitudes toward PLHIV, and would shun contact with them. Compared to men, women are noticeably less likely to show discrimination against PLHIV. One respondent to this survey said "It is no problem to have contact with PLHIV in daily life, so long as the PLHIV has no cuts or wounds. However, I would never eat the Doufu they make, because you can never know whether his hand was cut during the process of making Doufu."

Table 4.29 Attitude of respondents from non-HIV households

(Percent)

	Male			Female			Total		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Their community would allow PLHIV to live in the same community	65.4	27.5	7.1	71.5	21.8	6.7	68.6	24.5	6.9
Interact with the family having PLHIV	67.1	30.4	2.5	71.8	23.4	4.8	69.6	26.7	3.7
Share food with the PLHIV	56.6	39.6	3.8	66.7	29.7	3.5	61.9	34.5	3.6
Use facilities used by the PLHIV	54.7	42.0	3.3	58.5	37.5	3.9	56.7	39.7	3.6
Allow their children to play with children from HIV households	59.6	35.4	5.0	65.2	30.2	4.6	62.5	32.7	4.8
Send their children to a school where HIV-positive children study	56.6	35.8	7.6	64.3	28.0	7.7	60.6	31.7	7.7
Purchase goods etc from a shopkeeper who is HIV-positive	53.4	42.6	3.9	60.0	34.3	5.7	56.8	38.3	4.9
Purchase doufu/steamed breads etc from a shopkeeper who is HIV-positive	33.2	61.2	5.5	39.2	53.3	7.5	36.3	57.1	6.6
Accept a HIV-positive person as a teacher	53.3	36.8	9.9	62.0	27.3	10.7	57.8	31.9	10.3

4.10 Observations

The results of the research show that in their daily lives PLHIV encounter stigma and discrimination in a wide range of arenas. Many PLHIV have encountered discrimination in their own families, communities, work places and health facilities. In Chapter 5 we have already noted that stigma and discrimination have a greater negative impact on the income of PLHIV than health problems, another sign of the destructiveness of this social problem. Later in this report this is further confirmed in Chapter 11, with its finding that the single most powerful predictor of PHIV quality of life is whether they face stigma and discrimination. Even the children of PLHIV face serious discrimination at school and when seeking marriage partners.

These findings add new information to what other studies have previously found regarding this vital topic. Li Jing et al discussed discrimination in the aspects of community public, health facility, communion, occupation, marriage, and education facility (Li Jing et al, 2006). Shi Xiaoming et al found that discrimination against PLHIV and their family members was particularly serious in areas where the main transmission mode is commercial blood (Shi Xiaoming et al, 2006). Zhang Kaining et al identified discrimination against PLHIV among family planning staff and the public (Zhang Kaining et al, 2005). A survey of Wang Yuan etc indicated that seven types of discrimination related to HIV/AIDS all existed in health sector in China. These seven types of discrimination were listed in the "Draft of Recognizing Discrimination Related to HIV/AIDS" introduced by UNAIDS (Wang Yuan et al, 2006).

Stigma and discrimination against PLHIV may be a result of many factors, including the complicated historical, cultural and social background of the epidemic, ignorance and fear of HIV/AIDS, the thought that HIV/AIDS is caused by immoral behavior and the irresponsible drumbeating of some public media (Feng Liangui, 2006; Cao Xiobin et al, 2005). However this survey confirmed that stigma and discrimination can be overcome through education and contact with PLHIV.

Children of HIV households also suffer unfair treatment at school due to discrimination. Although most of the respondents from non-HIV households reported they are willing to maintain contact with PLHIV in daily life, their more detailed answers and the life experience of PLHIV show clearly that negative attitudes and fear toward HIV/AIDS continue to exist.

Better care for PLHIV should start in their homes. The survey found that although the initial

reactions of family members when the PLHIV disclosed his/her HIV status were often negative, over time and with intensification of HIV/AIDS public education most PLHIV can receive support, comfort and care from their families. The psychological and more concrete day to day support from the PLHIV's family can play an important role in allowing them to lead good lives, and should be promoted.

At the same time, PLHIV cannot be forced to remain isolated in their homes as a shelter from stigma in their communities. Continued efforts are needed to improve HIV/AIDS awareness around the country as a means of fighting discrimination. The survey found that among non-HIV population HIV/AIDS awareness and knowledge of HIV/AIDS related is still too low. Ignorance about HIV/AIDS is one fundamental cause of discrimination. Low awareness among non-HIV people of HIV/AIDS services is also a serious obstacle to effective prevention campaigns.

In group discussions, PLHIV and the staff involved in the HIV/AIDS prevention and treatment activities stated that stigma and discrimination make their lives and activities extremely difficult. Although there are a lot of educational activities, there is still a need for cooperation among various sections of the society to turn that knowledge into changes in actual behavior.

The Regulation on AIDS Prevention and Treatment specifically ordains that, "People with HIV/AIDS and their relatives should not be discriminated by any department and individual; their rights of marriage, work, receiving medical care, receiving schooling, etc are protected by law." Chinese leaders have visited with and comforted PLHIV and orphans caused by HIV/AIDS many times also encouraged the whole community to reduce the discrimination against PLHIV and their family members. In depth public education and anti discrimination education activities have been undertaken in all provinces and sectors (SCAWCO et al, 2007). However, some surveys have found that the change of knowledge does not always translate into changes of attitude and behavior. Research conducted by Zhang Chunan etc showed that the awareness of public has increased significantly comparing with the result in the last year; however, the attitude of public has not changed noticeable (Zhang Chunan et al, 2006). Zuo Huibin etc have found the awareness of students in a school is quite good, but the students' attitude and behavior towards HIV/AIDS often does not reflect their training (Zuo Huibin et al, 2006). Shi Xiaoming et al have found that discrimination towards HIV/AIDS was negatively correlated with knowledge other than about modes of transmission, and was positively correlated with knowledge about modes of transmission

(Shi Xiaoming et al, 2006). Our survey found that a lot of non-PLHIV have a good deal of knowledge about HIV/AIDS, but still will not agree to work and eat with PLHIV. Education activities that inform the public about how to avoid HIV/AIDS transmission play an important public health function, but do little, at best, to remove discrimination.

It is therefore clear that carrying out the Regulation of AIDS Prevention and Treatment requires further exploration and experimentation , such as how to combine the anti-discrimination education with local culture, how to strengthen the multi sectoral cooperation and how to implement anti-discrimination activities continually as part of routine work.

Furthermore, there is a need for particular attention to discrimination faced by PLHIV who are part of the floating population or other high risk groups. With the rapid social and economic development in China, the migration of people is more and more common. There are more and more PLHIV migrating due to the need for income, or because of fear of discrimination in their home areas. These PLHIV generally are unwilling to disclose their HIV status and have more psychological pressure in a strange environment. The only migrants covered by this survey were those who have returned to their hometown; PLHIV who are still in their migration receiving areas were not included. Further research is needed regarding the discrimination status of these people, as part of a broader program of research. Furthermore, the PLHIV who were infected by commercial sexual contact and MSM were not investigated in this survey, and it is likely that these people suffer discrimination because of negative attitudes among some people toward their sexual behavior. It is necessary to conduct further research aimed at these types of PLHIV.

Chapter 5 Impact of HIV/AIDS on Income and Employment

Income and occupation play an important role in determining the social status of a person and have a large and direct effect on their quality of life. Most PLHIV in China are in their most productive years and many are the primary income earners in their families. HIV/AIDS' impact on such people, and on their families, can be devastating, as many PLHIV have to work less, take different jobs and in some cases fall into unemployment due to impaired work ability and to stigma and discrimination, leading to a great loss of income for their families. HIV/AIDS often also has a direct impact on the economic well-being of family members in HIV households, as the need to take care of their sick relatives and stigma and discrimination against them often lead to changes in jobs and reduced earnings. This impact is exacerbated by their increased responsibility for taking care of and providing for other family members.

This chapter analyzes the impact of HIV/AIDS on income and employment, including impact on household income level, the source of income, the work force participation rate and occupation of PLHIV and their household members.

5.1 Impact of HIV/AIDS on household income

The survey found that household income of HIV households is markedly lower than that of non-HIV households (Table 5.1 and Table 5.2). The average annual household income of HIV households is 14,910 Yuan and of non-HIV households is 18,875 Yuan. The annual per capita income of HIV households is 3,911 Yuan and of non-HIV households is 4,571 Yuan. These findings are almost the same in each of the provinces surveyed, with some slight variations. The one exception is that annual per capita income of HIV households is higher than non-HIV households in Guangxi, in part because the HIV households in Guangxi are smaller than non-HIV households (HIV households have an average size of 4.0 and non-HIV households 4.8), and in part because the total household income gap is smaller than in other provinces.

Table 5.1 Average annual household income by province

(Yuan)

Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	15,145	16,167	12,816	11,176	12,745	14,910
Non-HIV	20,556	17,262	16,749	17,191	19,173	18,875
T	13.428	2.449	4.958	9.627	7.770	15.435
P	0.000	0.014	0.000	0.000	0.000	0.000

Table 5.2 Per capita income by province

(Yuan)

Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	3,609	4,506	4,440	3,204	3,155	3,911
Non-HIV	5,077	3,871	5,060	4,401	4,263	4,571
T	15.109	-5.411	2.302	6.710	6.116	10.090
P	0.000	0.000	0.021	0.000	0.000	0.000

Figure 5.1 Average annual household income and per capita income

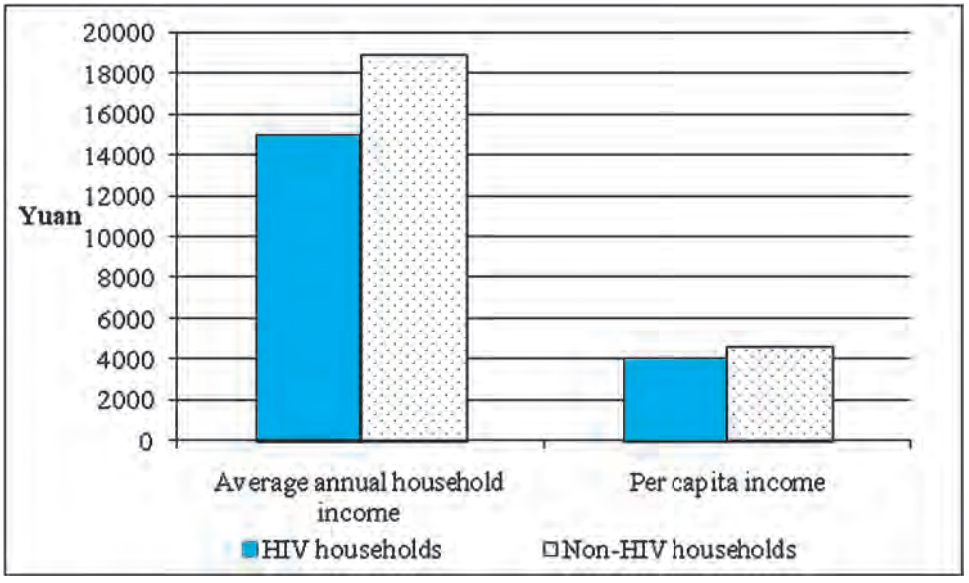


Figure 5.2 Average annual household income by province

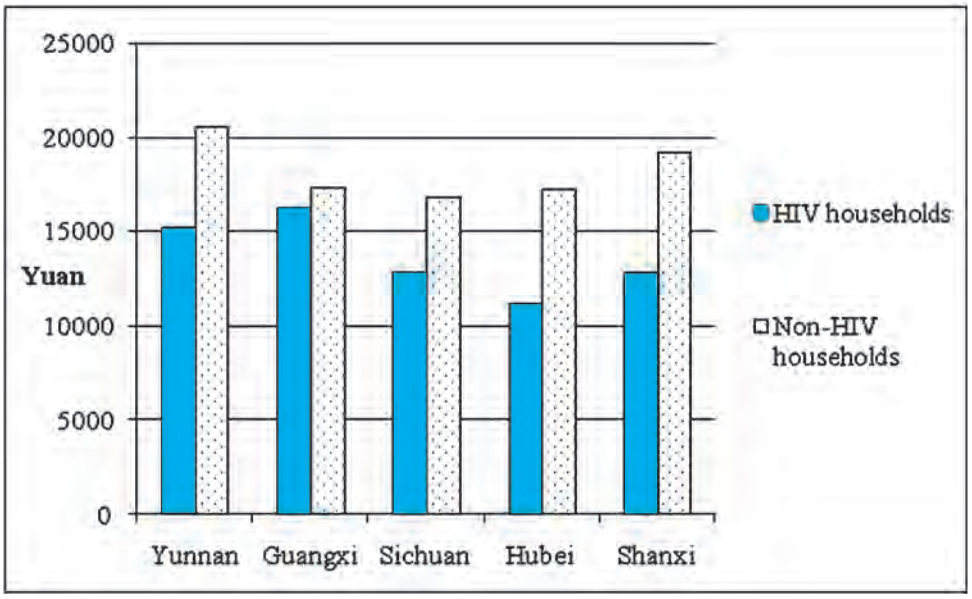
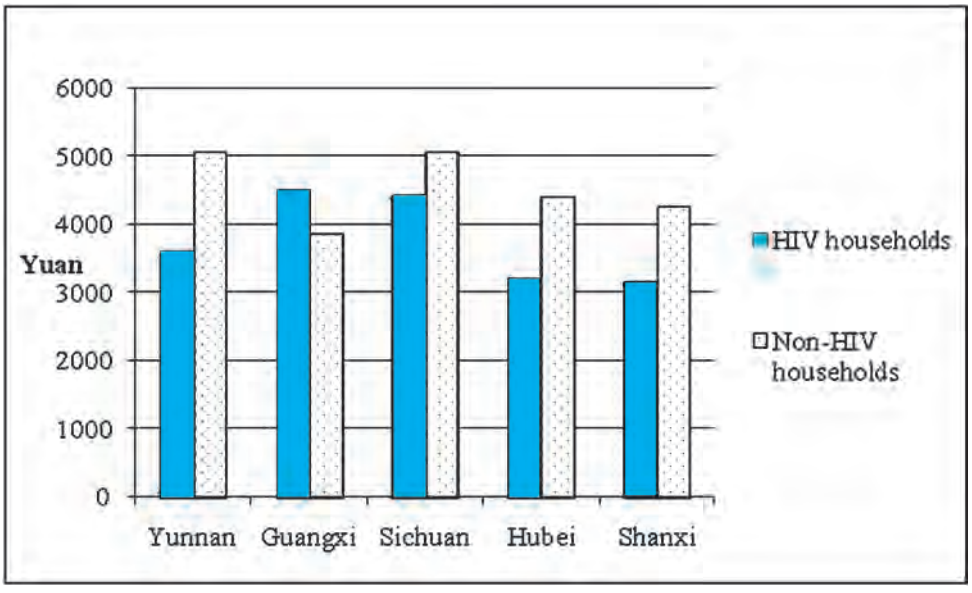


Figure 5.3 Per capita income by province



Distribution of households by income is presented in Table 5.3. The share of HIV households classified as low income (defined here as having annual household income below 10,000) is markedly higher than for non-HIV. In fact, nearly half of the HIV households fall in the low income category, and 19.3 percent of the HIV households live under the relative poverty line (household annual income less than 4,193 Yuan). Only one third of the non-HIV households are classified as low income and 11.5 percent of the households fall under the relative poverty line. The share of

households belong to high income category (annual income greater than 50,000 Yuan) while low in both groups, is higher for non-HIV households (6.5%) than for non-HIV (3.4%).

In terms of head counts, 44.4% of the persons from HIV households belong to the low household income category, and 15.5% are under the poverty line. Among members of non-HIV households these shares are much lower; 32.0% are low income, and 10.1% are under the poverty line. Interestingly among households living under the relative poverty line, the per capita income of HIV households is significantly higher than in non-HIV households (836 Yuan and 730 Yuan). This may reflect two factors: First, the poor HIV households receive more government support than non-HIV households; secondly, the family size of HIV household is smaller. Although 44.4 percent of HIV household population belongs to the low income category, the share of income of these families is only 17.2%. Furthermore, the ratio of low income household members to high income members is 14:1 for HIV households, while this ratio is only 5:1 for non-HIV households. This gap between rich and poor is much wider for HIV households than for non-HIV.

Table 5.3 Distribution of households by income group, income per household and per capita income

Households	Annual income category (in Yuan)	HHs (%)	Population (%)	Share in income (%)	Average income per household (Yuan)	Per capita income (Yuan)
HIV household	0-9,999	49.5	44.4	17.2	5,178	1,641
	0-4,193	19.3	15.5	2.8	2,177	836
	10,000-19,999	28.2	30.2	26.7	14,146	3,892
	20,000-29,999	11.6	12.0	19.2	24,614	6,886
	30,000-39,999	5.3	6.3	12.0	33,879	7,859
	40,000-49,999	2.0	3.0	5.8	43,263	7,950
	50,000+	3.4	4.1	19.1	82,588	18,210
	Total	100.0	100.0	100.0	14,910	3,911
Non-HIV household	0-9,999	33.3	32.0	9.7	5,479	1,396
	0-4,193	11.5	10.1	1.5	2,491	730
	10,000-19,999	32.8	32.0	24.5	14,121	3,622
	20,000-29,999	17.8	18.6	22.7	24,082	5,741
	30,000-39,999	6.2	6.9	11.2	34,016	7,355
	40,000-49,999	3.4	3.5	7.7	43,335	10,615
	50,000+	6.5	7.0	24.2	69,767	16,556
	Total	100.0	100.0	100.0	18,875	4,571

Note: The national relative poverty line (1,067 per Yuan per capita in 2007), is multiplied by the appropriate household size to obtain the household poverty line as 4,193 Yuan per year.

The distribution of households by income group in all five surveyed provinces is presented in Tables 5.4 through 5.8. It is noteworthy that although 55.3 percent of surveyed HIV households in Hubei province are in the low income group, the highest share of all five provinces, only 5.9 percent of Hubei's HIV households live under the poverty line, far lower than in the other four provinces and lower even than the 9.6 percent share of the poor among Hubei's non-HIV households. This situation most likely reflects the much higher support for poor HIV households in Hubei, which compensates both for the loss of income and for the higher living costs (see chapter 6) of HIV households.

Table 5.4 Distribution of households by income group in Yunnan

Annual income category (in Yuan)	HIV household				Non-HIV household			
	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)
0-9,999	49.2	42.9	5,592	1,688	31.5	29.6	5,459	1,437
0-4,193	16.8	13.4	2,613	825	11.5	9.2	2,648	878
10,000-19,999	28.6	32.3	14,617	3,366	33.4	32.9	14,085	3,596
20,000-29,999	12.2	12.4	24,347	6,179	16.3	17.4	23,918	5,827
30,000-39,999	5.2	6.1	33,565	7,645	5.3	6.1	34,158	7,294
40,000-49,999	1.5	2.1	44,234	8,342	4.5	4.5	43,055	11,401
50,000+	3.3	4.2	86,078	16,363	9.0	9.5	72,340	17,551
Total	100.0	100.0	15,145	3,609	100.0	100.0	20,556	5,077

Table 5.5 Distribution of households by income group in Guangxi

Annual income category (in Yuan)	HIV household				Non-HIV household			
	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)
0-9,999	49.0	44.8	4,431	1,492	37.2	36.4	5,317	1,196
0-4,193	23.7	19.6	1,689	756	13.0	12.1	2,257	554
10,000-19,999	24.2	24.0	13,899	4,813	30.1	29.2	14,282	3,450
20,000-29,999	12.2	12.7	25,315	7,606	19.0	19.6	24,334	5,436
30,000-39,999	6.2	7.6	34,094	7,597	6.6	7.1	34,271	6,801
40,000-49,999	3.7	5.7	42,524	7,342	2.3	2.8	43,909	7,865
50,000+	4.7	5.2	81,771	19,886	4.8	4.9	64,587	15,138
Total	100.0	100.0	16,167	4,506	100.0	100.0	17,262	3,871

Table 5.6 Distribution of households by income group in Sichuan

Annual income category (in Yuan)	HIV household				Non-HIV household			
	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)
0-9,999	52.4	47.1	3,883	1,734	32.7	30.8	5,820	1,913
0-4,193	31.4	25.2	2,031	1,114	8.6	8.3	2,260	636
10,000-19,999	26.7	29.3	13,403	4,598	36.0	35.1	13,078	4,522
20,000-29,999	10.6	11.8	24,186	8,073	15.9	16.5	24,671	6,848
30,000-39,999	5.4	5.7	34,364	11,251	9.9	11.0	33,883	9,374
40,000-49,999	1.6	2.0	45,271	12,160	3.1	2.5	41,869	14,890
50,000+	3.3	4.1	63,136	19,806	2.4	4.1	65,817	13,780
Total	100.0	100.0	12,816	4,440	100.0	100.0	16,749	5,060

Table 5.7 Distribution of households by income group in Hubei

Annual income category (in Yuan)	HIV household				Non-HIV household			
	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)
0-9,999	55.3	54.6	6,790	1,906	32.2	30.6	5,823	1,673
0-4,193	5.9	6.2	2,643	791	9.6	9.2	2,874	764
10,000-19,999	34.9	35.2	13,460	3,658	37.3	37.4	14,227	3,765
20,000-29,999	6.2	5.8	23,424	9,531	19.7	19.7	23,844	6,327
30,000-39,999	3.6	4.4	35,062	7,800	4.8	4.8	32,217	8,370
40,000-49,999	0.0	0.0	---	---	1.2	1.4	46,098	11,301
50,000+	0.0	0.0	---	---	4.8	6.1	66,769	14,006
Total	100.0	100.0	11,176	3,204	100.0	100.0	17,191	4,401

Table 5.8 Distribution of households by income group in Shanxi

Annual income category (in Yuan)	HIV household				Non-HIV household			
	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)	HHs (%)	Pop. (%)	Average Income Per household (Yuan)	Per capita Income (Yuan)
0-9,999	42.1	38.9	5,474	1,598	25.1	23.3	6,182	1,609
0-4,193	16.1	13.2	2,728	1,002	6.7	6.9	2,676	745
10,000-19,999	42.9	43.1	13,528	3,473	35.1	34.0	14,646	3,514
20,000-29,999	11.1	13.0	23,892	5,391	23.0	23.9	23,532	5,240
30,000-39,999	2.6	3.4	32,708	6,424	10.3	10.9	33,582	7,024
40,000-49,999	0.0	0.0	---	---	3.1	4.0	44,488	8,044
50,000+	1.3	1.6	86,257	17,251	3.4	3.9	65,797	13,210
Total	100.0	100.0	12,745	3,155	100.0	100.0	19,173	4,263

5.2 Impact of HIV/AIDS on the composition of income

As presented in Tables 5.9 and 5.10, in most provinces the main source of income for both HIV and non-HIV households is cultivation, followed by income from labor migration and animal breeding. The share of cultivation income in the total is 31.0 percent for HIV households and 39.0 percent for non-HIV households.

HIV households have less income from physically arduous activities, such as cultivation, animal breeding and migration. It is also seen that the proportion of income from business is higher among HIV as compared to non-HIV households (13.1% and 7.2%). Most of this arose from results in Yunnan, Guangxi and Sichuan, and seems to reflect the fact that a significant share of IDU individuals there came from households with higher business income. Furthermore, since HIV households receive more income from the support of society (government, NGOs or HIV/AIDS projects) and relatives; the share of income from support is 5.3 percent higher than for non-HIV households.

Income from outside support varies considerably among the five surveyed provinces, due to differences in policy. In Yunnan and Guangxi, the contribution of support to household income is relatively low, while the contribution of such income in Sichuan, Hubei and Shanxi is higher. At the same time it is noteworthy that Yunnan and Guangxi are the provinces with the highest average household income, despite the lack of government income support programs. Hubei stands out in

terms of the extent of government support; 25.3 percent of HIV household income comes from such sources.

Table 5.9 Household income structure of HIV households

(Percent)

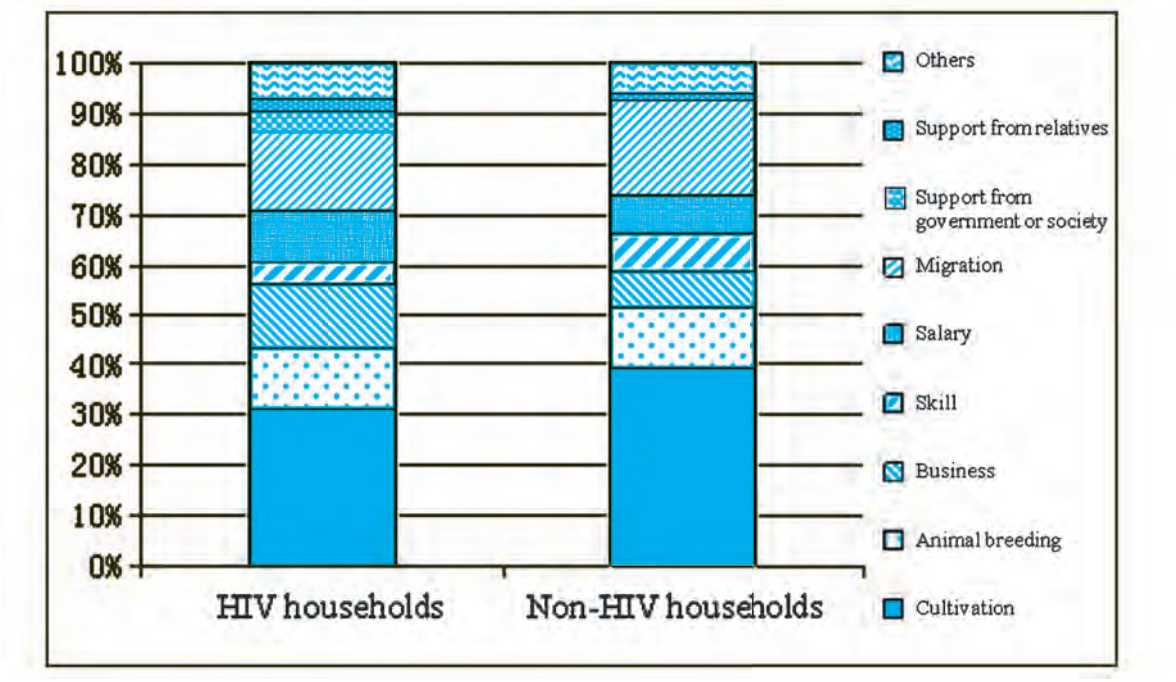
Income structure	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Cultivation	50.1	11.3	3.6	25.9	25.3	31.0
Migration	10.2	20.1	13.7	21.9	37.9	15.8
Business	8.6	22.2	14.5	2.1	0.4	13.1
Animal breeding	15.9	8.3	1.1	15.3	14.1	12.2
Skill	5.3	3.3	9.4	1.5	1.8	4.5
Salary	1.1	18.5	36.2	5.0	7.5	9.9
Support from government or society	2.3	1.2	9.0	25.3	8.7	3.8
Support from relatives	0.5	4.8	7.5	1.2	1.2	2.5
Others	6.0	10.3	5.0	1.8	3.1	7.2

Table 5.10 Household income structure of non-HIV households

(Percent)

Income structure	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Cultivation	43.9	40.2	4.3	34.6	24.3	39.0
Migration	12.1	24.8	35.3	16.6	40.3	19.1
Business	7.1	5.3	9.8	15.4	6.5	7.2
Animal breeding	14.3	12.0	3.9	18.1	6.1	12.9
Skill	8.4	6.1	13.4	4.2	5.0	7.5
Salary	5.8	5.6	24.9	8.1	14.4	7.4
Support from government or society	0.5	0.2	0.9	0.3	0.3	0.4
Support from relatives	1.0	0.1	1.0	0.1	0.7	0.6
Others	6.9	5.7	6.5	2.6	2.4	5.9

Figure 5.4 Household income structure



5.3 Impact of HIV/AIDS on work force participation rate

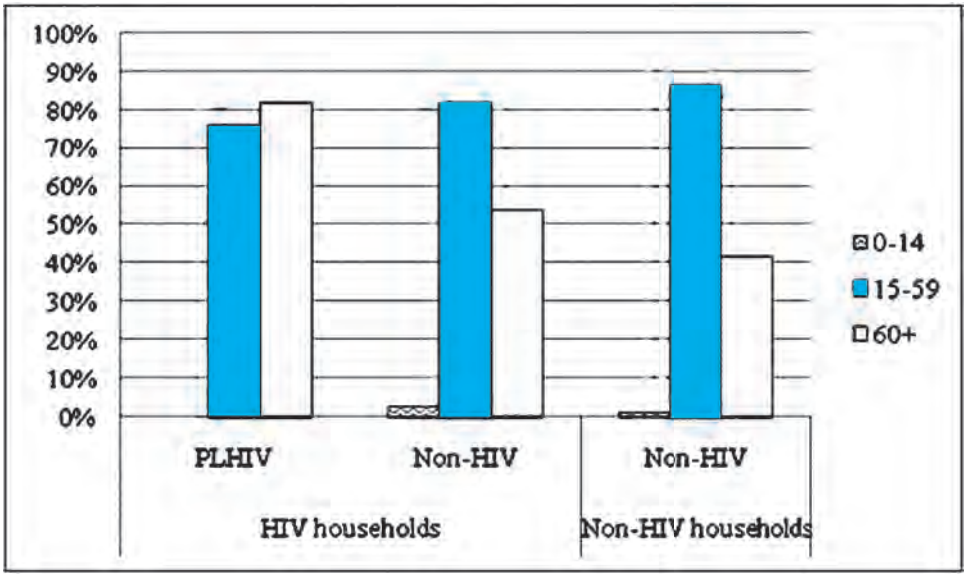
Workforce participation is defined as the extent to which an individual is willing and able to work, excluding housework. In Table 5.11, the workforce participation rates of the members of HIV and non-HIV households are presented by age group. The table clearly indicates that in HIV households there is a burden on the children and the elderly to work in order to support the family. Although HIV positive children do not participate in the workforce in this survey, the non-HIV children in HIV households enter the labor force at a significantly higher rate than children in non-HIV households. The Work Force Participation Rate (WFPR) of these children (0-14 years old) is 2.5%, whereas in non-HIV households it is only 1.0%, suggesting that some children in HIV households are led to drop out from school and work in order to make up for the loss of household income. The WFPR of elderly (60 years old or higher) PLHIV and elderly non-HIV family members in HIV households is also significantly higher (81.6% and 53.7%, respectively) as compared to that of elderly members of non-HIV households (41.7%). So elderly people in HIV households are also under pressure to work and earn income. The higher school drop-out rate for children in HIV households is confirmed again in chapter 6, below.

Table 5.11 Work force participation rate by age group

(Percent)

Age (in years old)	HIV household			Non-HIV household
	PLHIV	Non-HIV	Total	Non-HIV
0-14	0.0	2.6	2.5	1.0
15-59	76.0	81.9	79.3	86.2
60+	81.6	53.7	55.9	41.7

Figure 5.5 Work force participation tate by age group



5.4 Impact on household cultivation

Most of the respondents interviewed are working in the agricultural sector and the main source of income for both HIV and non-HIV households is cultivation (HIV household 31.0%, non-HIV household 39.0%). Hence, the use of land and status of cultivation are very important to the household income for these families. There are noteworthy differences between the land use pattern of HIV and non-HIV households, with implications for the income and welfare.

Land is the most important input into cultivation. The rate of land use is affected by many factors. A drop in the market price of crops, an increase in production costs, out-migration of family members or physical health problems can all lead to a decision to rent out one's land, or simply to stop cultivating it. As shown in Table 5.12 the ratio of land planted to land distributed is 91.3% for HIV households, indicating that on average nearly 9 percent of HIV household land is left idle. But most non-HIV farming households look to rent and cultivate additional land beyond that which is allocated to them; their planted/distributed ratio is 108.4 percent. The share of HIV households who

rent out their land is 10 percent higher than non-HIV households (26.9% and 16.9%); while the proportion of households who rent other's land is lower than for HIV households. HIV households reduce their cultivation of land for many reasons, especially the weakened physical condition of PLHIV and the need for other family members to seek other higher paid work to compensate for the loss of income.

The use of land by province is presented in Table 5.12 and Table 5.13. In Hubei and Shanxi province, the ratio of land planted to land distributed is more than 100 percent for both HIV and non-HIV households, although the ratio for HIV households is quite a bit lower. However, in Yunnan, Guangxi and Sichuan this ratio ranges from 78 percent to 92 percent for HIV households. This different land use pattern may reflect the different transmission mode in these provinces. Most of the PLHIV in Hubei and Shanxi province are farmers infected by commercial blood sales. Their ages are quite high and they are less able to migrate, so their families still mainly depend on income from land cultivation even after infection. However, most of the PLHIV in Yunnan, Guangxi and Sichuan province are IDU and in the relatively young age group of 20-39, and prefer other sources of income rather than continuing to work on the land.

Table 5.12 Use of land

(A unit of area)

Household	Use of land	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Land distributed	8.6	4.2	2.5	4.2	7.8	6.9
	Land planted	7.9	3.3	2.0	4.3	8.0	6.3
	Ratio（%）	92.2	78.2	81.3	101.0	102.7	91.3
Non-HIV	Land distributed	9.1	5.1	2.2	5.5	10.4	7.2
	Land planted	9.6	5.7	2.1	5.9	12.2	7.8
	Ratio（%）	105.6	112.5	97.7	108.4	116.5	108.4

Table 5.13 Rent and lend of the land

(Percent)

Household	Rent and lend of the land	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Percentage of land lend	29.5	34.0	31.2	5.3	5.8	26.9
	Percentage of land rent	18.0	9.1	6.4	5.3	9.6	13.9
Non-HIV	Percentage of land lend	18.1	20.8	12.6	2.0	4.3	16.9
	Percentage of land rent	23.4	25.3	5.4	8.1	18.0	22.0

5.5 Changes in occupation and income caused by HIV/AIDS

(1) Change in occupation

PLHIV are more likely to change or lose their jobs than non-HIV individuals. Change in employment status could occur due to a number of reasons: ill health or a wish for greater anonymity. In some cases PLHIV have been thrown out of their jobs by their employers due to stigma and discrimination. The choice of occupation of non-HIV in HIV households is also frequently affected by their family member's illness, due to the increase of the household's economic burden or the need to devote more time taking care of their ill relative.

Table 5.14 presents the pattern of change in the types of jobs of PLHIV and their other non-HIV household members after they discovered their HIV status. For PLHIV, the most striking change is the increased share of PLHIV who are unemployed and the decreased proportion of PLHIV who migrate to find work elsewhere. After being detected as positive, the proportion of PLHIV unemployed has increased from 18.2% to 26.0%, and the proportion who takes work elsewhere has decreased from 24.0% to 17.9%. The income loss due to reduced employment of PLHIV as migrant workers is to some extent compensated by other family members of HIV households taking up work as migrants. The proportion of non-infected members of HIV households engaged in migrant labor has increased from 19.3% to 24.9%, reflecting the need to find new sources of income for the household to cover higher medical expenses and the loss of income of the PLHIV. It is also noteworthy that the unemployment rate among PLHIV and their household members was already markedly higher (18.2 and 16.3 percent, respectively) even before their illness was identified. This seems to reflect the lower WFPR of IDU individuals, even those who do not have HIV/AIDS. However the unemployment rate increases sharply for PLHIV after they contract the disease.

Table 5.14 Change in occupation distribution of persons aged 18+

(Percent)

Type of job	HIV HHs Past		HIV HHs Current		Non-HIV HHs Current
	PLHIV	Non-HIV	PLHIV	Non-HIV	Non-HIV
Agriculture	55.5	45.6	54.4	45.5	57.2
Migrant workers	24.0	19.3	17.9	24.9	29.7
Business	6.9	8.1	5.8	7.7	6.0
Other	2.9	7.6	2.5	6.9	3.1
Unemployed	18.2	16.3	26.0	17.0	9.0
Students	0.2	6.6	0.0	2.9	2.9

Figure 5.6 Change in occupation distribution of PLHIV aged 18+

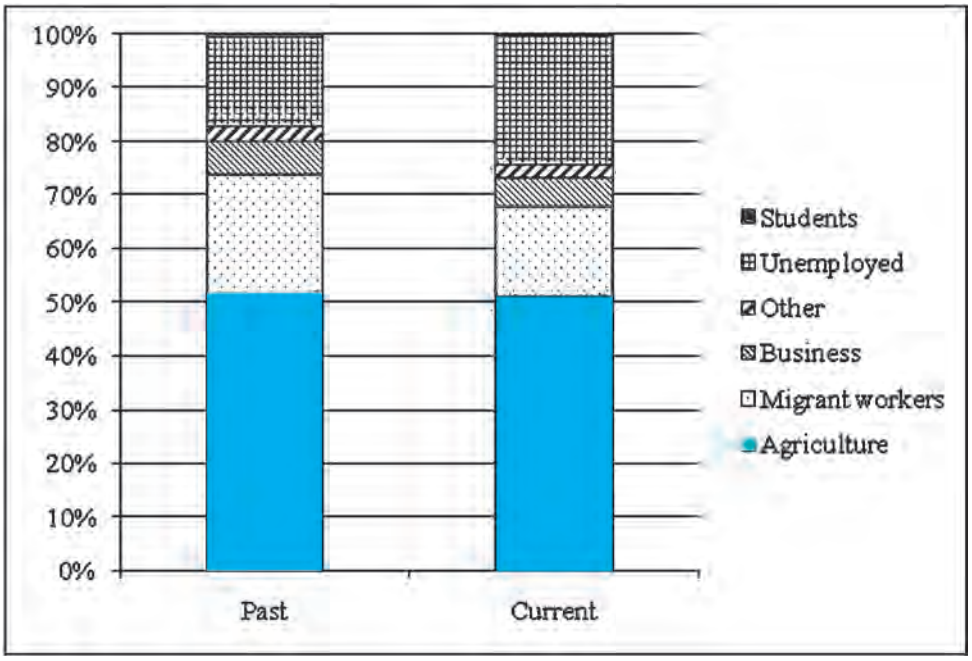
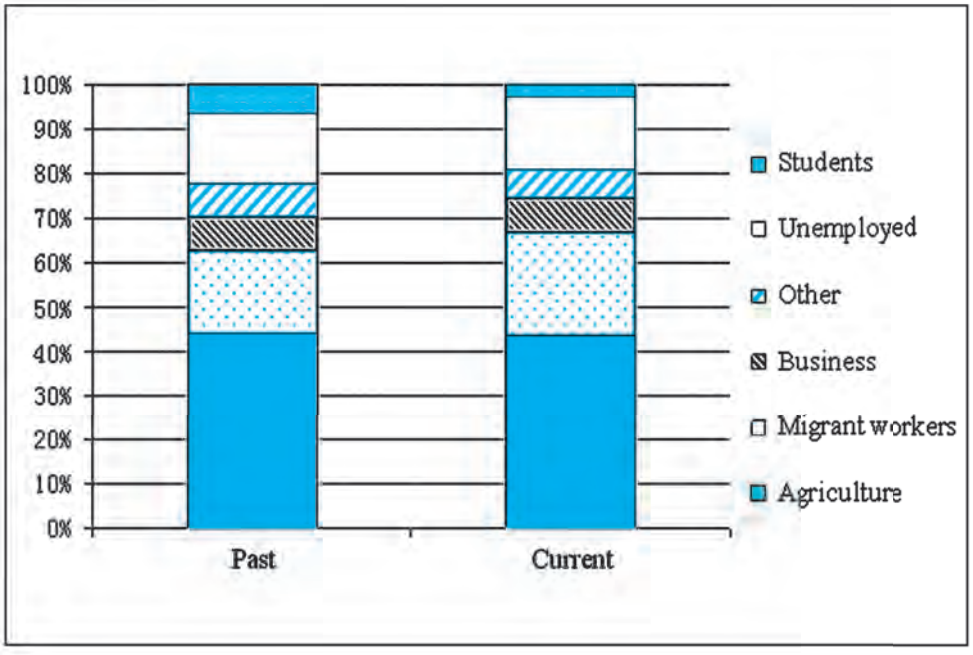


Figure 5.7 Change in occupation distribution of non-HIV in HIV households aged 18+



Case study 6：Before being detected positive, Mr. X was working as a carpenter and earning a good income. However, after he tested positive in 2003, people who knew about his HIV status stopped giving him work, hence he had to change his job. In 2005, he found another job in a factory. But when his boss came to know about his HIV status, he was fired from his job. He is still unemployed. This case is an example of stigma and discrimination faced by the PLHIV at the workplace.

(2) Change in income due to HIV/AIDS

As seen in Table 5.14, after being tested positive, work opportunities for PLHIV fall, and the types of employment that they engage in also changes. This change in employment generally leads to loss of income (Table 5.15). The average annual personal income of PLHIV has decreased from 5,057 Yuan, before they found that they had contracted the disease to 3,891 Yuan. At the same time, the personal income of non-HIV members in the HIV households has also decreased, from 5,391 to 4,730 Yuan, due to their increased responsibility for caring for the PLHIV in their family. The personal income gap between HIV households and non-HIV households has increased.

Findings by province are presented in Table 5.16. The personal income of the PLHIV declined significantly in all provinces. Personal income of other family members in HIV households also decreased significantly in Guangxi and Sichuan, while the personal income of other family members in HIV households increased in Yunnan, Hubei and Shanxi. One factor in this pattern is that urban HIV households, such as those in Guangxi and Sichuan, usually have migrant workers in their families, which tends to be an unstable source of income. When a household member becomes ill others are forced to spend more time at home looking after them, reducing their ability to go out for work. However rural HIV households, such as those in Yunnan, Shanxi and Hubei, are primarily earning their income from agricultural work, which is easier to continue or increase even while caring for ill household members.

Table 5.15 Change in annual personal income of PLHIV and other household members

(Yuan per person)

Households	Household members	Past	Current	T	P
HIV	PLHIV	5,057	3,891	18.798	0.000
	Non-HIV	5,391	4,730	4.171	0.000

Figure 5.8 Change in annual personal income of PLHIV and other household members

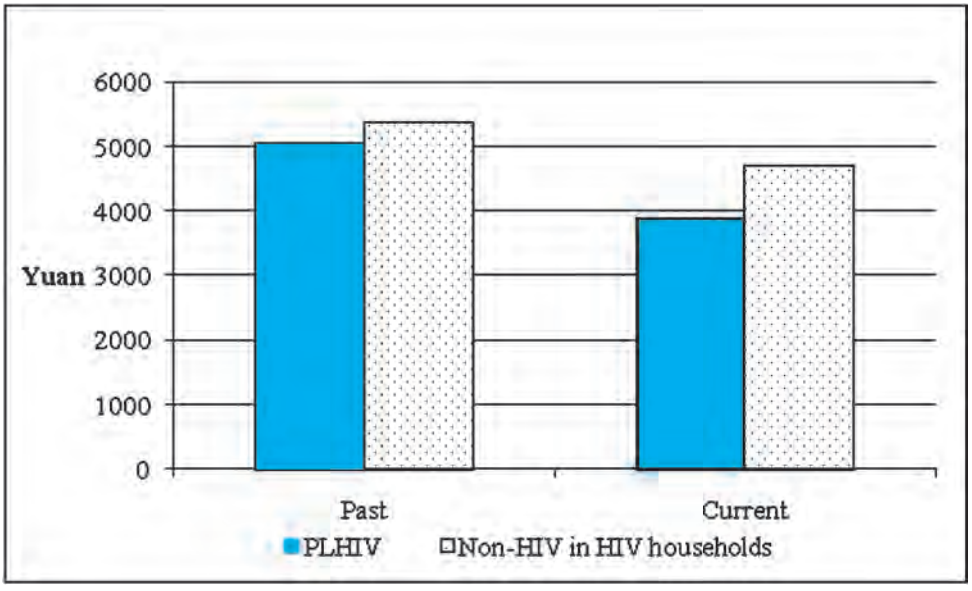


Table 5.16 Change in annual personal income of PLHIV and other household members by province

(Yuan per person)

Households		Household members	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Past	PLHIV	3,542	8,441	10,454	3,891	4,019	5,057
		Non-HIV	3,069	8,576	8,541	4,230	3,632	5,391
	Current	PLHIV	3,379	5,500	4,924	2,589	3,330	3,891
		Non-HIV	3,791	5,665	7,643	4,892	4,316	4,730

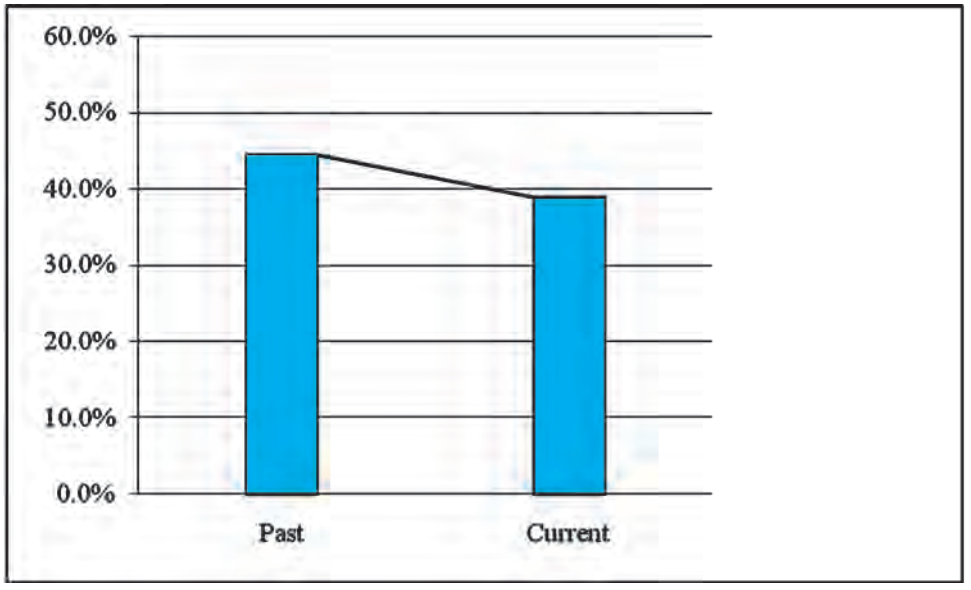
Changes in the contribution of PLHIV to household income are presented in Table 5.17. Before being detected positive, PLHIV contributed on average 44.4 percent of their household's income, while after being detected positive their contribution declined to 38.9 percent. Most of the PLHIV are in their most productive years, however, their ability to work has dropped and income has been lost due to HIV/AIDS, creating a large economic loss for their families.

Table 5.17 Contribution to household income

(Percent)

Household members	Time	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	Past	52.5	37.4	39.2	52.7	62.8	44.4
	Current	40.0	39.9	25.5	33.5	43.6	38.9
Non-HIV in HIV HHs	Past	47.5	62.6	60.8	47.3	37.2	55.6
	Current	60.0	60.1	74.5	66.5	56.4	61.1

Figure 5.9 Contribution of PLHIV to household income



5.6 Multivariate regression analysis of personal income of PLHIV

In order to find out the main factors which affect the personal income of PLHIV, we have chosen the annual income of respondents from both HIV and non-HIV households as the dependent variable, and taken the age, sex, education yeas, types of work and health condition as independent variable. For PLHIV, health condition was measured by CD4 level, and for non-HIV, health condition was measured by whether they have been in hospital in the preceding year. The linear model was presented as followed:

$$Y = \beta_0 + \sum_{i=1}^{8} \beta_i X_i$$

In the model, Y stands for personal income, " β_i " is the regression coefficient, X_1 stands for age, X_2 stands for gender, X_3 stands for education years, $X_{4\text{-}7}$ stands for type of work and X_8 stands for health condition.

By multivariate stepwise regressing, we got these equations.

For PLHIV:

$$Y=-1617.014+1005.140X_2+160.558X_3+2887.122X_4+7356.617X_5+9352.679X_6 +11065.609X_7$$

For Non-HIV:

$$Y=-2068.718+16.207X_1+2046.787X_2+350.831X_3+2483.380X_4+5946.916X_5 +5803.968X_6+8112.514X_7$$

The results of regression analysis are presented in Table 5.18 ($F=421.892$, $P<0.05$ and $F=304.871$, $P<0.05$), the results show that the regression models have significance. The multiple correlation coefficients (R) of the two models are 0.531 and 0.449 separately, indicating that dependent variable was moderately correlated with independent variable. The R Square is 0.282 and 0.201, indicating the fitting effect is not very good. Furthermore, the t test of partial regression coefficient of different independent variables is presented in Table 5.19 and Table 5.20, all the P is less than the confidence level (here α is 0.05). The expansion factor VIF of every independent variable is less than 10, which indicated that there are no significant relations among the independent variables.

The standardized regression coefficients show that, for both PLHIV and Non-HIV, the most important factor which affects the personal income is the type of work they did, second is their years of education, and third is their gender.

The unstandardized regression coefficients show that, for both PLHIV and non-HIV, the marginal income is much higher for the respondents who are doing off-farm work, business and other jobs. The personal income has positive correlation with education years. For every on year of additional education, the personal income of PLHIV would increase 160 Yuan, and the personal income of non-HIV interviewed would increase 351 Yuan.

There are some differences of the impact of gender on income between HIV and non-HIV individuals. Income of a male PLHIV is 1,005 Yuan more than that of a female PLHIV, ceteris paribus, while the income of non-HIV men is 2,047 Yuan higher than non-HIV women's.

This analysis indicates that the impact of HIV/AIDS on personal income of PLHIV can be seen most obviously in two aspects: First, the positive correlation of education years to income has sharply decreased. PLHIV are less able to translate their skills into income, due to loss of employment opportunities or capacity. Secondly, the income advantage of men over women has decreased. This situation reflects the fact that in general men have greater access to higher paying work than women, but that that advantage is less important for PLHIV, whose access to such work is impeded for all, men and women alike.

Table 5.18 Fitting effect of regression model

Respondent	F	P	R	R Square	Adjusted R Square
PLHIV	421.892	0.000	0.531	0.282	0.282
Non-HIV	304.871	0.000	0.449	0.201	0.201

Table 5.19 Coefficients of regression model about personal income of PLHIV

Variable	B	S.E.	Beta	T	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound	Tolerance	VIF
Constant	-1617.014	188.887		-8.561	0.000	-1987.295	-1246.733		
X_2-Gender	1005.140	118.719	0.091	8.467	0.000	772.411	1237.870	0.968	1.033
X_3-Education years	160.558	17.758	0.102	9.041	0.000	125.746	195.369	0.868	1.152
X_4-Agriculture	2887.122	138.416	0.270	20.858	0.000	2615.780	3158.464	0.665	1.503
X_5-Off-farm work	7356.617	201.898	0.430	36.437	0.000	6960.829	7752.405	0.799	1.251
X_6-Business	9352.679	282.822	0.373	33.069	0.000	8798.253	9907.105	0.876	1.142
X_7-Other jobs	11065.609	436.920	0.275	25.326	0.000	10209.101	11922.116	0.944	1.059

Notes: Gender: 0-Female, 1-Male;
The unit of education years is “year”.
Agriculture, off-farm work, business and other jobs are dummy variables, 0-do not do this type of job, 1-do this type of job, refer to unemployed;
The factors of age and health condition were not included in the model.

Table 5.20 Coefficients of regression model about personal income of non-PLHIV

Variable	B	S.E.	Beta	T	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound	Tolerance	VIF
Constant	-2068.718	393.360		-5.259	0.000	-2839.800	-1297.636		
X_1-Age	16.207	6.368	0.025	2.545	0.011	3.725	28.689	0.964	1.037
X_2-Gender	2046.787	121.665	0.168	16.823	0.000	1808.294	2285.280	0.947	1.056
X_3-Education years	350.831	19.531	0.185	17.962	0.000	312.545	389.117	0.890	1.124
X_4-Agriculture	2483.380	278.704	0.184	8.910	0.000	1937.053	3029.707	0.221	4.535
X_5-Off-farm work	5946.916	316.567	0.335	18.786	0.000	5326.368	6567.464	0.297	3.368
X_6-Business	5803.968	359.962	0.228	16.124	0.000	5098.354	6509.581	0.470	2.126
X_7-Other jobs	8112.514	406.281	0.261	19.968	0.000	7316.105	8908.923	0.552	1.812

Notes : The unit of age is “years old”;
Gender : 0-Female, 1-Male;
The unit of education years is “year”.
Agriculture, off-farm work, business and other jobs are dummy variables, 0-do not do this type of job, 1-do this type of job, refer to unemployed;
The factor of health condition was not included in the model.

In order to find out the impact of discrimination on the personal income of PLHIV, we have done further regression analysis of data from those PLHIV who have disclosed their HIV status in the community. At the same time, we have added an independent variable “whether or not have been discriminated against” into the model. This modified model is presented as follows:

$$Y=200.338-59.986X_1+1464.925X_2+144.898\ X_3+2854.392\ X_4+9381.798X_5+14372.853\ X_6 +11740.588\ X_7+0.775\ X_8-676.198X_9$$

The results of variance analysis of the model is F=345.659, P<0.05, the results show that the regression model has significance. The multiple correlation coefficients (R) of the model is 0.702 and R Square is 0.493, indicating the fitting effect of the model is acceptable. As it is presented in Table 5.21, all the P of the t test of partial regression coefficient of different independent variables is less than the confidence level (here α is 0.05). All the VIFs are less than 10, indicating that there is little multicollinearity among the independent variables.

The model shows that the discrimination plays a negative role in personal income. The personal income of PLHIV decreases 676 Yuan if the PLHIV reports discrimination. It is highly noteworthy that in the aspect of standardized regression coefficients (α=-0.048), discrimination has more

impact on income than the factor of health condition. This reflects the fact that most of the PLHIV surveyed are still in good health and able to work productively if they are allowed the opportunity to do so; discrimination prevents many, however.

Table 5.21 Coefficients of regression model about personal income of PLHIV

Variable	B	S.E.	Beta	t	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound	Tolerance	VIF
Constant	200.338	417.333		0.480	0.631	-617.929	1018.604		
X_1-Age	-59.986	8.606	-0.098	-6.970	0.000	-76.860	-43.112	0.805	1.242
X_2-Sex	1464.925	161.757	0.120	9.056	0.000	1147.767	1782.083	0.909	1.101
X_3-Education years	144.898	24.962	0.081	5.805	0.000	95.956	193.840	0.814	1.229
X_4-Agriculture	2854.392	178.249	0.240	16.014	0.000	2504.899	3203.885	0.705	1.418
X_5-Off-farm work	9381.798	259.374	0.494	36.171	0.000	8873.243	9890.353	0.849	1.177
X_6-Business	14372.853	357.672	0.528	40.184	0.000	13671.564	15074.142	0.917	1.090
X_7-Other jobs	11740.588	451.258	0.362	26.017	0.000	10855.803	12625.372	0.820	1.220
X_8-Health condition	0.775	0.386	0.026	2.010	0.044	0.019	1.531	0.971	1.030
X_9-Whether has discrimination or not	-676.198	179.352	-0.048	-3.770	0.000	-1027.854	-324.541	0.967	1.034

Notes: The unit of health condition is "count/μl";
Discrimination dummy; 1-Yes, have encountered discrimination; 0-No.

5.7 Observations

In this chapter we have found that the annual household income and per capita income of HIV households are significantly lower than those of non-HIV households. Most of the HIV households interviewed belong to our lowest income category due to the loss of income caused by HIV/AIDS. The main source of income for HIV households is cultivation, animal breeding, labor migration and business. However, HIV households have more income from outside support than non-HIV households.

The occupation of PLHIV is frequently affected by HIV/AIDS. Comparing with their status before being detected positive, the proportion of unemployed PLHIV increases significantly and the proportion of PLHIV who are engaged in labor migration decreases significantly. The personal income of PLHIV decreases, while the income difference between PLHIV and non-HIV increases. The elderly and children in HIV households have to assume a greater burden to compensate for the

loss of household income. The Work Force Participation Rate (WFPR) of children (0-14 years old) is higher than that of the children in non-HIV households. The WFPR of the elderly (above 60 years old) is also significantly higher in HIV households as compared to non-HIV households.

Type of job, years of education and gender are the main factors which affect the personal income of PLHIV. Compared with non-HIV individuals the positive impact of education and gender on income is sharply lower for PLHIV. Furthermore, the impact of discrimination on personal income of PLHIV is much more serious than the impact of health condition, suggesting that stigma and discrimination are preventing large numbers of PLHIV from performing productive work that their illness would otherwise allow them to engage in.

At present, most of the PLHIV live in rural areas in China, and lack adequate skills to make up for the loss of income caused by their drop in work capacity. A rich family may be forced to become poor due to HIV/AIDS, and a poor family will likely become much poorer. Poor households are more vulnerable and lack adequate coping mechanisms when facing HIV/AIDS. As a result, it is necessary to help these families to increase income and reduce economic stress when conducting care and support activities. With the scaling up of free provision of ARV, most PLHIV who need treatment have timely access to ARV treatment. As a result, the health condition of PLHIV has improved and their work capacity has been significantly improved. However as this report has found, income earning opportunities for PLHIV, many of whom are eager to support their households, are often lacking. Hence, the government and other organizations have already realized that in many cases income generation activities could improve the household standard of living more efficiently than direct income support, in addition to boosting PLHIV self-confidence and self-esteem. Further public education campaigns to eliminate employment discrimination against PLHIV are also needed. These issues will be discussed in greater detail in Chapters 4 and 7 of this report.

Chapter 6 Impact of HIV/AIDS on Household Consumption

HIV/AIDS leads to a loss of household income and a worsening of poverty. At the same time it also causes an increase of expenditures on health care. Both the decline in income and the higher demand for medical treatment, along with other problems encountered by PLHIV, lead to shifts in the composition of household expenditures. This chapter analyzes the impact of HIV/AIDS on household expenditures, focusing on level of expenditures, structure of expenditures and the expenditure characteristics of HIV and non-HIV households of different income levels.

6.1 Household consumption

Annual household consumption for HIV households in our survey is 20,949 Yuan and 23,045 Yuan for non-HIV households. Per capita consumption is 5,788 Yuan for HIV households and 5,571 Yuan for non-HIV households (Table 6.1). In Yunnan, Hubei and Shanxi, the household consumption level of HIV households is lower than in non-HIV households both in terms of annual household consumption and on a per capita basis. However, household consumption and per capita consumption of HIV households are higher than for non-HIV households in Guangxi and Sichuan due to much larger medical expenditures of HIV households (Table 6.2 and Table 6.3).

Table 6.1 Household consumption level

(Yuan)

Consumption level	Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Annual household consumption	HIV	19,239	24,492	21,270	18,119	17,582	20,949
	Non-HIV	23,842	22,701	18,382	23,407	23,098	23,045
	T	6.073	-3.419	2.675	5.115	5.099	5.026
	P	0.000	0.001	0.003	0.000	0.000	0.000
Per capita consumption	HIV	4,785	7,187	7,687	5,080	4,517	5,788
	Non-HIV	5,502	5,576	5,675	6,009	5,423	5,571
	T	5.045	-8.025	5.202	2.991	3.001	-2.101
	P	0.000	0.000	0.000	0.003	0.003	0.036

Figure 6.1 Household consumption level

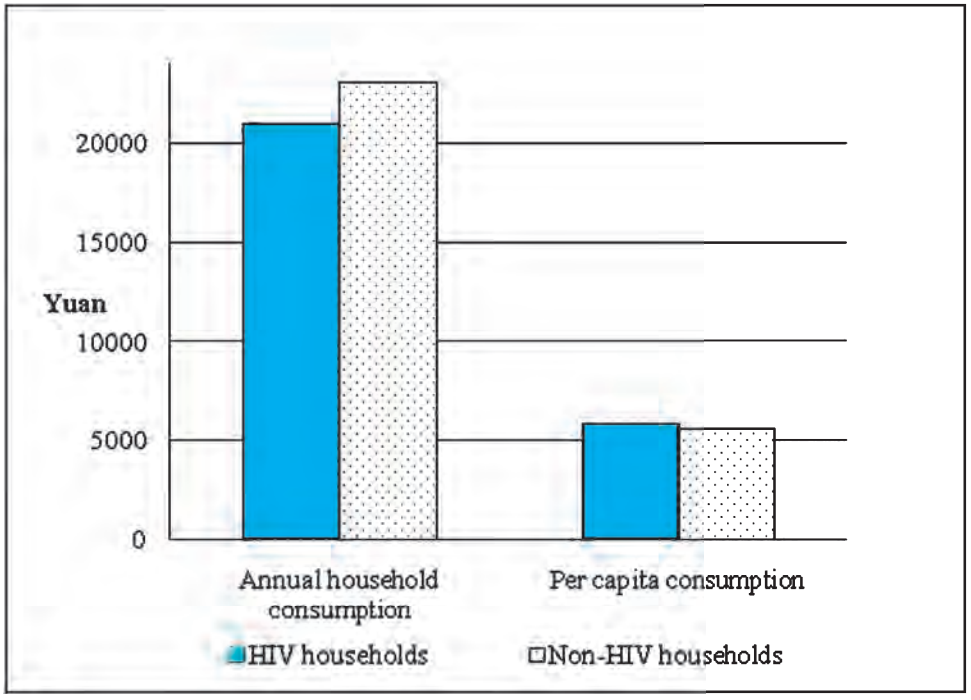


Table 6.2 and Table 6.3 present the pattern of expenditure for HIV and non-HIV households. There are significant differences between the two groups. The expenditures of HIV households are almost entirely focused on basic needs; 62.4 percent of total expenditures are used on food, clothing and medical expenditures. Non-HIV households spend only 51.6 percent of their consumption on these items. On the other hand, non-HIV households spend 22.4 percent of their total expenditures on durable items and education, whereas HIV households only spend 13.6 percent on these types of expenditures, which can produce long-term improvements in quality of life.

Not surprisingly, the medical expenses of the HIV households are much higher than that of the non-HIV households. The average amount of annual medical expenditure is 3,652 Yuan (1,278 Yuan on expenditures related to HIV/AIDS, mostly is the expenditure for testing and treating side-effect related to ARV and opportunistic infections treatment) in HIV households (Table 6.2), which is about twice higher than non-HIV households (1,817 Yuan). In fact, non-HIV/AIDS related medical expenditures of HIV households are higher than total medical spending in non-HIV households, reflecting a broader deterioration in health due to psychological stress and overall weakness.

HIV households spent 17.4 percent of their total expenditures on medical expenses, much higher than the 7.9 percent share for non-HIV households. The huge medical expenditures of HIV

households may be due to two reasons: first, since PLHIV are likely to suffer from opportunistic infections, even with some amount of free/subsidized medical treatment, the HIV households may have to incur other huge expenditures during the treatment, such as traffic, food, etc. Secondly, the expenditures on OI treatment are often very large, especially when the PLHIV requires hospitalization. However, medical support schemes only reimburse a very small share of total medical expenditure, and most of the medical expenditures have to been paid by the PLHIV and their families themselves.

HIV households devote a slightly larger share of their spending on food than non-HIV (41.3 percent vs. 39.7 percent). HIV households spend 21.0 percent of their total food expenditures on cereals, their staple food, a bit more than the 18.9 percent that non-HIV households spend on cereals. However, the expenditures of HIV households on foods with greater nutritional value, such as meat or eggs are slightly less (HIV household 25.8% and non-HIV household 27.1%). Comments made during focus group discussions indicated that there were very large and broad increases in food prices in early 2008, which means the food expenditures would increase due to the small price elasticity of demand for basic foods. Many of the PLHIV interviewed reported that they had not eaten meat for a long time, and they could only ensure the basic feeding needs. The inflation that affected all Chinese households affected HIV households much more harshly than most.

There is also a significant difference between HIV and non-HIV households in their durable expenditures. Non-HIV households devoted 15.0 percent of their expenditures on such items, whereas HIV households spent only 9.4 percent on them.

HIV households spent 4.2 percent of their total expenditures on education; this percentage is significantly higher at 7.4 for non-HIV households. The average amount of education expenditure of HIV households is 885 Yuan, while the amount of non-HIV households is nearly double at 1,708 Yuan. The decrease of education expenditures may lead to drop in quality of education, and even lead to higher drop-out rates for children in the household.

Interestingly, there is only a small difference in ceremonial expenditures between HIV households and non-HIV households (1,972 Yuan and 2,051 Yuan), despite the lower total income of HIV families. This may be due to the social customs in China and according with the traditional habit of Chinese people that they like “face”. It is found in the survey that HIV households need to hold

ceremonies even when they are experiencing difficult economic conditions and can ill afford such spending.

The per capita spending patterns of HIV and non-HIV households are presented in Table 6.4 and Table 6.5. The results are almost the same as the overall household spending patterns.

Table 6.2 Amount and structure of annual household expenditures

Consumption pattern	HIV Households		Non-HIV Households	
	Household expenditures (Yuan)	Expenditure structure (%)	Household expenditures (Yuan)	Expenditure structure (%)
Food	8,659	41.3	9,151	39.7
Clothes	766	3.7	917	4.0
Normal health care	2,374	11.3	1,817	7.9
Heath care related to HIV/AIDS	1,278	6.1	0	0.0
Fuels and light	693	3.3	755	3.3
Durables	1,976	9.4	3,450	15.0
Education	885	4.2	1,708	7.4
Ceremonies	1,972	9.4	2,051	8.9
Others	2,347	11.3	3,196	13.8
Total	20,949	100.0	23,045	100.0

Table 6.3 Annual household food expenditures and structure of food consumption

Food consumption pattern	HIV Households		Non-HIV Households	
	Household expenditure (Yuan)	Consumption pattern (%)	Household expenditure (Yuan)	Consumption pattern (%)
Cereals	1,819	21.0	1,725	18.9
Meat and eggs	2,236	25.8	2,478	27.1
Other food	4,604	53.2	4,948	54.0
Total food	8,659	100.0	9,151	100.0

Figure 6.2 Structure of household expenditures

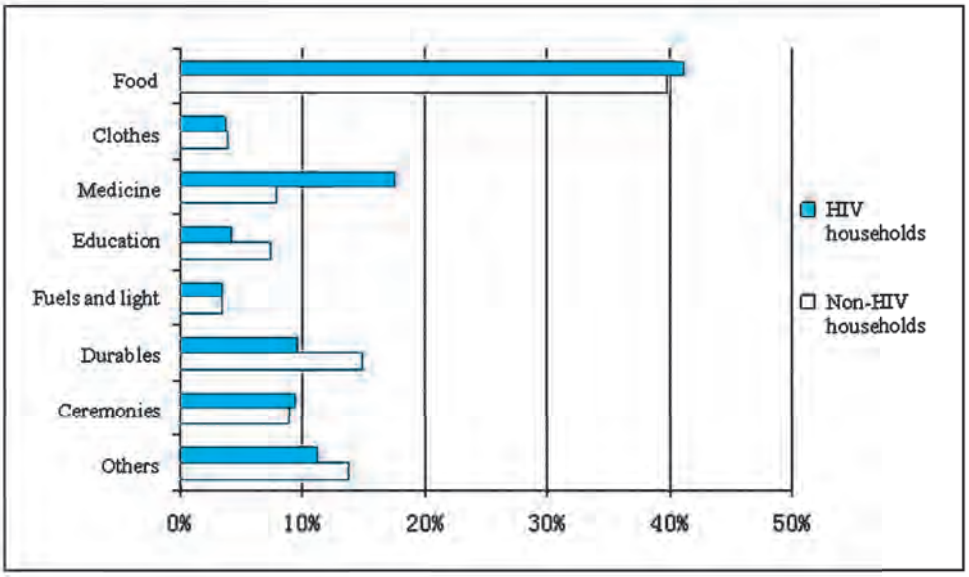


Figure 6.3 Structure of food consumption

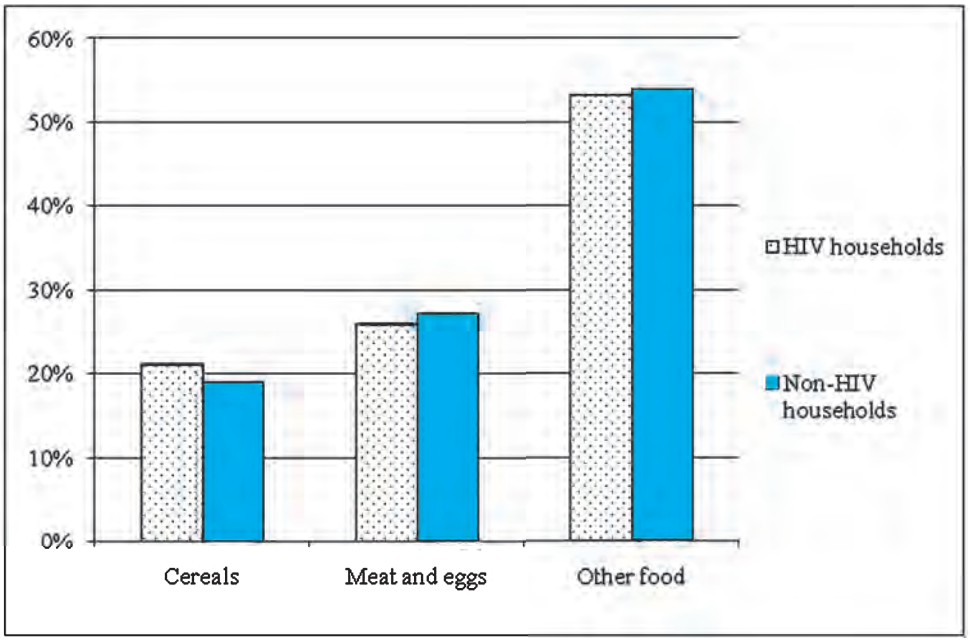


Table 6.4 Annual per capita expenditures and structure

Consumption pattern	HIV Households		Non-HIV Households	
	Per capita Expenditure (Yuan)	Consumption structure (%)	Per capita Expenditure (Yuan)	Expenditure structure (%)
Food	2,396	41.4	2,254	40.5
Clothes	207	3.6	223	4.0
Normal health care	667	11.5	434	7.8
Heath care related to HIV/AIDS	438	7.6	0	0.0
Fuels and light	190	3.3	173	3.1
Durables	492	8.5	801	14.4
Education	211	3.6	398	7.1
Ceremonies	479	8.3	493	8.9
Others	708	12.2	795	14.2
Total	5,788	100.0	5,571	100.0

Table 6.5 Per capita food expenditures and consumption pattern

Food consumption pattern	HIV Households		Non-HIV Households	
	Per capita expenditure (Yuan)	Consumption pattern (%)	Per capita expenditure (Yuan)	Consumption pattern (%)
Cereals	476	19.8	417	18.5
Meat and eggs	632	26.3	606	26.9
Other food	1,288	53.9	1,231	54.6
Total food	2,396	100.0	2,254	100.0

Figure 6.4 Per capita consumption patterns

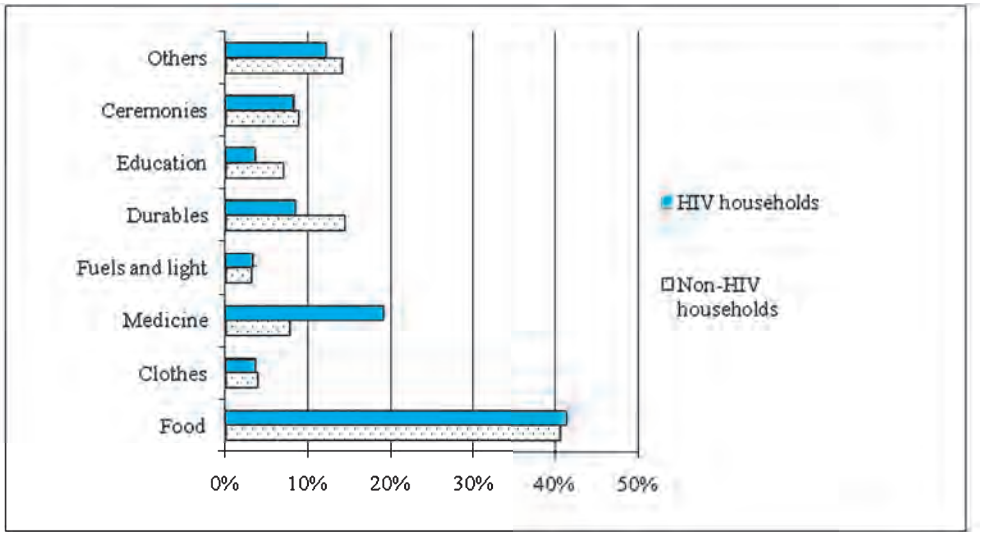
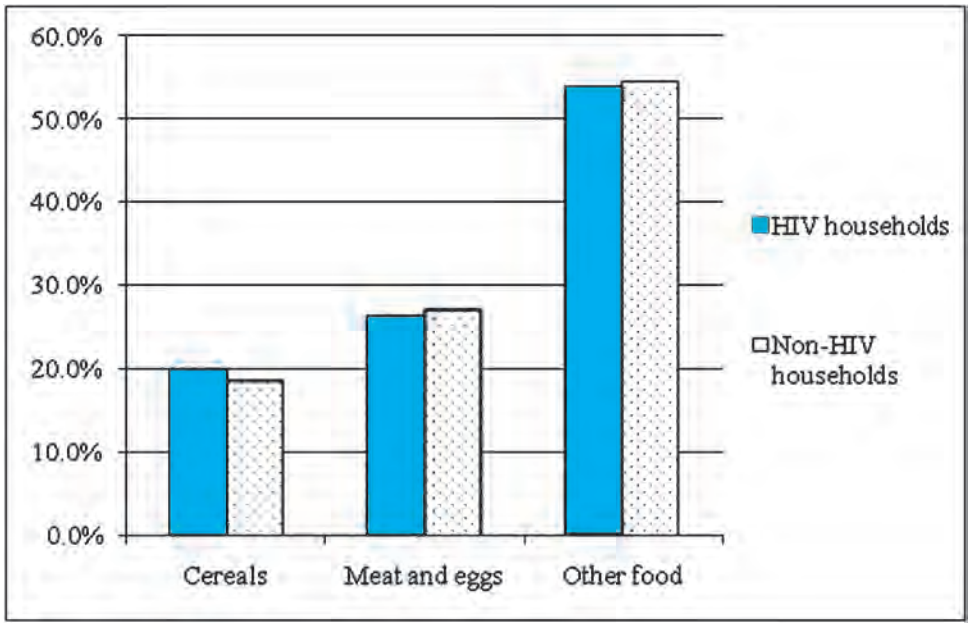


Figure 6.5 Per capita food consumption patterns



6.2 Analysis of household consumption demand

In order to analyze the demand for consumption of different goods and services, consumption models of both HIV and non-HIV households were established based on a linear expenditure system (LES). The simple model of LES is:

$$V_i = \alpha_i + \beta_i \times V + \varepsilon_i, \quad i = 1, 2 \cdots 8.$$

$$V = \sum_{i=1}^{8} V_i$$

"V_i" means the expenditure of consumable "i"; "α_i" is a constant; "β_i" is the consumption demand coefficient of consumable "i"; "V" is total expenditures; "ε_i" is the Error. "V_1、 V_2 ,….V_8" in the model means food expenditures, clothing expenditures, health care expenditures, fuel and light expenditures, durable expenditures, education expenditures, ceremonies and other expenditures (including inputs for economic activities and others).

The Variance Analysis of the regression model is presented in Table 6.6. The P of all the models is less than 0.05, indicating the model is significant. The R Square of most of the models is from 0.1 to 0.5, indicating the fitting effect of the model is commonly. Furthermore, the t tests of partial regression coefficients of different independent variables are presented in Table 6.7 and Table 6.8.

All the P values are less than the confidence level (here α is 0.05).

By comparing the consumption demand coefficients of HIV households with non-HIV households, it can be found that there are some differences, mostly in five aspects of expenditure-- health care, food, education, ceremony and others (including inputs for economic activities and others). For every increase of 1,000 Yuan in total expenditures of HIV households, the medical expenditures increase 167 Yuan, the food expenditures increase 176 Yuan, and the ceremonies increase 132 Yuan, which are 3.7 times, 1.96 times and 4.1 times more than the increase of non-HIV households separately. While the education expenditures only increase 27 Yuan, other expenditures, as defined above, increase 171 Yuan, which are one thirds and two thirds less than the increase of non-HIV households. The result indicates that the consumption demand of HIV households mostly focuses on medical care, food and ceremony, while demand for education and inputs into economic activities has declined.

Table 6.6 Fitting effect of regression model

Household	Model	F	P	R	R Square	Adjusted R Square
HIV	Food expenditure	4232.657	0.000	0.566	0.320	0.320
	Clothing expenditure	2637.311	0.000	0.477	0.227	0.227
	Health care expenditure	2021.687	0.000	0.429	0.184	0.184
	Fuel and light expenditure	574.692	0.000	0.245	0.060	0.060
	Durable expenditure	4338.365	0.000	0.571	0.326	0.326
	Education expenditure	365.146	0.000	0.198	0.039	0.039
	Ceremonies	2329.418	0.000	0.454	0.206	0.206
	Other expenditure	3413.648	0.000	0.525	0.276	0.275
Non-HIV	Food expenditure	3470.120	0.000	0.530	0.281	0.281
	Clothing expenditure	4626.643	0.000	0.586	0.343	0.343
	Health care expenditure	1347.861	0.000	0.363	0.132	0.132
	Fuel and light expenditure	87.381	0.000	0.099	0.010	0.010
	Durable expenditure	3597.160	0.000	0.537	0.289	0.289
	Education expenditure	1132.302	0.000	0.337	0.113	0.113
	Ceremonies	795.229	0.000	0.287	0.082	0.082
	Other expenditure	16582.664	0.000	0.807	0.652	0.652

Table 6.7 Coefficients of regression model about consumption demand of HIV households

Model	Variable	B	S.E.	Beta	T	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound
Food expenditure	Constant	4961.755	73.393		67.606	0.000	4817.889	5105.622
	Total expenditure	0.176	0.003	0.566	65.059	0.000	0.171	0.182
Clothes expenditure	Constant	170.042	15.008		11.330	0.000	140.623	199.462
	Total expenditure	0.028	0.001	0.477	51.355	0.000	0.027	0.030
Health care expenditure	Constant	150.354	100.837		1.491	0.136	-47.310	348.018
	Total expenditure	0.167	0.004	0.429	44.963	0.000	0.160	0.175
Fuel and light expenditure	Constant	480.201	11.629		41.294	0.000	457.405	502.996
	Total expenditure	0.010	0.000	0.245	23.973	0.000	0.009	0.011
Durable expenditure	Constant	-4111.596	118.535		-34.687	0.000	-4343.952	-3879.241
	Total expenditure	0.288	0.004	0.571	65.866	0.000	0.280	0.297
Education expenditure	Constant	334.407	37.793		8.848	0.000	260.324	408.489
	Total expenditure	0.027	0.001	0.198	19.109	0.000	0.024	0.029
Ceremonies	Constant	-767.057	73.982		-10.368	0.000	-912.079	-622.034
	Total expenditure	0.132	0.003	0.454	48.264	0.000	0.126	0.137
Other expenditure	Constant	-1218.106	79.288		-15.363	0.000	-1373.528	-1062.684
	Total expenditure	0.171	0.003	0.525	58.426	0.000	0.165	0.177

Table 6.8 Coefficients of regression model about consumption demand of non-HIV households

Model	Variable	B	S.E.	Beta	T	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound
Food expenditure	Constant	7090.157	64.839		109.350	0.000	6963.056	7217.257
	Total expenditure	0.090	0.002	0.530	58.908	0.000	0.087	0.093
Clothes expenditure	Constant	435.703	12.962		33.615	0.000	410.296	461.111
	Total expenditure	0.021	0.000	0.586	68.019	0.000	0.020	0.021
Health care expenditure	Constant	789.842	51.682		15.283	0.000	688.533	891.152
	Total expenditure	0.045	0.001	0.363	36.713	0.000	0.042	0.047
Fuel and light expenditure	Constant	701.648	10.772		65.134	0.000	680.532	722.764
	Total expenditure	0.002	0.000	0.099	9.348	0.000	0.002	0.003
Durable expenditure	Constant	-2474.682	181.967		-13.600	0.000	-2831.379	-2117.985
	Total expenditure	0.257	0.004	0.537	59.976	0.000	0.249	0.266
Education expenditure	Constant	774.071	50.372		15.367	0.000	675.330	872.811
	Total expenditure	0.040	0.001	0.337	33.650	0.000	0.038	0.042
Ceremonies	Constant	1324.434	47.649		27.796	0.000	1231.031	1417.837
	Total expenditure	0.032	0.001	0.287	28.200	0.000	0.029	0.034
Other expenditure	Constant	-8641.173	168.864		-51.172	0.000	-8972.186	-8310.161
	Total expenditure	0.513	0.004	0.807	128.774	0.000	0.505	0.521

6.3 Household expenditures by income level

Household income is a key determinant of the amount and structure of household consumption. For our analysis the household income level is divided into three categories: household annual income less than 10,000 Yuan; household income more than 10,000 Yuan and less than 30,000 Yuan; household income more than 30,000 Yuan. Household consumption by income level is presented in Table 6.9 and Table 6.10. Generally speaking, the expenditures of both HIV household and non-HIV household go up with the rise of household income. However, the HIV households spend more on health care and less on education than non-HIV households in the same income category.

For non-HIV households, the percentage of expenditure for food goes down with the rise of household income (from 44.3 percent to 34.0 percent), and the percentage of expenditure on durables and education go up with the rise (from 20.9% to 31.8%), reflecting a broad improvement in lifestyle for non-HIV households as their income increases. However, the pattern is different for HIV households. The share of expenditure on food is about 41 percent for HIV households in all three income categories, suggesting that increases in income do not create a qualitatively different and better lifestyle for HIV households.

Table 6.9 Household expenditure and consumption pattern of HIV household by income group

Consumption Pattern	Household expenditure (Yuan)			Consumption pattern (%)		
	<10,000	10,000-30,000	> 30,000	<10,000	10,000-30,000	> 30,000
Food	7,138	9,005	14,380	42.0	41.0	40.7
Clothing	579	753	1,675	3.4	3.4	4.7
Normal medicine	2,129	2,365	3,535	12.5	10.8	10.0
Medicine related to HIV/AIDS	972	1,521	1,786	5.7	6.9	5.1
Fuels and light	600	719	1,030	3.5	3.3	2.9
Durables	1,793	1,935	2,969	10.5	8.8	8.4
Education	711	1,065	1,016	4.2	4.8	2.9
Ceremonies	1,445	2,024	4,204	8.5	9.2	11.9
Others	1,644	2,566	4,770	9.7	11.8	13.4
Total	17,012	21,952	35,365	100.0	100.0	100.0

Table 6.10 Household expenditure and consumption pattern of non-HIV households by income group

Consumption Pattern	Household expenditure (Yuan)			Consumption pattern (%)		
	<10,000	10,000-30,000	> 30,000	<10,000	10,000-30,000	> 30,000
Food	7,647	9,114	12,373	44.3	40.3	34.0
Clothes	526	935	1,667	3.0	4.1	4.6
Normal medicine	1,740	1,737	2,228	10.1	7.7	6.1
Medicine related to HIV/AIDS	0	0	0	0.0	0.0	0.0
Fuels and light	662	803	800	3.8	3.6	2.2
Durables	2,119	2,374	9,580	12.3	10.5	26.4
Education	1,485	1,778	1,953	8.6	7.9	5.4
Ceremonies	1,325	2,049	3,557	7.7	9.1	9.8
Others	1,769	3,817	4,198	10.2	16.9	11.5
Total	17,273	22,605	36,356	100.0	100.0	100.0

6.4 Observations

The impact of HIV/AIDS on household consumption can be very severe. Compared to non-HIV households, the consumption pattern of HIV households has changed a lot—HIV households spend more on food and health care, and less on education and durables. It is noticed that the burden of medical expenditures on HIV households is significantly bigger than non-HIV households. Most of the PLHIV interviewed are still in good health condition, meaning that medical expenditures will increase more if and when their health situations turn worse, which will mean an even heavier shock for the household.

While the increase in medical expenditures for HIV households is predictable, the marked reduction in spending on education is less so and is highly disturbing. Unless actions are taken to correct this trend, the illnesses of one generation could severely impair the opportunity to develop of the next generations as well. This trend, due to economic factors and also (see Chapter 4) a result of the stigma and discrimination encountered by children of PLHIV, poses important policy challenges. As noted in Chapter 7, another problem faced by PLHIV who try to maintain expenditures on education and other important items is that some coping mechanisms for dealing with financial stress, such as borrowing from relatives and friends, are much more difficult for them to access because of their illness.

Chapter 7 Coping Mechanisms and Availability of Support System

Analysis in earlier chapters found that HIV/AIDS often leads to a large loss of income and a large increase in medical expenditures; a double blow to the economic wellbeing of HIV households. In some cases, HIV households are left unable to afford basic living expenses and essential medical expenditures. The survey examined the coping mechanisms adopted by the HIV households themselves in face of these difficulties. The first sections exclude government and other institutional support from their calculations. Then the chapter concludes by factoring in the current role being played by social insurance and other government welfare programs as well as support from other non-government sources such as international programmes in helping HIV households overcome their difficulties.

7.1 Coping mechanisms

The respondents were asked which coping mechanisms they would adopt when facing economic hardships. The results in Table 7.1 show that the major coping mechanisms are "borrowing from relatives and friends" and "savings". 60.7 percent of HIV households and 66.7 percent of non-HIV households reported that they choose to borrow from relatives and friends, and 25.5 percent of HIV households and 32.7 percent of non-HIV households use savings. A smaller number of households report raising funds through liquidation of assets and seeking new work for spouses. Interestingly, these latter coping mechanisms are used more frequently by HIV households than non-HIV, reflecting the greater financial pressure that they generally face.

China is a traditional country where human relationships are very important, and households usually depend on support from relatives and friends when they are in trouble. However, because HIV households' ability to repay loans is weakened by the steadily worsening impact of the illness on their economic situation, they often cannot repay on time. As a result many find that they can no longer borrow from others. This is an especially serious problem for PLHIV who have disclosed their HIV status, many of whom report that their relatives and friends were no longer willing to lend them money.

Table 7.1 Coping mechanisms

(Percent)

Coping mechanisms	HIV household	Non-HIV household
Borrowings from relatives and friends	60.7	66.7
Usury	2.0	4.3
Borrowing from small financial institutions	9.0	9.0
Savings	25.5	32.7
Medical insurance	14.5	14.0
Liquidation of assets	10.9	5.2
Spouse has to go out to work for money	9.1	5.9
Children have to go out to work for money	8.0	9.3
Have to do additional work	8.5	9.7

The coping mechanism adopted by households is analyzed according to their household income level in Table 7.2. Households in the highest income group are more likely to use savings (53.7 percent vs. 20.1 percent for low income households), while households belonging to the low income group are more likely to borrow from relatives and friends (67.7 percent vs. 37.2 percent for high income households). Poorer households lack the capacity to help themselves and in the absence of support from outside will encounter great hardship, and likely fall deeper into poverty. The survey found that 2.6 percent of poor households, and 1.9 percent of households in the middle income group, resort to borrowing from usurers to raise funds, a step which is very likely to quickly lead to even greater difficulties. No families in the high income group reported taking such a step.

There are some differences in the use of other coping mechanisms among households in different income levels. 22.4 percent of higher income households, because of their better economic conditions, borrow from small local financial institutions, while only 6.3 percent of lower income households do so. On the other hand, 36.9 percent of higher income households use medical insurance to pay for their health care costs, while for lower income households this percentage is much lower at 15%. Generally speaking, a family will only choose to liquidate assets/durables/livestock to raise funds when they have no other options; no savings and no access to loans. The proportion of higher income households who adopt asset liquidation is 5.3%, while the proportion for lower income households is 11.0 percent. Similarly, it is more common for lower income households to send their children out to do new work when facing economic problems. 7.7 percent of the lower income group reported having used this option, while only 3.5 percent of higher income households had done so.

Table 7.2 Coping mechanisms adopted by HIV households by household income

(Percent)

Coping mechanisms	<10,000	10,000-30,000	>30,000
Borrowings from relatives and friends	67.7	68.3	37.2
Usury	2.6	1.9	0.0
Borrowing from small financial institutions	6.3	11.7	22.4
Savings	20.1	32.9	53.7
Medical insurance	15.0	12.4	36.9
Liquidation of assets	11.0	13.7	5.3
Spouse has to go out to work for money	11.2	7.8	9.7
Children have to go out to work for money	7.7	11.1	3.5
Have to do additional work	8.3	11.1	5.6

7.2 Social insurance

With the implementation of the new rural cooperative medical system by the government, a majority of the respondents had medical insurance. However the participation rate among HIV households was much lower than for non-HIV, with 73.5 percent of HIV households taking part, and 88.2 percent of non-HIV households. At the same time, because at present Chinese life insurance programs do not extend coverage to those who die from HIV/AIDS almost no HIV households have life insurance that will protect their families. Furthermore, only 1.7 percent of the PLHIV interviewed have pensions, another component in China's social insurance programs (Table 7.3).

Medical insurance can help reduce the medical expenditure burden of HIV households. However, the current medical insurance system offers a low reimbursement rate, which can only help with minor daily expenses. PLHIV have to assume most of the costs of OI treatment themselves, even when their local governments have implemented policies to reduce or even make free certain OI related expenses.

As presented in Table 7.3, the great majority (around 80 percent or more) of HIV households interviewed in Yunnan, Hubei and Shanxi have medical insurance. However in Guangxi and Sichuan province, only 57.6 and 27.2 percent have medical insurance, primarily because the PLHIV interviewed in these two provinces mainly lived in cities and towns and are therefore not covered by the new rural cooperative medical system. Because of the very high unemployment rate among

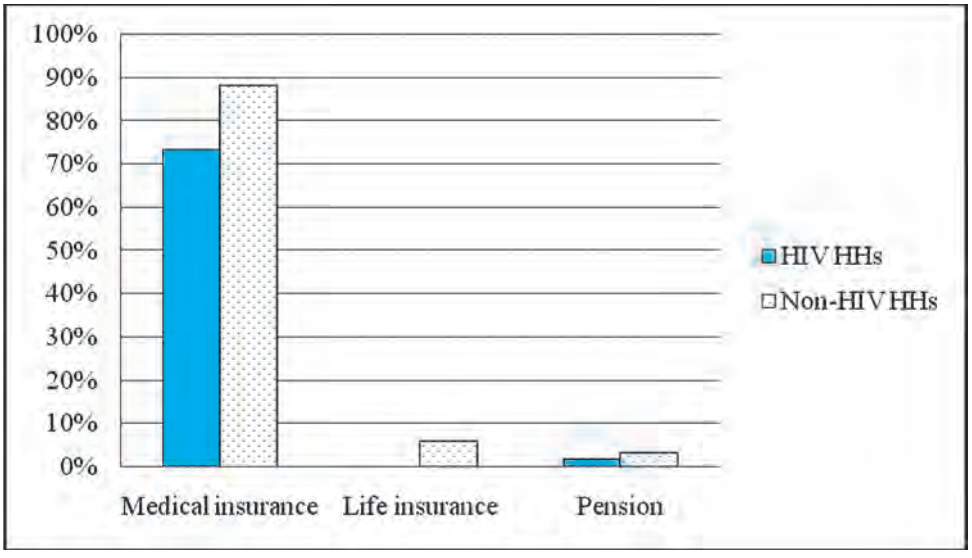
urban PLHIV (see chapter 3) they are also unable to participate in the urban basic medical insurance system, which is employment-based. At the same time, they were unable to buy medical insurance themselves. As a result, these people will encounter even more serious difficulties when facing large medical bills.

Table 7.3 Social insurance participation rates by province

(Percent)

Household	Social insurance	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Medical insurance	89.2	57.6	27.2	78.6	83.9	73.5
	Life insurance	0.0	1.1	0.3	0.6	3.5	0.6
	Pension	0.0	4.1	2.9	1.5	0.4	1.7
Non-HIV	Medical insurance	89.7	89.8	64.9	84.9	96.6	88.2
	Life insurance	5.2	4.5	7.3	8.3	18.8	6.0
	Pension	2.5	2.2	16.3	6.4	0.5	3.4

Figure 7.1 Participation in social insurance programs



The participation rates in these three social insurance programs for different household income levels are presented in Table 7.4. For non-HIV households, the percentage of households with insurance goes up with the rise in household income. When the annual household income increases from below 10,000 Yuan to above 30,000 Yuan, the proportion of non-HIV households with medical insurance has increased from 82.1% to 90%, the share with life insurance increases from 3.1 percent to 9.7 percent, and the share with pensions has increased from 1.3% to 9.2%. However, for HIV households, the proportion of households who have medical insurance and life insurance does not change when household income increases. Only the share with pensions does rise significantly.

The result indicates that because current medical and life insurance schemes offer little or no help to PLHIV, they do not increase their participation even with higher income, unlike non-HIV households.

Table 7.4 Social insurance participation rates by household income

(Percent)

Household	Type of social insurance	<10,000	10,000-30,000	>30,000	Total
HIV	Medical insurance	72.4	75.0	72.3	73.5
	Life insurance	0.6	0.8	0.2	0.6
	Pension	0.1	1.7	8.8	1.7
Non-HIV	Medical insurance	82.1	91.8	89.5	88.2
	Life insurance	3.1	6.7	9.7	6.0
	Pension	1.3	3.0	9.2	3.4

7.3 Medical support

HIV/AIDS can be a devastating and highly costly illness. As a result, the free supply of ARV and the introduction of favorable policies for OI treatment are very important when conducting prevention and care activities. The Chinese government gives high priority to the treatment of PLHIV, and has offered them free ARV and traditional Chinese medicine treatment since 2003. In this section we analyze link between CD4 level and access to ARV or traditional Chinese medicine treatment.

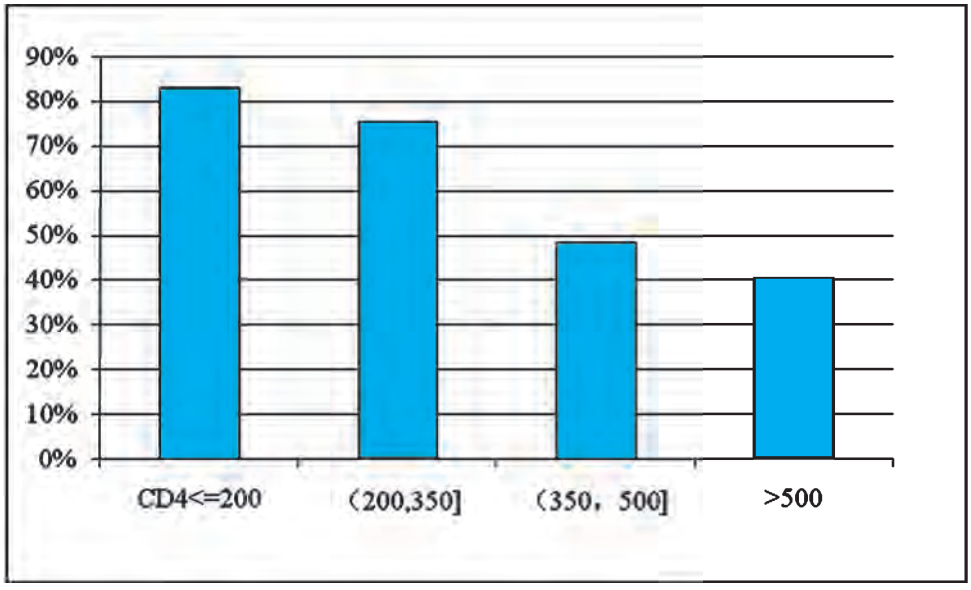
63.4 percent of the PLHIV interviewed have received free ARV or traditional Chinese Medicine treatment (Table 7.5). The proportion of PLHIV who have received free ARV or traditional Chinese Medicine treatment goes up with the drop in the CD4 count. 83% of PLHIV having CD4 count below 200 have received free ARV or traditional Chinese Medicine treatment, which achieves the target of China's Action Plan for Containment and Control of HIV/AIDS (2006-2010) ahead of schedule. That plan's goal was that more than 80 percent of eligible patients according to the ARV standard could get free treatment by the end of 2010. The remaining 17% of patients with CD4 below 200 either discovered their status recently or are presently undergoing OI treatment. China's ARV policy aims to ensure that PLHIV receive timely treatment. The survey also found in the focus group discussions that medical support programs such as free ARV treatment not only improve the health of PLHIV, but also reduce the medical burden on other household members and help develop the confidence to cope with the disease.

Table 7.5 CD4 count and ARV received by PLHIV

(Percent)

Category	CD4<=200	（200,350]	（350，500]	>500	Total
PLHIV	24.8	28.4	26.9	20.0	100.0
ARV or Traditional Chinese Medicine treatment received	83.0	75.2	48.4	40.2	63.4

Figure 7.2 ARV received by PLHIV by CD4 count



The CD4 count and ARV received by PLHIV in the five surveyed provinces are presented in Table 7.6. The proportion of PLHIV having CD4 count lower than 200 who receive free ARV or traditional Chinese Medicine treatment is more than 80 percent in each province except in Yunnan. In Yunnan province, this figure is 75.9 percent, well on track to achieve the national action plan target of 80% by 2010.

Table 7.6 CD4 count and ARV received by province

(Percent)

Province	Categories	CD4<=200	(200,350]	(350, 500]	>500	Total
Yunnan	PLHIV	20.3	25.9	26.9	26.9	100.0
	ARV or Traditional Chinese Medicine treatment received	75.9	68.2	42.0	32.0	54.0
Guangxi	PLHIV	36.8	27.4	26.1	9.7	100.0
	ARV or Traditional Chinese Medicine treatment received	86.7	73.5	39.2	38.3	65.5
Sichuan	PLHIV	16.9	27.4	28.1	27.7	100.0
	ARV or Traditional Chinese Medicine treatment received	81.3	82.7	47.6	49.5	63.6
Hubei	PLHIV	22.5	42.2	24.3	11.0	100.0
	ARV or Traditional Chinese Medicine treatment received	92.5	89.2	86.9	75.6	87.9
Shanxi	PLHIV	20.6	34.6	31.5	13.3	100.0
	ARV or Traditional Chinese Medicine treatment received	95.8	90.7	88.0	85.9	90.3

7.4 Economic support

At present, the main form of support activities received by the PLHIV surveyed by us and their families is financial assistance, much of it from government social welfare programs that do not specifically target PLHIV, but provide a safety net when PLHIV suffer an economic shock. This section analyzes assistance received by HIV households from these social welfare and other government programs, as well as assistance from other organizations such as NGOs and aid projects. The economic benefit of free ARV treatment, traditional Chinese medicine and free testing are not included in the calculation of economic support here, but will be analyzed later.

(1) Source and coverage of support

Generally speaking, households in difficulty can receive support from the government, and the PLHIV and their families can receive additional support because of programs aiming to help HIV/AIDS patients.

These programs include government assistance such as the minimum living standard assistance (MLSA) and other programs, and support from projects or NGOs. The amount of support calculated

below includes both cash and all other forms of assistance.

40.4 percent of HIV households receive some form of assistance; the proportion of non-HIV households is lower at 12.9%. And the average amount of assistance received by HIV households is 1,405 Yuan, which is more than double the 596 Yuan of support received by non-HIV households. The results indicate that the coverage of the support is still quite small -- nearly 60 percent of HIV households still have not received support. On the other hand, it also indicates that the demand for government and social support of families in difficulty have increased significantly due to HIV/AIDS.

In Sichuan, Hubei and Shanxi, most HIV households interviewed have received assistance. Especially in Hubei and Shanxi, where the main transmission mode is commercial blood sales, 96.5% and 82.4% of the HIV households have received support, and the average amount of support is quite high (2,927 Yuan in Hubei). The proportion of HIV households who have received support is lowest in Guangxi (15.1%). 57.9 percent of the HIV households interviewed in Yunnan have not received support, and for those who did receive it the average amount of support in Yunnan, 819 Yuan, is lowest among the five surveyed provinces.

Table 7.7 Percentage of households who have received support and average amount of the support, by province

Household	Support	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Percentage of households who have received support (%)	42.1	15.1	59.6	96.5	82.4	40.4
	Average amount of the support (Yuan)	819	1,232	1,937	2,927	1,349	1,405
Non-HIV	Percentage of households who have received support (%)	17.3	7.1	15.7	9.0	13.0	12.9
	Average amount of the support (Yuan)	593	487	981	587	483	596

Figure 7.3 Percentage of households who received support

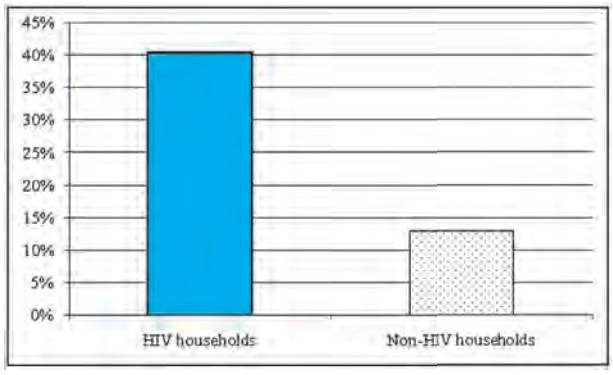


Figure 7.4 Average amount of support (yuan per household)

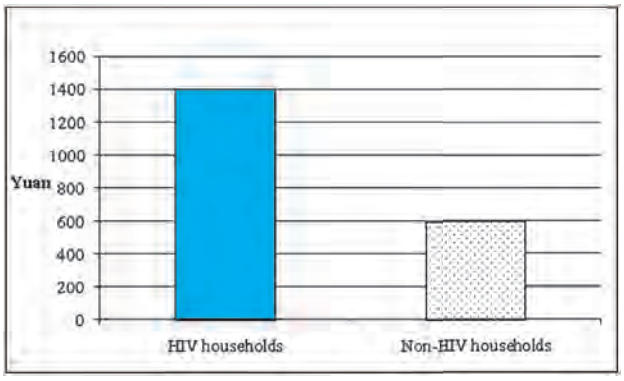


Table 7.8 groups HIV households by income level, and presents the shares of households who have received support, and their share of total support provided to all households. The proportion of households who receive support goes down with the rise of household income. 43.1 percent of low income households have received support, which is higher than the proportion of high income households (34.4%). Households whose annual household income is less than 30,000 Yuan received 88.2 percent of the total amount. This indicates that the distribution of support is mostly focused on poor families, which is consistent with the principle of efficiency and fairness. However, it is noteworthy that more than half of the low income households have still not received support (57%).

Table 7.8 Support received by household income level

(Percent)

Household income category (Yuan)	Percentage of households who have received supports	Share of amount of supports
<10,000	43.1	44.1
10,000-30,000	38.7	44.1
>30,000	34.4	11.8

Government plays the central role in supporting HIV households. The number of HIV households who have received government support is larger than those who have received support from other sources such as projects, NGOs, etc. The average amount of government support is also higher than support from those other sources. 31.3 percent of HIV households interviewed have received support from government (Table 7.9). In Sichuan, Hubei and Shanxi the share of HIV households receiving government support is 56.5%, 95.9% and 44.7% respectively. In Shanxi the proportion of HIV households interviewed who received support from other sources is highest, at 69.5%.

22.9% of HIV households interviewed have received minimum living standard assistance (MLSA), and this percentage is highest in Sichuan and Hubei (54.1% and 92.7%). Generally speaking, the MLSA is a widely available and reliable source of support and a steady income for many HIV households, which could reduce the economic burden of their daily lives.

Table 7.9 Percentage distribution of households by type of support received

(Percent)

Type of support	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Government support	30.4	11.1	56.5	95.9	44.7	31.3
MLSA	15.3	10.8	54.1	92.7	29.2	22.9
Other supports	17.5	0.3	2.7	54.2	20.5	13.6
Society support	22.4	5.1	11.4	49.8	69.5	20.3

The average amount of government and other (here lumped together and referred to as 'social') assistance and the relative shares of the two sources are presented in Table 7.10. The average amount of government support is 1,229 Yuan, higher than the support received from social organizations (672 Yuan). Government support is higher than social support in Yunnan, Guangxi, Sichuan and Hubei. In Hubei the average amount of government assistance is particularly high, 2,770 Yuan. However in all of these provinces the share of government assistance is 81.4% of the total and the share of government support is more than 90% in Guangxi, Sichuan and Hubei province, indicating the dominant role played by government in providing support to HIV households. Under these conditions, if the prevalence of HIV/AIDS is not quickly controlled and the number of PLHIV still increases at high speed, the government's budget will face increasing demands of support, leading to challenges of resource constraint and of equity in the use of government financial resources.

Table 7.10 Average amount and share of government and social assistance

Type of support	Categories	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Government support	Average amount (Yuan)	584	1,237	1,907	2,770	650	1,229
	Share (%)	63.2	97.7	98.4	94.6	43.6	81.4
Society support	Average amount (Yuan)	628	175	424	437	1,256	672
	Share (%)	36.8	2.3	1.6	5.4	56.4	18.6

Figure 7.5 Average amounts of different types of support

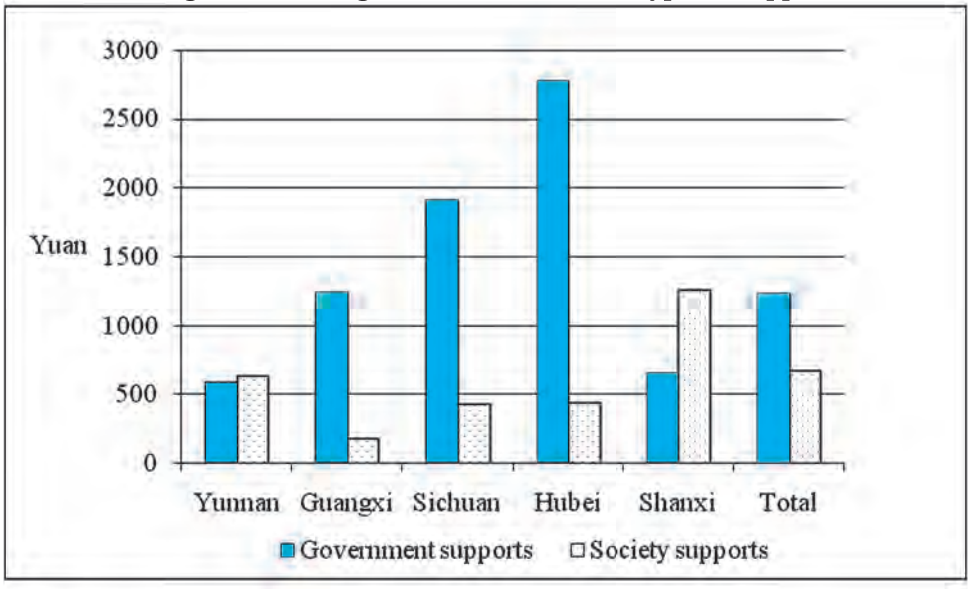
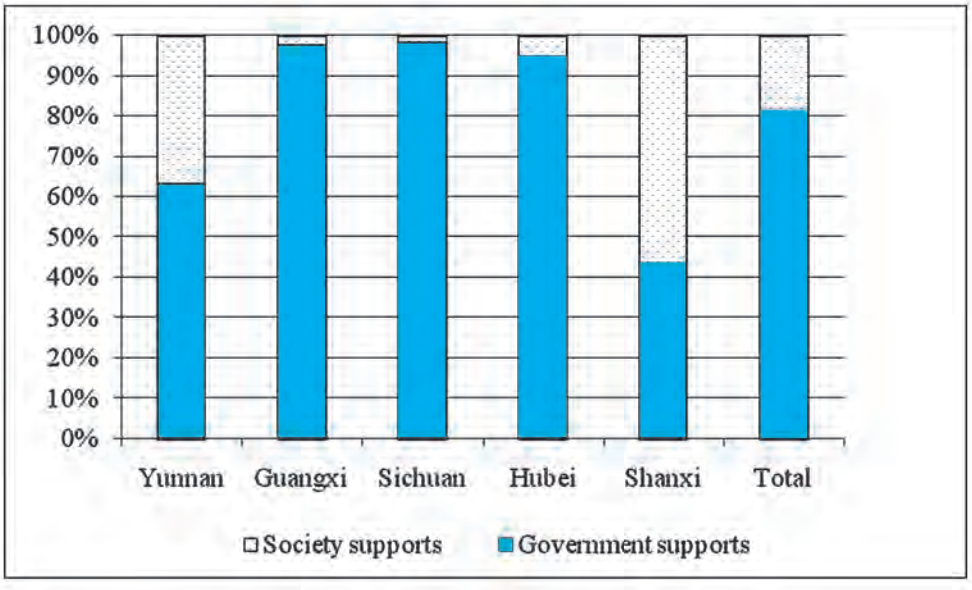


Figure 7.6 Share of different types of support



(2) Impact of support on household income

Outside assistance, from the government and social sources, has already become a major source of income for HIV households. Among HIV households who have received support it comprises 18.4 percent of household income (Table 7.11). The share of assistance in household income is 30.3% in Hubei and 39.6% in Sichuan, significantly higher than in the other provinces. This is probably a reflection of the relatively advanced MLSA system in Hubei and the high percentage of unemployed PLHIV in Sichuan, who receive government benefits. 92.7 percent of the HIV households interviewed in Hubei have received MLSA and every member in these families is eligible to receive

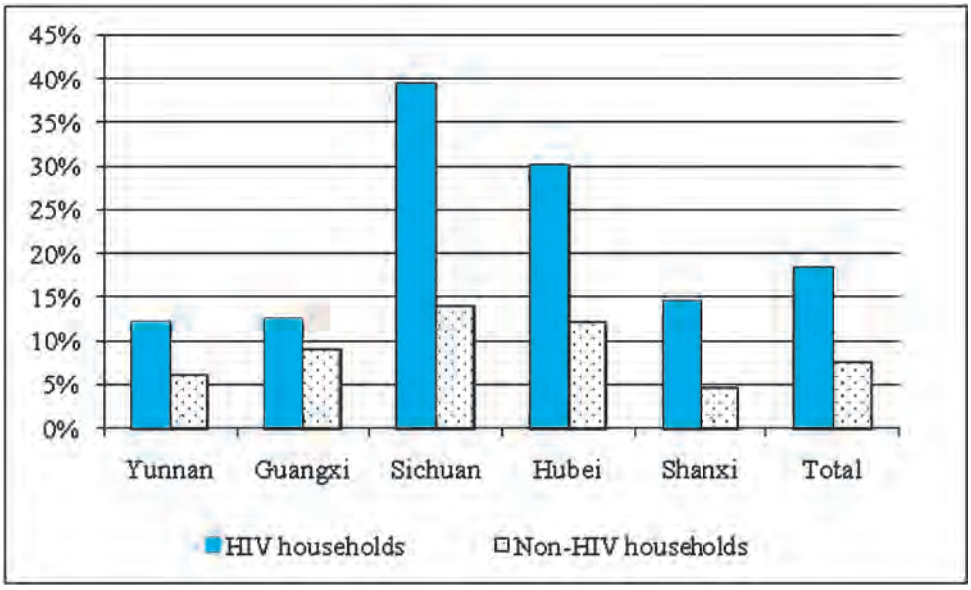
this allowance. In Sichuan province, 74.8 percent of the PLHIV interviewed were unemployed and had no source of income, some of them could receive government benefits like MLSA due to their disease, and the assistance that they receive is the only source of income.

Table 7.11 Percent share of support in household income

(Percent)

Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	12.2	12.6	39.6	30.3	14.6	18.4
Non-HIV	6.2	9.1	14.1	12.2	4.8	7.6

Figure 7.7 Percent share of support in household income



The distribution of households interviewed by the share of support in income is presented in Table 7.12. HIV households are in general far more dependent on assistance than non-HIV. Among HIV households who have received support, 49 percent receive more than 10 percent of their income from it and 30 percent receive more than 20 percent of their income from it. Among non-HIV households these percentages are much lower; 20.4 percent and 12.5 percent. This pattern is particularly pronounced in Sichuan and Hubei. In Sichuan more than 50 percent of the HIV households who have received assistance receive more than 20 percent of their income from it. Even more striking, in Sichuan 23% of these households rely completely on support for their entire household income. In Hubei, nearly 60% of HIV households receive more than 20% of their household income from support, reflecting the more advanced PLHIV assistance programs in Hubei,

and the well functioning MLSA systems there. We see that the dependence of HIV households on government assistance is quite large. If the number of PLHIV continues to increase the burden on society's resources and on government support will grow as well.

Table 7.12 Distribution of households by share of support in income

(Percent)

Household	Share of support in income	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	a＜10%	67.9	64.6	27.3	12.8	41.6	51.0
	10%≤a＜20%	13.0	12.8	22.0	29.2	35.7	19.1
	20%≤a＜40%	9.7	14.6	16.4	30.5	16.7	15.3
	40%≤a＜60%	4.7	8.0	5.5	18.8	3.7	7.5
	60%≤a＜80%	3.3	0.0	3.7	4.9	1.8	3.1
	80%≤a＜100%	0.7	0.0	2.1	1.9	0.0	0.9
	a=100%	0.7	0.0	23.0	1.9	0.5	3.1
Non-HIV	a＜10%	85.3	73.4	47.7	70.7	86.2	79.6
	10%≤a＜20%	4.7	5.5	30.2	22.4	8.6	7.9
	20%≤a＜40%	5.3	15.6	15.1	0.0	5.2	7.7
	40%≤a＜60%	4.7	5.5	7.0	0.0	0.0	4.5
	60%≤a＜80%	0.0	0.0	0.0	0.0	0.0	0.0
	80%≤a＜100%	0.0	0.0	0.0	0.0	0.0	0.0
	a=100%	0.0	0.0	0.0	6.9	0.0	0.3

Note: "a" means the share of support in household income.

(3) Contribution of economic assistance to closing the income gap between HIV and non-HIV households

As analyzed in Chapter 5 of this report, the income of HIV households tends to decline for a number of reasons, leading to a wide income difference between HIV and non-HIV households. This survey found that assistance from the government and social organizations can help reduce that income gap. For those HIV households who have received support, annual income excluding outside assistance is 68.8 percent of the annual income of non-HIV households. After receiving the support, this ratio increases to 76.2 percent (Table 7.13). The support reduces the income difference between HIV and non-HIV households by 7.4 percent. The income difference has been reduced most obviously in Sichuan (11.1%) and Hubei (16.8%).

Table 7.13 Average incomes of HIV households as percentage of non-HIV households with and without assistance

(Percent)

Category	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Excluding assistance	71.4	94.4	63.6	46.6	56.6	68.8
Including assistance	75.4	101.5	74.7	63.4	63.3	76.2
Difference	4.0	7.1	11.1	16.8	6.7	7.4

(4) Impact of including subsidies for medical treatment in measurement of government assistance

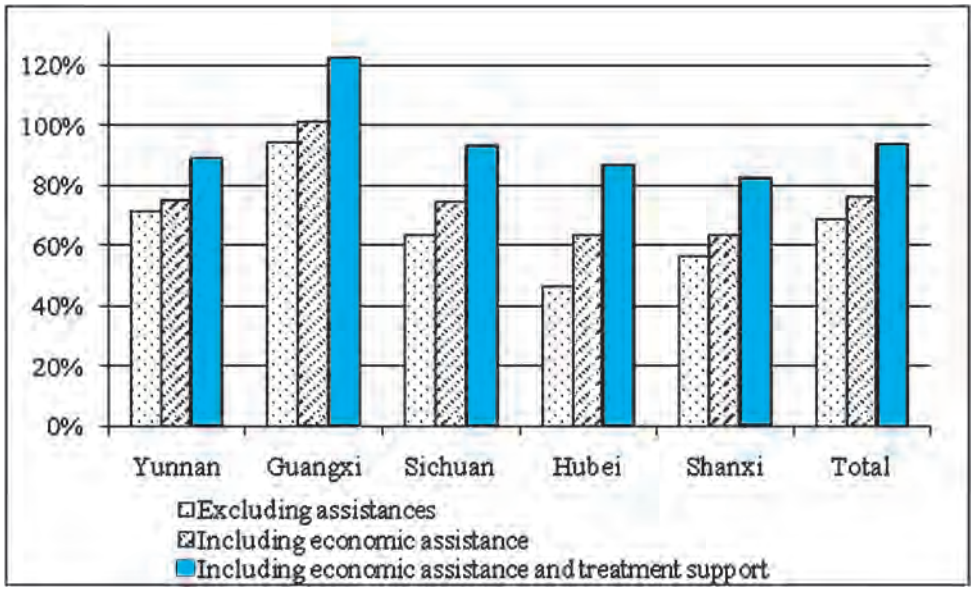
The contribution of assistance to the standard of living of HIV households is clearer when the value of the free medicine and tests is included. For our calculations we assume that per capita expenditures on ARV medicine are 4,500 Yuan per year, thes expenditure on CD4 testing are 100 yuan per test and two CD4 tests are done per year. Excluding this assistance the annual household income of HIV households is 68.8 percent of non-HIV households'. Including this assistance, the proportion increases to 93.5 percent. This assistance sharply reduces the income gap between HIV and non-HIV households, as it falls by 24.7 percent. Of course this assistance represents both increased income and corresponding increased expenditure on health care, so HIV households' command over income for other expenses, such as food, clothing and shelter is not affected, and is still well short of non-HIV households.

Table 7.14 Average income of HIV households as percentage of non-HIV households before and after assistance is included

(Percent)

Category	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Excluding assistance	71.4	94.4	63.6	46.6	56.6	68.8
Including economic assistance and treatment support	89.1	122.3	93.3	86.6	82.4	93.5
Difference	17.7	27.9	29.8	40.0	25.8	24.7

Figure 7.8 Average income of HIV households as percentage of non-HIV households with and without including assistance, by province



7.5 Income generation activities

Current assistance for HIV households is provided either in cash or in kind, and consists primarily of direct income support, medical support and education support. As free provision of ART becomes more widespread and the health status of PLHIV improves, there is increasing awareness on the part of the government and NGOs that more than this direct assistance is needed; PLHIV have to lead productive lives. Assistance aimed at providing productive employment for PLHIV who still have ability to work will not only increase household income, but also can help rebuild the confidence and courage of PLHIV.

Case study 7: A PLHIV namely D has conducted rabbit breeding with the support of small loans. At the beginning of the activity, the scale of the farm was quite small and project staff often went to guide and monitor his work. As a result, the work went well and D's income increased greatly. However, the PLHIV has faced a lot of difficulties in daily management and prevention of murrain when the scale of the farm enlarged. At that time, the project had already finished and there was no further guidance or monitoring from experts. As a result, the farm closed down after a large murrain outbreak and D had to go outside to work for other people. Although this activity did not work out well, the activity helped D to build up self-confidence and made a foundation for the PLHIV to do work by himself in future. Clearly, in order to help the PLHIV conduct income generation activities efficiently, it is necessary to give a great deal of attention to technical support during the activities, so as to improve the productive capacity of PLHIV. At the same time, it is necessary to explore and practice the pattern of income generation

7.6 Observations

Most PLHIV have no life insurance and no pension. The great majority of the PLHIV surveyed have medical insurance, mostly through participation in the RCMS. As noted above, however, RCMS only covers a relatively small amount of daily medical expenses, and falls far short of covering the medical expenditures incurred by PLHIV. Because the official safety net for PLHIV is still incomplete, most HIV households still have to resort to borrowing from friends and relatives during economic difficulties. As we have seen, though, this coping mechanism is also inadequate for PLHIV, in part because even friends and relatives are at times not willing to lend to them.

The exploration of current support trends provides vital information for the design of effective care and support activities. At present, these activities have significantly mitigated the impact of HIV/AIDS on many individuals and households. At the same time, as noted earlier in this chapter, the majority of HIV households, including low income households, are not yet receiving any government assistance, meaning that there is a great need to make the coverage of these programs more comprehensive. We also should note that the dependence of HIV households on assistance is increasing, and this increasing demand for assistance is posing a big challenge to the available resources. HIV households still lack the ability to deal with risk, and low income households still

require assistance in finding productive employment and in obtaining loans. Further work is needed to widen the availability of effective income generation activities, in order to rebuild the productive and development capability of HIV households.

There is a deep pool of domestic and international experience to draw on in designing such activities. For example, Dazhi city in Hubei provided funds and items (about 100,000 Yuan) for dozens of HIV households by using the resources of the China Comprehensive AIDS Response (China CARES) projects and helped the HIV households engage in new income generation activities, such as planting watermelons, breeding pigs, etc (SCAWCO et al, 2007). With the support of China-UK HIV/AIDS Prevention and Care Project, Ruili city in Yunnan provided loans for HIV households to conduct activities like planting sugarcane and breeding pigs and fish (Develop Centre for Women and Children in Yunnan, 2006). Yi Men county in Yunnan organized income generation activities in such areas as breeding, business and handicrafts, with a special focus on PLHIV who contracted the disease through IDU (Fei Shuhan et al, 2006). Funan county in Anhui province established a project with funds from Save the Children UK and the funds of the villagers, and supported PLHIV to conduct breeding, cultivation, and so on (Xu Jiaqi et al, 2008).

As we can see, income generation activities for PLHIV have been undertaken in many parts of China. Some of them have achieved good results and developed useful experience for other regions. However, a frank assessment indicates that the number of cases where sustainable impact was achieved is not very high. This survey found that although some of the PLHIV interviewed have received support for productive activities, including small loans, animals for breeding, etc, most of these efforts had already halted or failed by the time of the survey. Based on survey results, we have identified several reasons why these activities did not achieve the desired impact. First, the programs were not designed for subjects with the low education level and productive skills of most PLHIV; second, technical support and monitoring of the projects was insufficient; third, income generation activities were mostly focused on short-term impact, and paid less attention to sustainable long-term development, essential given the improvements in treatment for PLHIV that have lengthened their working years. Last, the departments who are responsible for the implementation of income generation activities are usually health departments, who lack the relevant experience, human resource capacity and other resources necessary for this type of activity.

An influential survey conducted by World Bank in Africa in 1997 provided a helpful direction

for income generation activities. The report found that it is highly effective to combine projects aimed at reducing the impact of HIV/AIDS with broader government anti-poverty activities (World Bank, 1997). In China, poverty alleviation has been one of the government's most important and successful long-term priorities, which has already achieved enormous results. The government's poverty monitoring and alleviation systems are very advanced after these decades of effort. There would be great benefits if income generation activities for PLHIV could be combined with local anti-poverty activities. This would help solve many of the problems now being encountered by income generation activities for PLHIV, primarily arising from the isolation of these activities from the experience, human resources and systems present in broader poverty alleviation programs. By avoiding a narrow focus on PLHIV, and a narrow base in HIV/AIDS-related programs, these income generation activities will be more sustainable.

Linking PLHIV income generation activities to China's broad poverty alleviation agenda is even more logical when we note that the great majority of China's PLHIV live in poor provinces where poverty alleviation programs are quite advanced. The cumulative number of PLHIV in Yunnan, Henan, Guangxi, Xinjiang, Guangdong and Sichuan accounts for 80.5 per cent of China's total (SCAWCO et al, 2007). Other than Guangdong, the other five high prevalence provinces are economically underdeveloped areas, with strong anti-poverty activities. This provides favorable conditions for effective and sustainable income generation activities for PLHIV.

Beyond income generation activities, as seen in this survey HIV households are likely to continue to need other government life support as well, because of their very difficult economic circumstances and lack of sufficient coping mechanisms. In order to carry out the policy of "Four Frees and One Care" and to reduce the economic burden of HIV households, at present, local governments have conducted various types of support activities, such as: first, include PLHIV in economic difficulty in the MLSA; second, government departments provide temporary support for PLHIV, including one-off assistance to people in difficulty, festival care and support activities; third, international projects and NGOs supply monthly support for HIV households in economic difficulties; fourth, other special support programs for PLHIV are implemented. Examples of the last kind of support include LinFen city in Shanxi, which established Green Fleet (Yang Zongjin, 2005); RuiLi city Yunnan province, which conducted festival care and support activities in collaboration with the Buddhist Association (Li Zhoulin et al, 2006); GeJiu city Yunnan province, where people visited HIV households every month and conducted care and support activities, establishing one-to-one

links between community volunteers and targeted groups (Huang Jin et al, 2006).

In this survey we found that 22.9 percent of HIV households interviewed receive the MLSA, 13.6 percent have received other support from government and 20.3 percent have received support from projects or NGOs. That assistance has reduced the economic burden of HIV households to some extent, and narrowed the income gap between HIV and non-HIV households.

With regard to the source of funds of the support, Cheng Gang found in a survey that, the support funds for PLHIV mostly come from governmental resources, which is larger, more stable and more sustainable. Second in importance is financing from international projects, which is generally large enough but is not sustainable. He found that financing from other social sources is quite small and plays a limited role (Cheng Gang, 2008). At present, the MLSA is the most sustainable long-term support effort conducted by the government, and has laid the foundation for expansion of coverage. MLSA would be a good mechanism for involving support for PLHIV who answer for the standard into the current social system.

Currently, there are a lot of areas where the PLHIV could receive the MLSA, but coverage is still quite small, and there are differences of the implementation of the MLSA in different areas. For example, it is found in this survey 92.7% of the PLHIV have received the MLSA in Hubei, while less than 20% of the PLHIV have received it in Yunnan and Guangxi. At the same time, there are some different problems in the implementation of the MLSA for PLHIV. First, the list of persons who receive the MLSA and the reason they are eligible for this assistance are supposed to be public information, as a result of which PLHIV refuse MLSA due to fear of disclosing their HIV status. The civil departments in some areas have taken measures to solve this problem, such as allowing PLHIV to cite other medical reasons when they apply for MLSA. However, this problem is still not solved in most of the regions. Secondly, in areas where the major transmission mode is IDU, most of the PLHIV are drug users. There are a lot of people who oppose providing the MLSA for the IDU PLHIV, mostly because of concern that some PLHIV may use the support to buy drugs. Thirdly, because the financing of the MLSA mainly depends on local government budget resources, less economically developed regions could face serious fiscal challenges in offering the MLSA to PLHIV. Furthermore, if local funding for the MLSA is tight in some high prevalence regions, including PLHIV in the MLSA may reduce the access of non-HIV poor households to this important source of financial support. A survey regarding HIV/AIDS policies conducted by the Social Policy

Research Centre under the Chinese Academy of Social Sciences found that a lot of people who were eligible for assistance could not get the MLSA in Shangcai county of Henan province, a high prevalence area. Extending the MLSA to PLHIV can only be sustainable if adequate funding is ensured for all eligible households, including non-HIV, requiring proper costings and central support, when needed (Chinese Academy of Social Sciences Social Policy Research Centre, 2008). Clearly further exploration and practice are needed to best provide life support for PLHIV under existing government support systems, such as the MLSA.

At present some areas are also examining options for creating specific support funds for PLHIV. For example, Hubei established a support fund to respond to HIV/AIDS in 2006, with 30 million Yuan in funding. This fund was mostly focused on support for PLHIV who were infected by blood transfusion (Hu Xiaoyun, 2006). Zhang Liwen et al argued that such a fund is needed to finance prevention and treatment activities by using multi-sectoral cooperation and social care (Zhang Liwen et al, 2006). However, there are also some experts who disagree, because they believe that such specific funds would lead to the specialization of HIV/AIDS, and could also undermine the balance of relevant policies and be unfair to other groups who also need government assistance. At the same time, it is doubtful whether the fund to support the specialization could be sustainable (Chinese Academy of Social Sciences Social Policy Research Centre, 2008). Hence, the feasibility and implementation of special support still requires analysis and experimentation.

Chapter 8 Impact of HIV/AIDS on the Education of Children

There are presently about one million children affected by HIV/AIDS in China, including children who are PLHIV, children of whom at least one parent has HIV/AIDS and children who have lost at least one parent to HIV/AIDS. As the disease continues to spread, this number will keep increasing. Ensuring that the education rights of the children affected by HIV/AIDS, including the right to stay in school, to obtain the same quality of education as other children and the right to receive higher education, are not undermined by their illness or that of their family members is a vitally important policy goal. This chapter will analyze the impact of HIV/AIDS on education of children aged 10-14 and 15-17.

8.1 Impact of HIV/AIDS on the education of children aged 10-14

In order to avoid problems due to differences in age of school enrollment the survey followed standard international practice and took children in the 10-14 year age group as its focus. In China children of this age should be covered by free nine-year compulsory education.

The enrollment ratio of children from HIV households is markedly lower than those of non-HIV households; 88.9 percent for the former, vs. 97.2 percent for the latter. Enrollment ratios of girls in HIV households are lowest in Yunnan and Guangxi -- 83.8% in Yunnan and 86.2% in Guangxi. The enrollment ratio of boys in HIV households is lowest at 69.8% in Hubei.

Table 8.1 Enrollment ratio of children aged 10-14

(Percent)

Province	Sex	HIV household	Non-HIV household
Yunnan	Boy	95.0	92.0
	Girl	83.8	98.3
	Total	88.7	95.0
Guangxi	Boy	88.8	100.0
	Girl	86.2	100.0
	Total	87.2	100.0
Sichuan	Boy	93.0	100.0
	Girl	100.0	100.0
	Total	96.2	100.0
Hubei	Boy	69.8	100.0
	Girl	92.6	100.0
	Total	81.3	100.0
Shanxi	Boy	96.7	100.0
	Girl	100.0	100.0
	Total	98.1	100.0
Total	Boy	92.3	95.6
	Girl	86.2	99.1
	Total	88.9	97.2

Figure 8.1 Enrollment ratio of children aged 10-14

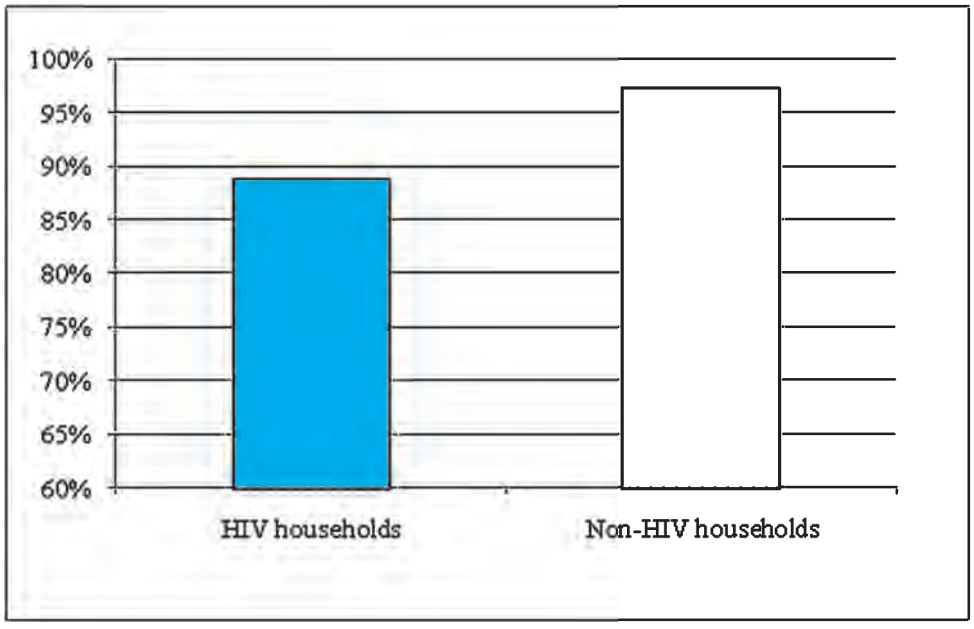


Figure 8.2 Enrollment ratio of children aged 10-14, by province

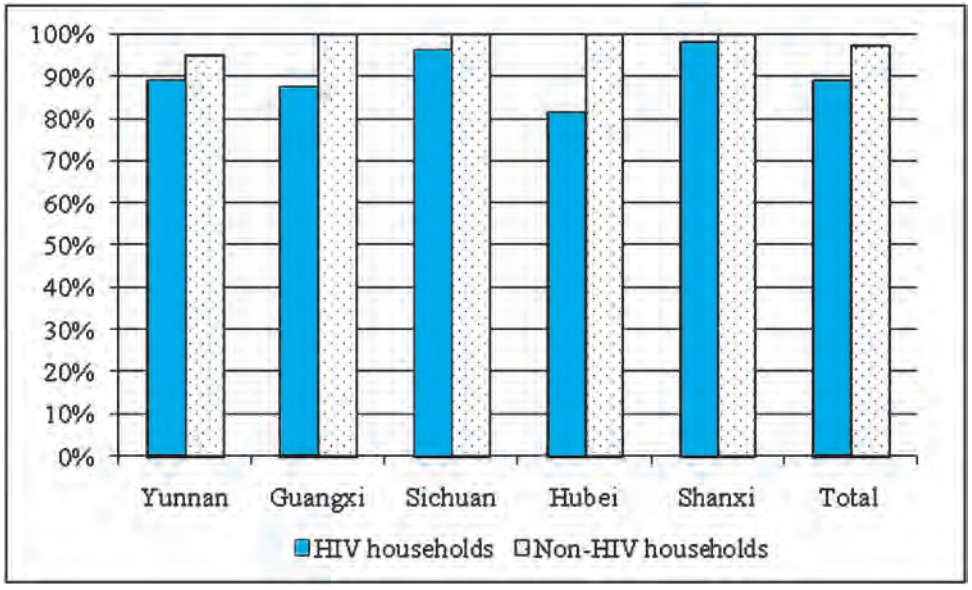


Table 8.2 shows the drop-out rate and average number of schooling years for dropout children aged 10-14 from HIV households and non-HIV households. The drop-out rate for children from HIV households is 11.1%, sharply higher than the rate of 2.8% for non-HIV households. The difference is particularly striking for girls, whose drop-out rate is 13.8 percent higher in HIV households. The average number of years of schooling completed by the children who have dropped out of school is the same for boys, whether from HIV or non-HIV households, but is much lower for girl from HIV households-only 1.4 years, vs. 6.0 years for girls from non-HIV households.

Table 8.2 Drop-out rate and average number of schooling years for dropout children aged 10-14

Sex	Dropout rate (%)		Average number of schooling years	
	HIV HHs	Non-HIV HHs	HIV HHs	Non-HIV HHs
Boy	7.7	4.4	4.8	4.7
Girl	13.8	0.9	1.4	6.0
Total	11.1	2.8	2.7	4.9

Household income plays an important role in determining the enrollment of children in school. Enrollment ratios for both types of households tend to be higher for families with higher income (Table 8.3). For HIV households, the enrollment ratio is lowest at 71% for households living under the relative poverty line and 82.8% for all low income households. Even for HIV households, the enrollment ratio is 100% for children from those households whose annual income is more than 30,000 Yuan. These results indicate that the impact of HIV/AIDS on enrollment is felt through

economic factors; children in poor HIV households are affected the most.

Comparisons of children from HIV households with children in the same income group but from non-HIV households further demonstrate this link between HIV/AIDS, poverty and education status. In households whose annual income is less than 10,000 Yuan, the enrollment ratio is 82.8% for children in HIV households and 98.9% for children in non-HIV households. Since the HIV households have to incur large medical expenditures they may have to cut down on education expenditures for their children, and at times have their children drop out of school to look after sick parents or earn some additional income for the family.

Table 8.3 Enrollment ratio of children aged 10-14 by household income

(Percent)

Household income (Yuan)	HIV HHs	Non-HIV HHs	Chi-square	P
0-9,999	82.8	98.9	186.325	0.000
0-4,193	71.0	100.0	129.838	0.000
10,000-19,999	97.5	93.3	12.781	0.000
20,000-29,999	97.6	100.0	9.442	0.002
30,000-39,999	100.0	100.0	---	---
40,000+	100.0	100.0	---	---

8.2 Logistic regression analysis of education trends in HIV households

In order to analyze the impact on education of the household environment we took the variable "whether the children aged 10-14 are going to school or not" as the dependent variable, and took two factors as independent variables -- per capita income (x_1) and average education years of adults (x_2). The Logistic Regression Model is as followed:

$$Prob=\frac{e^{z}}{1+e^{z}}=\frac{e^{\beta_0+\beta_1x_1+\beta_2x_2}}{1+e^{\beta_0+\beta_1x_1+\beta_2x_2}}$$

The results of Logistic Regression of HIV and non-HIV households are as followed:

Regression model of HIV households: $z=0.621+0.807x_1+0.056x_2$

Regression model of non-HIV households: $z=1.403+0.144x_1+0.381x_2$

The Hosmer and Lemeshow χ^2 of the model is 144.944 and 188.254, P is less than 0.05, indicating

the model has significance. The Cox & Snell R^2 of the model is 0.076 and 0.028. Nagelkerke R^2 is 0.155 and 0.123, indicating that the fitting effect of the model is not very good.

Comparing the results of the regression models in Table 8.5 we see that the influence of household income on education of children is much greater in HIV households than in non-HIV households. For every increase of 1,000 Yuan in per capita income, in HIV households the ratio of number of children who are enrolled to the number of children who drop out increases 2.242 times. In non-HIV households the corresponding increase is only 1.155 times. On the other hand, the influence of education level of adults in the family on education of children is much bigger in non-HIV households. This offers further evidence that the education of children is affected more by the household income in HIV households; the worsening of economic status would lead to the increase rate of children drop out of school.

Table 8.4 Fitting effect of regression model

Household	Hosmer and Lemeshow Test (Chi-square)	P	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
HIV	144.944	0.000	1158.672	0.076	0.155
Non-HIV	188.254	0.000	655.597	0.028	0.123

Table 8.5 Coefficients of regression model about education of children aged 10-14

House hold	Variable	B	S.E	Wald	P	Exp(B)	95.0% C.I.for EXP(B)	
HIV	Per capita income	0.807	0.086	88.438	0.000	2.242	1.895	2.653
	Average education years of adult	0.056	0.024	5.622	0.018	1.058	1.010	1.108
	Constant	0.621	0.176	12.383	0.000	1.861		
Non-HIV	Per capita income	0.144	0.053	7.311	0.007	1.155	1.041	1.283
	Average education years of adult	0.381	0.047	66.623	0.000	1.463	1.335	1.603
	Constant	1.403	0.255	30.368	0.000	4.069		

Notes: "Whether going to school or not" is dependent variable: 0-not go to school, 1-go to school;
The unit of income is "thousand Yuan";
The unit of average education years of adult is "year";
Exp(B) is the odds ratio.

8.3 Impact of HIV/AIDS on the education of older children

Older children aged 15-17 are beyond the scope of China's free nine-year compulsory education policy. Therefore the costs of their education will be borne by the family alone. The survey found that in HIV households only 48.9 percent of older children continue to receive education, while in non-HIV households this proportion is 69.7 percent (Table 8.6). For those older children who have dropped out of school, the average number of schooling years works out to be 6.3 years for the children of HIV households and marginally higher at 7.1 years for the non-HIV households. In both HIV and non-HIV households we see that the average number of years of schooling of drop-out children is less than nine, meaning that at the time this survey was conducted the free nine-year compulsory education policy had not been fully implemented.

The enrollment ratio of children aged 15-17 is broken down by province in Table 8.7. In Yunnan and Guangxi, border regions with high minority populations and less developed education systems, these rates are the lowest. For example, only 37.6% of older children from HIV households in Yunnan are continuing their education. Guangxi has the lowest years of education for school drop-outs, with an average of only 4.4 years.

Table 8.6 Education of children aged 15-17

Household	Enrollment ratio (%)	Average number of schooling years
HIV	48.9	6.3
Non-HIV	69.7	7.1
Chi-square/t	160.381	6.410
P	0.000	0.000

Table 8.7 Education of children aged 15-17 by province

Household	Education	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Enrollment ratio (%)	37.6	54.2	80.8	61.9	77.6	48.9
	Average number of schooling years	6.5	4.4	7.0	7.8	7.0	6.3
Non-HIV	Enrollment ratio (%)	54.7	78.6	90.9	85.3	78.7	69.7
	Average number of schooling years	6.7	7.5	8.0	9.0	8.1	7.1

Figure 8.3 Enrollment rate of children aged 15-17

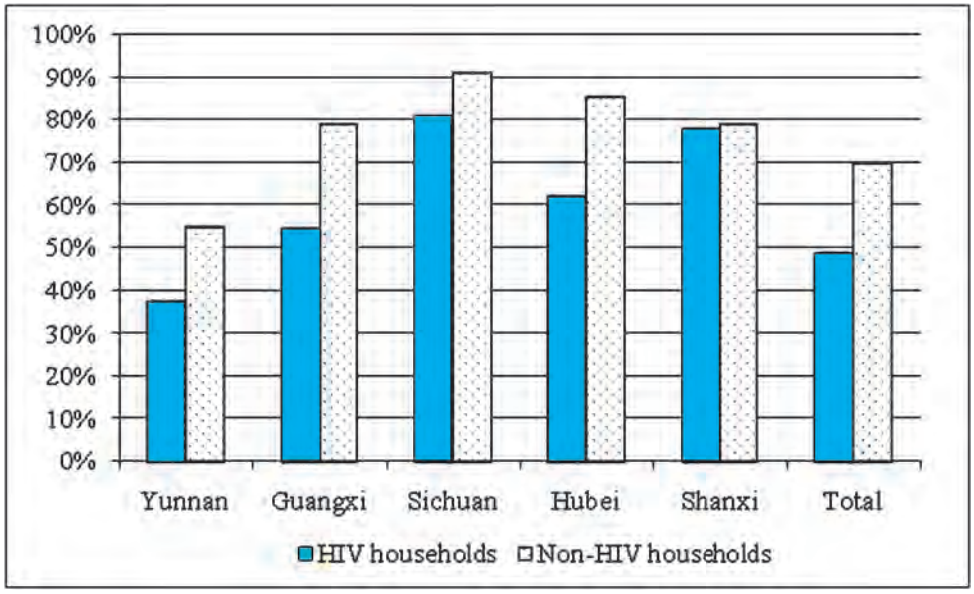
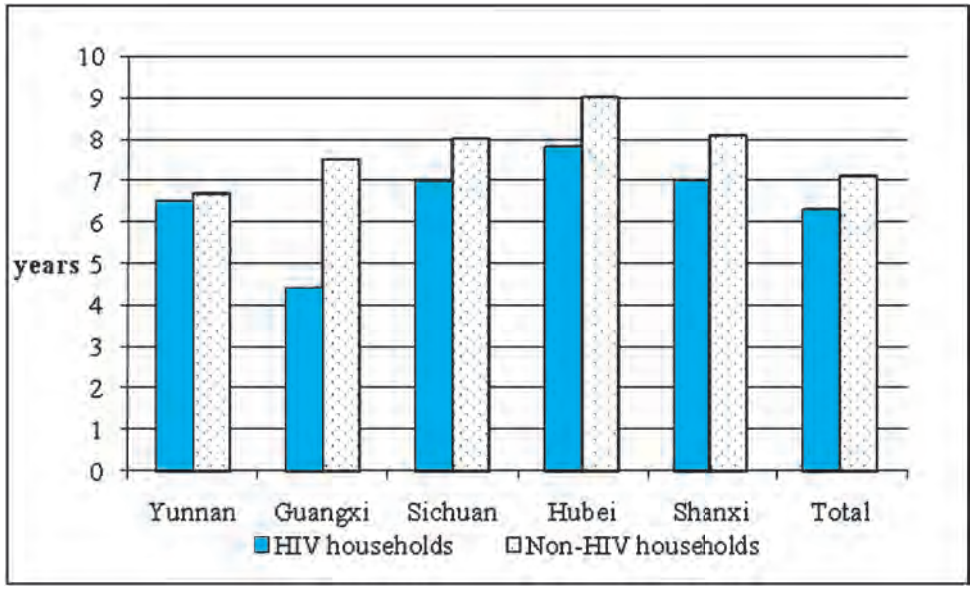


Figure 8.4 Average number of schooling years for children dropped out of school



The HIV status of family members may have a great influence on children's future development. The survey designed a question named "Does HIV/AIDS affect children's chance of receiving higher education?" specifically aiming at PLHIV whose family have children under 18 years of age. 55.7% of the respondents thought that HIV/AIDS does reduce the chance of children to receive higher education. Among those respondents who stated that it would have an influence, 88.7 percent thought that both boys and girls would be affected.

Table 8.8 Impact of HIV/AIDS on higher education opportunities for children

(Percent)

Answers of respondents	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Has an effect	56.5	54.9	57.9	55.5	52.8	55.7
Affects both boys and girls	87.4	89.4	89.8	88.1	91.5	88.7
Only affects boys	2.7	7.7	1.6	6.5	3.8	5.2
Only affects girls	9.9	2.9	8.6	5.4	4.7	6.1

Another question in the survey aimed to assess how HIV/AIDS affects households' ability to pay for their children's education. Table 8.9 shows the responses to the question, "What level of education can your family afford for your children?" We see that most non-HIV households (50.4%) stated that they could afford the expense of undergraduate and higher education, while only 24.1% of HIV households felt that this was within their means. 44.5 percent of HIV households advised that they could only afford middle school or lower for their children.

Table 8.9 Education expenses a family could afford

(**Percent**)

Household	Level of education	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	Elementary education	45.7	42.7	50.4	52.8	25.9	44.5
	Middle education	26.0	35.0	34.0	34.8	62.5	31.4
	Higher education	28.3	22.3	15.6	12.4	11.6	24.1
Non-HIV	Elementary education	25.8	11.0	7.8	8.3	9.7	18.2
	Middle education	26.7	35.5	37.7	36.6	41.3	31.4
	Higher education	47.5	53.5	54.5	55.1	49.0	50.4

HIV households devote less of their attention and resources to their children as their family's economic situation turns bad. Table 8.10 shows the percentage of respondents who had plans for their children's future. In the focus group discussion, the respondents reported most of their plans for their children's future are that they should go to school, learn a skill to find a good job and get married early. It is distressing to see that the proportion of HIV households who have plans for the future of their children is markedly less than in non-HIV households.

Table 8.10 Plan for the future of children

(Percent)

Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV	46.0	38.8	41.0	66.4	49.2	45.7
Non-HIV	64.4	39.3	55.1	57.7	69.1	55.4

8.4 Observations

The findings of this chapter indicate that HIV/AIDS has a serious impact on children's education. The enrollment ratio of children from HIV households is significantly lower than children from non-HIV households, especially for the girls. Data on years of schooling of children who drop out indicate that a significant number of girls from HIV households are receiving almost no education at all. The impact on education is more severe for low income households. The enrollment ratio of older children from HIV households is quite low, and most HIV households could not afford higher education for their children. In fact, they seem not to have the energy and capacity to think about the future development of their children.

Fortunately, the policy of nine-year compulsory education and "two exemptions and one supplement" have been implemented widely in the recent two years. Children from HIV households have better access to education and security. This has reduced HIV's influence on children's education, at least for the youngest children.

However, the nine-year compulsory education only includes elementary school and junior high school, and the families in poor usually could not afford the expenditure of higher education of children. Hence, it is suggested that more importance should be attached to education support for children, especially continued education support and skill training for older children.

Chapter 9 Health Care Seeking Behavior of PLHIV

Besides the ARV treatment that is provided by the government, PLHIV have a range of other health care needs, including treatment for OI and for general medical problems. To analyze the overall health care needs and behavior of PLHIV, the respondents were asked if they had been ill in the preceding month, and if they had been, what level of hospital they visited, the expenditure amounts and the reason why any chose not to see a doctor for treatment.

9.1 Health care seeking behavior in the preceding month

As can be seen in Table 9.1, PLHIV are far more likely to seek health care than non-PLHIV, and non-HIV members in HIV households are also somewhat more likely to do so. Access to good quality and affordable health care is a critical issue for these families.

Table 9.1 Share seeking health care in preceding month

(Percent)

Group	Share seeking health care in preceding month
PLHIV	16.3
Non-HIV household members of PLHIV	8.1
Non-HIV households	6.3

Table 9.2 compares the choice of level of health care facility of PLHIV and non-HIV individuals. The survey found that PLHIV are far more likely to seek treatment in the county hospital, where there are special facilities for treatment of HIV/AIDS, than non-HIV individuals; 33.3 percent of PLHIV went to the country hospital, vs. 14.4 percent of non-HIV. Table 9.3 breaks down the responses by province. In Yunnan and Guangxi, the proportion of PLHIV receiving treatment in the county hospital is significantly higher than non-HIV. In Hubei the PLHIVs were more likely than non-HIV to go to both county and town hospitals --mostly because special clinics for PLHIV have also been set up in some towns with a larger number of PLHIV. However, the situation in Shanxi

province is a little different; more than 70 percent of both PLHIV and non-HIV sought treatment in the village clinic. This may reflect the fact that under the RCMS treatment is provided in the village clinic, and the proportion of respondents who are enrolled in the RCMS is higher in Shanxi than in the other surveyed provinces.

Table 9.2 Health care seeking behavior in the preceding month

(Percent)

Level of treatment facility	PLHIV	Non-HIV household members
Village	33.9	53.3
Town	23.4	21.1
County	33.0	14.4
City	4.5	4.0
Others	5.2	7.2

Figure 9.1 Health care seeking behavior in the preceding month

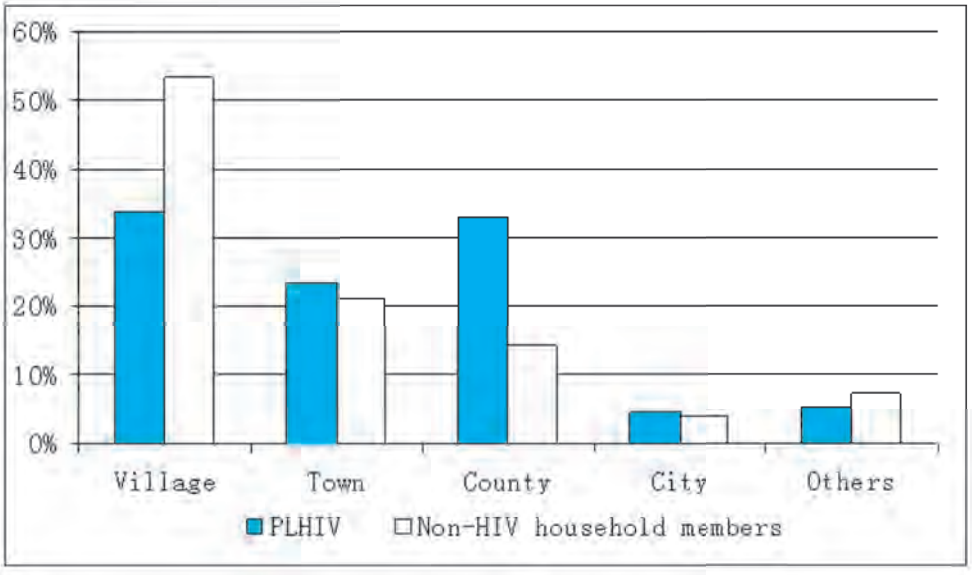


Table 9.3 Health care seeking behavior in the preceding month by province

(Percent)

Province	Household members	Village	Town	County	City	Others
Yunnan	PLHIV	44.3	28.1	21.5	3.1	3.0
	Non-HIV household members	43.2	30.4	10.6	5.4	10.4
Guangxi	PLHIV	12.2	15.5	69.5	2.8	0.0
	Non-HIV household members	65.3	8.7	22.5	0.0	3.5
Sichuan	PLHIV	7.7	22.5	19.7	11.3	38.8
	Non-HIV household members	37.8	25.5	8.5	15.4	12.8
Hubei	PLHIV	34.9	37.2	17.8	10.1	0.0
	Non-HIV household members	61.1	30.8	2.2	5.9	0.0
Shanxi	PLHIV	76.2	13.0	5.1	4.3	1.4
	Non-HIV household members	76.9	3.3	13.2	2.2	4.4

Regarding medical expenditures, the PLHIV spent an average of 574 Yuan on treatment during this time period, vs. only 412 Yuan for members of non-HIV households. The higher the level of medical facility the higher the cost incurred. We note that the average expenses of PLHIV in village, town and county hospitals are close to or more than those of members of non-HIV households, but lower in higher level facilities, such as city hospitals. Trends in medical expenditure by province are presented in Table 9.5 and Table 9.6. In Yunnan, Guangxi and Sichuan the average medical expenditures of PLHIV are higher than non-HIV households, however in Hubei and Shanxi they are only half of those of non-HIV household members. This may reflect the greater availability of medical assistance for PLHIV in these two provinces, where special attention has been paid to care and support for PLHIV infected through commercial blood sales.

The distribution of medical expenditures by level of hospital shows that 54.4 percent of the medical expenditures of PLHIV in this month took place in county hospitals, while this proportion is lower at 27.2 for non-HIV households. The medical expenditures of PLHIV were mostly used in county hospital in Yunnan, Guangxi and Sichuan. However, most of the expenditures took place in town hospitals in Hubei and village hospitals in Shanxi.

Table 9.4 Medical expenditures in the preceding month

Level of hospital	PLHIV		Non-HIV household members	
	Average expenditure (Yuan)	Distribution of the medical expenditure (%)	Average expenditure (Yuan)	Distribution of the medical expenditure (%)
Village	171	10.4	191	22.9
Town	537	23.3	532	25.0
County	969	54.4	804	27.2
City	1,084	8.2	2,562	23.5
Others	577	3.7	85	1.4
Total	574	100.0	442	100.0

Table 9.5 Average medical expenditures in the preceding month, by province

(Yuan)

Province	Household members	Village	Town	County	City	Others	Total
Yunnan	PLHIV	180	804	1,416	1,670	800	686
	Non-HIV household members	106	649	1,096	2,786	103	527
Guangxi	PLHIV	138	52	684	1,040	---	521
	Non-HIV household members	281	148	678	---	42	352
Sichuan	PLHIV	69	609	1,948	960	426	829
	Non-HIV household members	50	77	438	773	61	200
Hubei	PLHIV	213	229	605	474	---	280
	Non-HIV household members	140	821	300	5,731	---	721
Shanxi	PLHIV	156	182	52	163	---	154
	Non-HIV household members	222	100	614	---	50	263

Table 9.6 Distribution of medical expenditures in the preceding month, by province

(Percent)

Province	Household members	Village	Town	County	City	Others
Yunnan	PLHIV	11.6	32.9	44.4	7.5	3.6
	Non-HIV household members	8.6	36.4	23.0	29.9	2.1
Guangxi	PLHIV	3.4	1.6	89.0	6.0	0.0
	Non-HIV household members	51.6	3.7	44.3	0.0	0.4
Sichuan	PLHIV	0.8	20.8	47.9	16.4	14.1
	Non-HIV household members	9.5	9.9	18.8	57.9	3.9
Hubei	PLHIV	27.3	38.1	23.1	11.5	0.0
	Non-HIV household members	11.6	35.7	1.0	51.7	0.0
Shanxi	PLHIV	76.0	17.0	1.9	5.1	0.0
	Non-HIV household members	66.4	1.3	31.4	0.0	0.9

Table 9.7 shows that for all those surveyed the great majority of payment was made in cash. More PLHIV received insurance or other assistance, but that number is still low; only 4.6 percent of expenses were covered in this way.

Table 9.7 Means of payment for treatment in the preceding month

(Percent)

Payment	PLHIV	Non-HIV household members
Cash	93.7	95.8
Insurance or other assistance	4.6	0.7
Balance unpaid	1.2	1.0
Others	0.5	2.5

9.2 Reason for not seeking treatment

17.8 percent of PLHIV and 14.0 percent of respondents from non-HIV households reported that they did not seek treatment when they were ill in the last month. The reason cited by 90.9 percent of respondents from non-HIV households is that they took medicine and treated themselves at home. Only 2.7 percent of this group cited lack of money as the main reason why they did not seek outside treatment. However, only 42.2 percent of PLHIV who didn't seek treatment reported that they treated themselves at home. 26 percent of them reported that they did not think their illness was serious, and another 26% reported that they did not have money to see a doctor. Since PLHIV are more likely to suffer opportunistic infections, it is dangerous for them not to see a doctor or take medicine when they are ill. It is noteworthy that the proportion of PLHIV who have not sought treatment from doctors or treated themselves at home is highest in Yunnan province, at 84 percent.

Table 9.8 Reason for not go to see the doctor

(Percent)

Household members	Percent that didn't seek treatment	Reason for not seeing a doctor			
		Treated themselves at home	Not serious	No money	Others
PLHIV	17.8	42.2	26.0	26.0	5.8
Non-HIV household members	14.0	90.9	0.0	2.7	6.4

Table 9.9 Reason for not seeking treatment, by province

(Percent)

Province	Household members	Percent of not to see doctor	Reason for not seeking treatment			
			Treated themselves at home	Not serious	No money	Others
Yunnan	PLHIV	19.3	16.0	42.0	42.0	0.0
	Non-HIV household members	17.2	89.6	0.0	0.0	10.4
Guangxi	PLHIV	15.5	53.8	15.4	15.4	15.4
	Non-HIV household members	9.8	100.0	0.0	0.0	0.0
Sichuan	PLHIV	22.8	81.0	0.0	19.0	0.0
	Non-HIV household members	24.0	81.4	0.0	0.0	18.6
Hubei	PLHIV	18.1	63.6	36.4	0.0	0.0
	Non-HIV household members	6.2	100.0	0.0	0.0	0.0
Shanxi	PLHIV	10.3	68.8	0.0	0.0	31.2
	Non-HIV household members	2.2	100.0	0.0	0.0	0.0

9.3 Observations

Whereas non-HIV generally seeks treatment in the nearest facility, PLHIV health care seeking behavior is heavily influenced by the availability of special facilities for them. Choices of both PLHIV and non-HIV are also influenced by the RCMS, which is spreading rapidly in rural China. The main method of the payment is cash. PLHIV have spent more on medical expenditures than non-HIV in the preceding month -- mostly because of opportunistic infections. 17.8 percent of the PLHIV reported that they did not seek treatment, and more than half of these people did not even treat themselves at home, mostly because they thought the illness was not serious or because they felt they could not afford treatment.

PLHIV medical expenses are primarily for ARV and OI treatment. The Chinese government has introduced policies that ensure that PLHIV in China who meet the eligibility requirements can receive free ARV. By the end of September 2008, the provision of ARV was expanded to 1,495 counties in all 31 provinces. The cumulative number of people aged 15 and above who commenced treatment was 53,330. And a total of 1,144 children from 190 counties and districts of 21 provinces had received ARV (Zheng Lingqiao, 2008).

With regard to OI treatment, according to current policy the government would reduce parts of the expenditure of OI treatment and medicine for the PLHIV who were in economic difficulties in

both rural and in urban areas. Free OI treatment is provided in some provinces. By June 2007, over 36,000 PLHIV had received OI prevention and treatment services in areas covered by the Global Fund projects (SCAWCO et al, 2007).

At present, there are still some problems in carrying out free ARV treatment and OI treatment. For example, Chinese Academy of Social Sciences Social Policy Research Centre pointed out in a survey that there are a lot of "floating population", internal migrants, who were not included in the coverage of local ARV treatment plan, because of the lack of clear residence status. The same study also found that there are more and more employees in urban areas who were not included in the coverage of their local ARV treatment plan. This report found that there are relatively few fixed health care facility which offer ARV treatment (Chinese Academy of Social Sciences Social Policy Research Centre, 2008). Furthermore, the implementation of policies on treatment-related testing and OI treatment has been uneven in different areas. Some locations lack clear policies on treatment-related testing and OI treatment (SCAWCO et al, 2007). As noted earlier in this chapter, this survey found a significant difference in the availability of free ARV treatment in different provinces. In areas where the major transmission mode was commercial blood sales, the PLHIV could get free ARV and some medical support in village or town hospital. For example, PLHIV in Hubei could get free ARV, free CD4 testing, and they could also get support with the heavy burden of OI treatment. However, in areas where the major transmission mode is IDU, such as Yunnan and Guangxi, PLHIV have to go to county hospitals to get free ARV treatment, which is often a long and expensive trip. In these areas PLHIV also have to pay themselves for OI treatment. A survey conducted by Wang Qilin et al in Yunnan found that 20.6 percent of PLHIV in hospitals were receiving some reduction in costs of their hospitalization treatments due to local policy. However survey found that only patients in provincial hospitals could get this reduction; patients in county or prefecture hospitals could not enjoy the favorable policy (Wang Qilin et al, 2008).

In this survey we have found that the per capita medical expenditures of HIV households were 1,105 Yuan in 2007, nearly 30 percent of household per capita income (3,911 Yuan). For non-HIV households the ratio of medical expenditures to household income was less than 10 percent. It is noticed that most of the PLHIV interviewed are still in good health condition; the number of people who need OI treatment is not very great. However, a report on conditions in Henan, a high prevalence province where the disease is relatively advanced, found that as of September 2007 per capita expenditures for OI treatment were 4,680 Yuan, if this cost was totally paid by the

PLHIV themselves, it would be far beyond the paying capacity of PLHIV themselves and therefore borne by the provincial authorities (Analysis of Relative Policies of HIV/AIDS Prevention and Treatment in China -- Chinese Academy of Social Sciences Social Policy Research Centre, 2008). HIV/AIDS is a long-term disease and cannot be cured now, so the PLHIV have to face the risk of opportunistic infection for a long time, which means the expenditures on OI treatment will continue and increase over time as the disease worsens. At the same time, when there is no efficient support activity the ability of HIV households to pay for this treatment will decrease due to their declining work capacity and loss of income. Without assistance, HIV households cannot afford the long-term expenditure of OI treatment, which will pose a challenge for sustainable and effective ARV treatment.

As number of PLHIV increases the demands for government medical support will pose a serious challenge to the current medical support structures. At present, the provision of medical support for PLHIV mainly relies on the medical service system and special projects which are specifically targeting PLHIV. The funds for these programs mainly come from transfers from the central government, local finances or projects like the Global Fund, so are often not sustainable. It has been pointed out in “To Face up to AIDS”, introduced by the World Bank, that it would be neither fair nor efficient if the government provides more assistance to PLHIV than it does to other patients (World Bank, 1997). In some developed countries like Australia and England, the HIV/AIDS financing has been folded into the mainstream health financing system since the mid-1990s. As a result, in order to achieve the principle of sustainable, effective and fair, it is necessary to find ways to integrate medical support for PLHIV into the current public health system, and cover the PLHIV under the medical insurance system.

In recent years, the government medical insurance system has been steadily improving, and the commercial insurance market has become more and more advanced. In urban areas the basic medical insurance system for employees in urban areas covers urban workers, while the basic medical insurance system for residents in urban areas covers other urban residents, including the unemployed. In the countryside the RCMS provides medical insurance for most people and the medical support system provides special assistance for people in difficulty in both rural and urban areas (Ministry of Health, 2008). This situation provides foundation for normalizing medical assistance to PLHIV. However, at present, HIV/AIDS medical support is still not included in current medical insurance system.

There are only a few urban areas where OI treatment expenditures are covered by basic medical insurance. For example, Nanjing city provided fixed assistance for the clinic expenditures of PLHIV, with an upper limit of 1,000 Yuan per capita per month, managed and used by specific health facilities (Nanjing Bureau of Health et al, 2006). In Jiangxi province, PLHIV could be included the basic medical insurance system for employees or residents in urban areas (Jiangxi Ministry of Labor and Social Security, 2008). The ARV medicines were included in the medicine list of basic medical insurance system, and could be paid by the medical insurance (Li Qian, 2009). However, in most of the country HIV/AIDS is not included in the coverage of basic medical insurance system in urban areas, including high prevalence areas. This problem is further compounded by the frequent unwillingness of PLHIV to disclose their illness in order to register for insurance, because of fear of discrimination in their communities. Furthermore, even when they are eligible and enrolled in this insurance, the reimbursement rate is often limited because HIV/AIDS was not included under "serious disease" reimbursement policies. At present, the basic medical insurance system for employees/residents in urban areas is still being developed and improved, providing both an opportunity and a challenge. Steps need to be taken to ensure that PLHIV can participate in this system, and the rules of the system should be formulated based on the need to provide fair and adequate insurance for people suffering from HIV/AIDS.

In the countryside, RCMS also needs to be managed with the needs of PLHIV in mind. As of the end of Sep. 2008, there are 2,729 counties (cities/sections) where the new type of rural cooperative medical system is underway, and there are 814 million rural people enrolled in the system. The national participation rate is 91.5% (Ministry of Health, 2008). Because the epidemic of HIV/AIDS occurs primarily in rural areas in China, there is an urgent need to scale up the RCMS to reduce the medical burden of PLHIV. However, there are still some challenges in covering HIV/AIDS treatment under RCMS. According to this survey, and documents collected that the authors collected, there are only a few regions where OI treatment expenditures are included among treatments eligible for reimbursement under the RCMS. Although this survey found that 73.5% of the PLHIV are enrolled in the RCMS or other medical insurance, only routine illnesses are covered by RCMS. Wang Qilin et al found in Yunnan found that although RCMS enrollment premiums are lower than those of the urban basic medical insurance system, the reimbursement rate is also much lower (Wang Qilin et al, 2008). Zhang Liwen analyzed the option of including HIV/AIDS care under the RCMS in Butuo county Sichuan province. He found that the level of the new type of rural cooperative medical system was quite low, and the insurance could only cover a small part of medical expense of PLHIV (Zhang Liwen, 2006). At the same time, Pu Shilu et al have noted

that the higher demands and treatment costs of PLHIV would present challenges to the stability and fairness of RCMS, if they are brought into this program (Pu Shilu et al, 2005). The results above indicate that there is a need to explore and pilot approaches to include HIV/AIDS into the RCMS.

There are some areas of China where special HIV/AIDS related assistance is offered. In Zhejiang province, HIV/AIDS is included in the special medical support fund, and the expenditures of HIV/AIDS treatment could all be free (Zhejiang Ministry of Health et al, 2004). Suzhou city, in Jiangsu Province, also covers HIV/AIDS in its special medical support fund, and HIV/AIDS treatment expenses could be reduced by half (Suzhou Bureau of Health, 2004). During the research we also found that a small percentage of PLHIV had received special medical support when they were in the hospital. However, the target group of the medical support in rural and urban areas is all the people facing economic difficulty, and the limited overall funding means that resources which could be distributed to PLHIV are generally insufficient.

As a makeup to the medical insurance system introduced by government, commercial insurance could help the patients to reduce medical burden efficiently. However, currently, there is no commercial insurance targeted on PLHIV in China, and the PLHIV is excluded in all the types of commercial insurance now. The HIV/AIDS is only concerned in some insurance which were limited, strictly and only for special groups. Such as Xinhua Insurance only aimed at paramedics; Taiping Insurance regulated the participants could only be infected by blood transfusion; The "HIV/AIDS group insurance" introduced by Taiping Insurance regulated the target groups were special group and special occupation, such as paramedics, law enforcement officials who have more opportunity to be infected (Huang Lei, 2005. Liang Lei, 2004). It is necessary to include the HIV/AIDS in the coverage of commercial insurance, especially in the background that the commercial insurance keeps developing in China now.

In summary, PLHIV face huge medical expenditures over an extended period of time. At present provision of support for HIV/AIDS treatment is still specific and ad hoc, and as a result there are very few PLHIV who receive sufficient support to allow them to manage their huge burden. It is necessary to fold HIV/AIDS prevention and treatment activities into the current medical insurance system, and to do so on a clear, fair and sustainable basis. If this is achieved, and the administration of HIV/AIDS medical support is recognized as one central component of the overall development of public health, and HIV/AIDS is mainstreamed within general health system; it will be able to provide HIV/AIDS medical support normally and efficiently.

Chapter 10 Impact of HIV/AIDS on Marriage and Household Structure

The impact of the HIV/AIDS epidemic is not limited to direct impact on the physical and psychological health of the PLHIV. It also has a strong impact on the normal functioning and structure of PLHIV households, undermining the basic economic and social unit of rural Chinese life. When the stability and integrity of a family are weakened the impact on family members is great. How does this happen? For one thing, HIV may destroy the marriage prospects of the PLHIV and even of other family members in HIV households. It can cause the dislocation or dissolution of the HIV household, and increase the number of households headed by grandparents or by women without husbands. HIV/AIDS can also change the normal household structure and weaken the effective functioning of the family. The change of household structure would not only affect the life of the PLHIV, but also affect the other persons in the family, especially the elderly and children.

This chapter will compare and analyze the marital status, household size and household structure of both HIV households and non-HIV households, to analyze the nature and extent of the impact of HIV/AIDS on the household.

10.1 Impact of HIV/AIDS on marriage

Marriage is generally the foundation of a family and plays a very important role in ensuring the stability and integrity of a family. Most of the respondents interviewed were in the age group 20 to 50 years old, i.e. at an age when they would normally be married. But compared to non-HIV respondents of the same age, a much higher percentage of PLHIV are unmarried/single (Table 10.1). The proportion of PLHIV in this age group who are in their first marriage is nearly 30 percent lower than that of non-HIV respondents (57.8% and 86.1%), while the proportion of PLHIV who are divorced, widowed and remarried is higher, strongly indicating that HIV destroys the normal marital status of PLHIV.

The marital status of PLHIV in the five provinces surveyed is presented in Table 10.1. In Sichuan

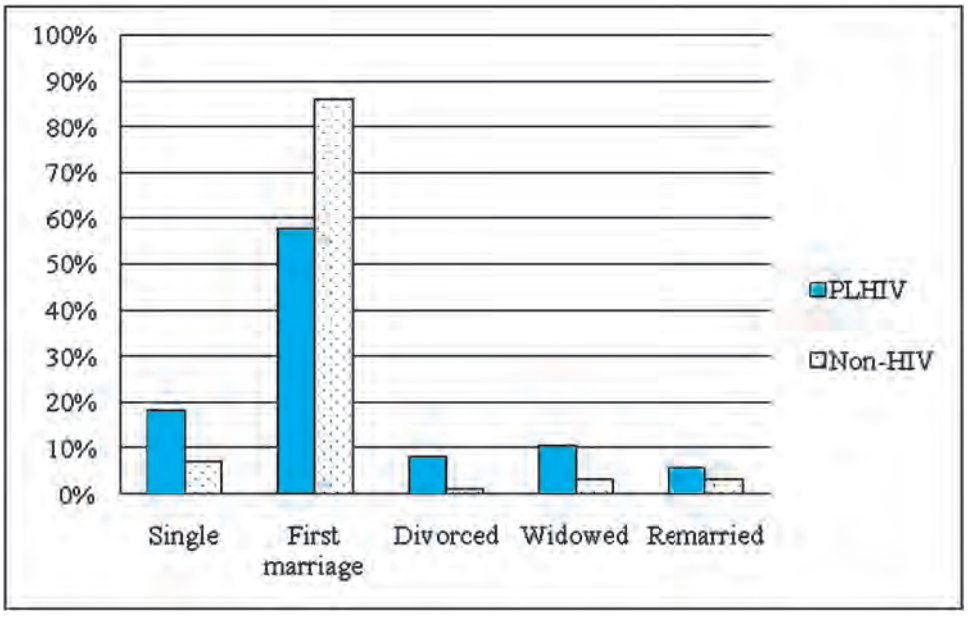
and Guangxi, where the main transmission mode is IDU, the impact on marriage of PLHIV seems to be most severe. The proportions of PLHIV who are single/unmarried (Guangxi 29.5%, Sichuan 30.3%) and divorced (Guangxi 9.4%, Sichuan 18.9%) are the highest. While it is possible that the IDU itself may also be the cause of marital difficulties, the fact that stigma and discrimination are more serious in these provinces than in the other surveyed regions (as discussed in chapter 4) is likely also the cause of these problems.

Table 10.1 Marital status of respondents

(Percent)

Respondent	Marital status	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
PLHIV	Single	12.1	29.5	30.3	6.9	0.9	18.1
	First marriage	59.7	52.3	37.3	72.5	79.2	57.8
	Divorced	6.9	9.4	18.9	1.7	5.9	8.1
	Widowed	12.6	7.7	6.8	13.0	9.2	10.4
	Remarried	8.7	1.1	6.7	5.9	4.8	5.6
Non-HIV	Single	4.5	13.1	3.5	1.7	1.4	7.0
	First marriage	85.1	84.7	82.7	95.0	95.9	86.1
	Divorced	1.8	0.0	4.8	0.0	0.0	1.1
	Widowed	3.8	2.2	3.3	0.5	1.1	2.9
	Remarried	4.8	0.0	5.7	2.8	1.6	2.9

Figure 10.1 Marital status of respondents



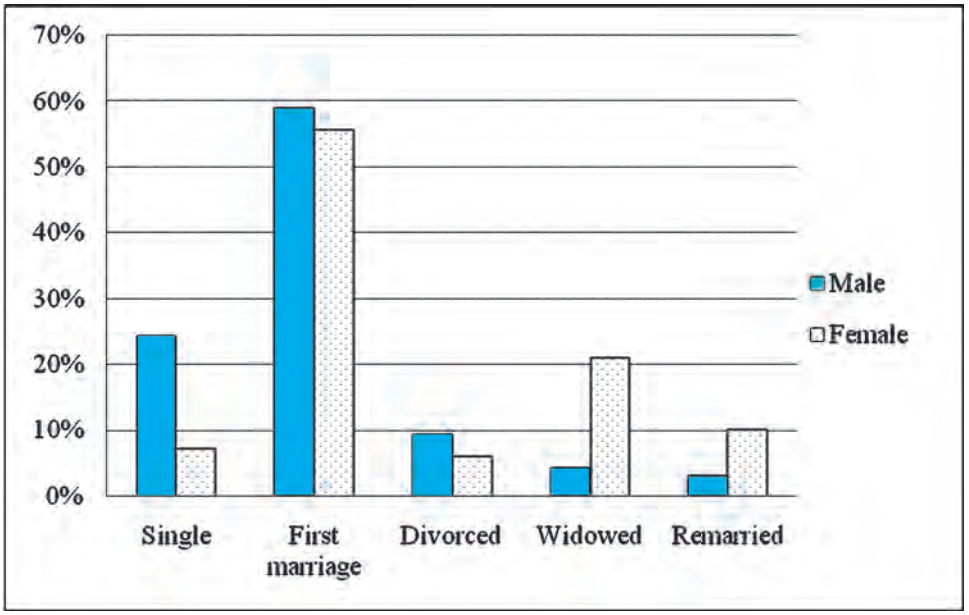
The share of male PLHIV who are single, in their first marriage or divorced is considerably higher than for female PLHIV; while the share of males who are widowed or in a second marriage is lower (Table 10.2). As many female PLHIV are infected through sexual contact with their husbands, it is understandable that HIV positive husbands tend to die earlier than HIV positive wives. These patterns in gender differences in marital status are largely the same across all five provinces, with the exception of Hubei.

Table 10.2 Marital status of respondents by gender

(Percent)

Respondent	Marital status	Yunnan		Guangxi		Sichuan		Hubei		Shanxi		Total	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
PLHIV	Single	18.9	2.3	35.0	15.8	33.1	23.8	8.8	4.6	1.4	0.0	24.4	7.2
	First marriage	66.5	50.1	49.6	59.3	36.3	39.9	71.5	73.9	78.8	80.1	58.9	55.6
	Divorced	7.6	5.9	10.1	7.7	22.4	10.9	1.1	2.3	8.7	1.2	9.3	6.1
	Widowed	3.0	26.3	4.3	16.0	2.7	16.1	14.1	11.6	6.9	12.9	4.3	21.0
	Remarried	4.0	15.4	1.0	1.2	5.5	9.3	4.5	7.6	4.2	5.8	3.1	10.1
Non-HIV	Single	7.2	2.4	21.5	3.1	4.6	2.7	2.7	0.9	2.6	0.0	12.0	2.4
	First marriage	87.0	83.4	77.8	92.9	79.8	84.8	93.9	95.9	94.3	97.7	84.0	87.9
	Divorced	1.1	2.4	0.0	0.0	6.0	4.0	0.0	0.0	0.0	0.0	0.8	1.5
	Widowed	0.7	6.4	0.7	4.0	0.0	5.5	0.0	0.9	0.9	1.4	0.6	5.0
	Remarried	4.0	5.4	0.0	0.0	9.6	3.0	3.4	2.3	2.2	0.9	2.6	3.2

Figure 10.2 Marital status of PLHIV by gender



10.2 Impact of HIV/AIDS on household structure

Based on the work of Fei Xiaotong, the term household structure refers to the number and composition of the members of the household, and the nature and form of interactions among them (Fei Xiaotong, 1986).

One way in which HIV/AIDS affects household structure is through its impact on household size. While the average household size of the non-HIV households is 4.4, the size of HIV households is lower at 4.0. With the sole exception of Hubei, the size of HIV households was smaller in all provinces surveyed, despite the differences among them in mode of transmission, employment status, education and other key characteristics of their PLHIV (Table 10.4). Hubei's widespread implementation of the Minimum Living Standard Allowance (MLSA), a key social safety net program, encourages families to stay together, because in any household with one eligible family member the stipend is paid to all other members as well. This policy is far more widely implemented in Hubei than elsewhere.

Table 10.3 Household size

(Persons)

Household size	HIV household	Non-HIV household
Household size	4.0	4.4
Standard deviation	1.6	1.4
The minimum	1.0	1.0
The maximum	12.0	10.0

Table 10.4 Household size in different areas

(Persons)

Household	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV HHs	4.2	4.0	3.1	4.0	4.1	4.0
Non-HIV HHs	4.3	4.8	3.7	4.0	4.7	4.4
T	2.485	17.023	7.520	-0.342	6.732	17.589
P	0.013	0.000	0.000	0.732	0.000	0.000

Generally speaking, the household structure can be divided into nuclear family[1], stem family[2] and combined family[3].

Most of the households interviewed are nuclear families (Table 10.5). The proportion of nuclear

families among HIV households is 50.7% whereas among non-HIV households it is higher at 62.3%. 41.1 percent of the HIV households surveyed are stem families, while in the case of non-HIV households this percentage is lower at 33.4%. In traditional stem families, grown children take care of both the elderly and their own children, however in HIV stem families it is often the case that the elderly in HIV households have to look after both the PLHIV and the PLHIV's children. The survey found that 2.9 percent of HIV households and 1.0 percent of non-HIV households are one generation families[4], in which the unmarried respondent lived alone or lived with other unmarried brothers or sisters.

Household structure, sorted by province, is presented in Table 10.5. Most of the households in each province are nuclear families, while the shares of stem families, combined families and one generation families are significantly higher for HIV households. However, in Guangxi and Sichuan the proportion of one generation families is considerably higher (5.9% and 6.2%), reflecting the larger number of unmarried PLHIV in those provinces, as already noted above.

Table 10.5 Household structure

(Percent)

Household	Household structure	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
HIV HHs	Nuclear	47.2	53.6	51.7	58.7	51.8	50.7
	Stem	45.7	34.5	37.1	40.2	47.3	41.1
	Combined	6.2	6.0	5.0	0.0	0.9	5.3
	One generation	0.9	5.9	6.2	1.1	0.0	2.9
Non-HIV HHs	Nuclear	60.8	63.7	68.0	69.5	49.4	62.3
	Stem	33.9	32.6	26.5	30.5	46.8	33.4
	Combined	4.8	2.2	0.9	0.0	3.8	3.3
	One generation	0.5	1.5	4.6	0.0	0.0	1.0

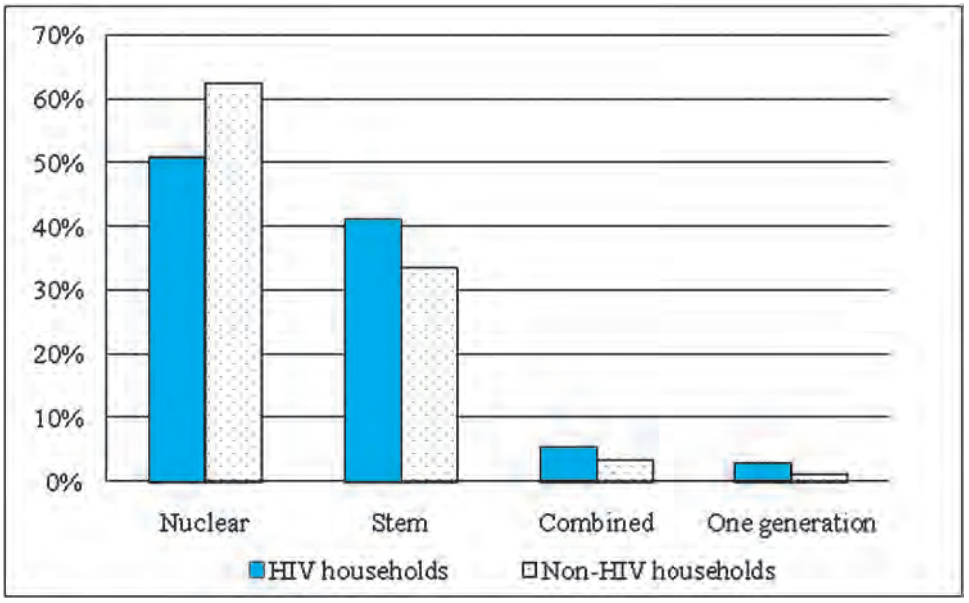
1 Nuclear family: A type of family where a married couple live with unmarried children.

2 Stem family: A type of family where a married couple live with married children.

3 Combined family: A type of family where there were at least two married couples in the same generation.

4 One generation family: A type of family where the unmarried respondent lived alone or lived with other unmarried brothers/sisters.

Figure 10.3 Household stucture



Since the large majority of families have more than one generation in a household, the distribution of PLHIV across generations in the family for each form of household structure was investigated by this survey. Results are presented in Table 10.6.

In nuclear PLHIV families, 75.2 percent of PLHIV are in the first generation of the family, who has the key parental responsibilities. As a result, the lives of their children will be seriously affected by their parents' HIV status. 18.5 percent of PHLIV are in the second generation, i.e. are children still living with their parents, for whom the elderly parents have to assume main responsibility for support and care. In the other 6.3 percent of the households, there are PLHIV in both of these generations, among both parents and children, an extremely difficult set of circumstances.

In stem families, 79.7 percent of PLHIV are in the second generation of the family; they have to assume responsibility not only for supporting the elderly but also for raising the children. However, these people would be unable to take on these responsibilities due to HIV/AIDS. In 19.9 percent of the stem family households the PLHIV live in the first generation, either parents or grandparents whose children are not infected. Compared to other HIV households, this type of household may face fewer difficulties. Interestingly, among the stem families in Sichuan province, all the PLHIV are in the second generation of the family.

The distribution of PLHIV in different generations in combined families is almost the same as in

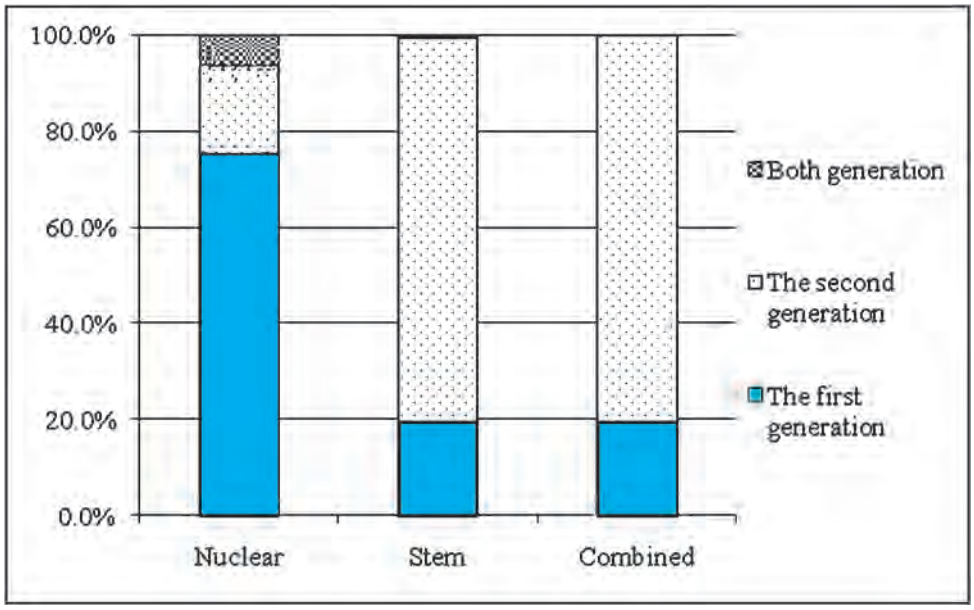
stem families. However, they usually have brothers or sisters in the second generation; as a result the difficulties of this type of family would be quite reduced. However, if there is more than one PLHIV in the second generation, the family would have to face more stress.

Table 10.6 Distribution of PLHIV in different generation by household structure

(Percent)

Household structure	Generation of PLHIV	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Nuclear	The first generation	80.7	64.6	71.4	81.9	91.4	75.2
	The second generation	8.4	34.1	26.5	10.1	1.0	18.5
	Both generation	10.9	1.3	2.1	8.0	7.6	6.3
Stem	The first generation	25.4	13.2	0.0	22.2	40.1	19.9
	The second generation	74.6	86.8	100.0	77.8	53.1	79.7
	Both generation	0.0	0.0	0.0	0.0	6.8	0.4
Combined	The first generation	13.8	21.9	32.2	0.0	50.0	19.8
	The second generation	86.2	78.1	67.8	0.0	50.0	80.2
	Both generations	0.0	0.0	0.0	0.0	0.0	0.0

Figure 10.4 Distribution of PLHIV in different generation by household structure



10.3 Observations

The analysis above shows that the impact of HIV/AIDS on marriage and household structure can be severe. Most obvious is the much higher proportion of PLHIV who are single, widowed or divorced, compared to their cohorts in non-HIV households. When marriages are undermined it is not only the PHLIV who are hurt; the development of their children is also influenced negatively.

In comparison with non-HIV, a higher percentage of the grown PLHIV respondents are still living with their parents as they need day to day assistance from their parents, in part due to their difficulty in maintaining their own marriages, imposing economic and physical stress on the elderly. This situation leads to the increased number of stem families and changes in household structure. Most of the PLHIV are in the first, or most important generation in their families, because of which they have heavy responsibilities for caring both for their children and elderly parents. Inability to perform this role due to HIV/AIDS and its accompanying loss of work capacity and health will weaken or halt the proper functioning of their families and affect all generations. This can have broader social impact as well.

Other ways in which traditional family structure and functioning are severely affected by HIV/AIDS, include the inability of many PLHIV to find marriage partners, or having married, their inability to care for their children and their elderly parents. Divorce rates are much higher among PLHIV than others, meaning that many of them have to deal with the stress of HIV/AIDS without the support and care of a spouse. Children's development can be undermined by their parents' illness, and elderly have to take on large responsibilities that they may no longer be capable of bearing. The lower marriage rate for PLHIV is linked to the smaller HIV household size that the survey found, which creates additional stress, and the inability of some PLHIV to support their children and themselves is most likely the reason why the percentage of stem families among HIV households is higher than for non-HIV. In rural areas in particular, where the family is the basic unit of agricultural production, instability like this can have strong consequences for the PLHIV, their families, and for the whole community. Yang Hongmei et al have also pointed out that HIV/AIDS could destroy the household structure. They found that the psychology and physical stress caused by the disease would lead to the breach of a family (divorce, separation), and the death of PLHIV would lead to single parent family or orphan family (Yang Hongmei et al, 2001). Xu Wenqing et al found that for the orphans caused by HIV/AIDS, their grades, social communication, emotions and behaviors were affected to some extent (Xu Wenqing et al, 2004).

At present, HIV-affected households have already been included in the target group when conducting care and support activities. Provinces such as Henan and Hubei have introduced the MLSA for entire households, that is: if one person in a family is infected, all the family members could receive the MLSA. Yingjiang County in Yunnan places high priority on restoring a healthy household environment for orphans caused by HIV/AIDS; they have provided support for orphans

and at the same time they have also provided relevant trainings for guardians. However, there are still some weaknesses in the way these activities are conducted: firstly, the targeted group was not totally covered. For example, Xu Qin et al felt that the needs of the elderly are not appropriately factored in, and the elderly should be involved into the HIV/AIDS policy framework and projects (Xu Qin et al, 2006). However, there are almost no care and support policies for elderly affected by HIV/AIDS. Xu Wenqing et al also thought that support for orphans caused by HIV/AIDS should be provided at the very start when their parents were ill, and that this support should include social communication and emotional support (Xu Wenqing et al, 2006). However, most of the care and support is only provided after the children are orphaned.

Secondly, the pattern of the care and support activities conducted now is quite narrowly focused on improving the economic status of the HIV households, and neglects issues related to the weakening of household functioning. For example, it is found in this survey that the current care and support activities mainly take the form of life support, whereas other essential activities such as psychological support, emotional support and daily care are still lacking. As a result it is difficult to make up the loss of household function. Thirdly, most of the staff involved in running these activities is from health departments, who are far removed from HIV households and lack relevant training. It is difficult for them to visit families when needed and provide daily life support.

As a result, in order to help HIV households more efficiently, it is necessary to revise and improve the current pattern of support. Examples from abroad indicate that one efficient way to help PLHIV and their families would be to use NGOs and social workers in programs that provide community care and support to HIV households (China CDC et al, 2005).

Community care and support systems already exist in many countries nowadays. They include efforts that focus on policy (for instance, legal services and protection for human rights), economics (for instance, provision of funds, financial assurance, allowance, and providing housing), culture and other issues in socialization. They also directly provide medical services to families and individuals (China-UK HIV/AIDS Prevention and Care Project, 2001). Niu Liquan suggested that activities such as community support, psychological support and taking care of children with AIDS were helpful for public to enhance awareness of HIV/AIDS and eliminate social discrimination. They were also useful in reaching HIV families, allowing them to share experiences and also for fund-raising (Niu Liquan et al, 2006). Research conducted by the Chinese Academy of Social Sciences

Social Policy Research Centre also found that community support can not only solve the problems facing by PLHIV, but can also increase their quality of life quality and reduce the social stress faced by HIV/AIDS orphans. Their effect could extend to reducing the cost of medical treatment, relieving the financial pressure from government and control the spread of AIDS through mobilization of the whole society (Chinese Academy of Social Sciences Social Policy Research Centre, 2008). There are some experiments with community support in China now, some of which have achieved good results. For example, a suburb in Yunnan province develops a module in which the community and family are in charge of taking care of AIDS's orphans. The local Womens Federation provides care and support to young children (Xu Wenqing et al, 2006). However, we need to notice that these are long-term needs that can only be met by long-lasting activities based on day-to-day work. This will be costly in terms of labor and money, and existing sources within communities in our country are not enough. Furthermore, community health centers and volunteers are both in the introductory phase. Hence, we are still only researching in different local areas and trying to introduce a range of sources, and to develop all-around activities for AIDS children across different departments.

Another point is the need for attention to prevent transmission in the marriage when providing daily life support for HIV households. It is found in the survey that the proportion of single PLHIV is quite high, and a high percentage of these people still want to be married and have babies, mostly because of the traditional marriage and family concepts in China. Without attention and care this could lead to the risk of transmission of the disease in the marriage and even transmission from mother to child. In the survey we have found that there are some PLHIV married with their spouses who have not yet disclosed their HIV status, and the spouse was infected. These families not only faced the pain and economic stress caused by HIV/AIDS, but also faced quite large psychological pressure caused by conflicts between spouses, On the other hand, another problem, relating to girls who migrate for marriage in other areas, occurred in economically developed areas in East China in recent years. Mu Fusheng etc have researched 1,284 such women in Taian city, and found that there are 7 PLHIV, and the HIV infection rate among the respondents is 0.55 percent. All the 7 PLHIV came from HIV high prevalence provinces (Mu Fusheng et al, 2006). Although the Marriage Registration Ordinance which was carried out on 1st Oct. 2003 has canceled the request of compelling premarital test, people should not ignore the premarital test, especially for the people who have high risk behavior. Other steps that could reduce or prevent transmission in marriage include strengthening public education regarding HIV/AIDS, strengthening people's consciousness that they should be responsible for the health of their spouse and themselves, and making people pay more attention to the premarital test.

Chapter 11 Quality of Life

The World Health Organization (WHO) has defined a quality of life measurement methodology that is meant to allow comparisons across people of different cultural background and value systems. Quality of life, by this definition, captures people's life experiences in the context of their own goals, expectation and standards (Nkinson C, 1994). The Quality of Life Index takes a broad and comprehensive look at the physical living conditions, health and psychology of a group of people. The survey used WHO's Quality of Life-HIV questionnaire to assess the quality of life of both PLHIV and non-HIV in terms of physical, psychological, social, environmental, self-confidence and independence criteria.

The "Physical" criterion measures pain and discomfort, energy and weariness, sleeping and rest, and clinical symptoms; "Psychological" measures positive feelings, negative feelings, thought, memory, attention and self-respect. "Independence" measures capacity for action, coping with daily life, dependence on medicine and medical treatment and capacity to work. "Social" assesses personal relationships, social support, and sex life and so on. "Environmental" measures a broad range of indicators including physical safety, quality of housing, source of economic income, medical service, social insurance, getting new information, entertainment, traffic, and so on. "Self-confidence" measures the PLHIV's ability to maintain confidence and high spirits.

11.1 Quality of life – overall findings for PLHIV and non-HIV

The average quality of life index for the surveyed PLHIV is 55.1, significantly lower than the 64.9 figure for non-HIV (Table 11.1). In fact, PLHIV quality of life is ranked lower than that of non-HIV according to all six criteria. This is a powerful indication of the impact that HIV/AIDS has on PLHIV in China today.

Distinguishing among the criteria, the quality of life criterion for which PLHIV scored lowest is the 'physical' criterion (53.8), reflecting the impact of HIV/AIDS on health. For non-HIV the lowest score was in the criterion of environment (59.8), indicating that the non-HIV may be more likely to

be dissatisfied with their external environment.

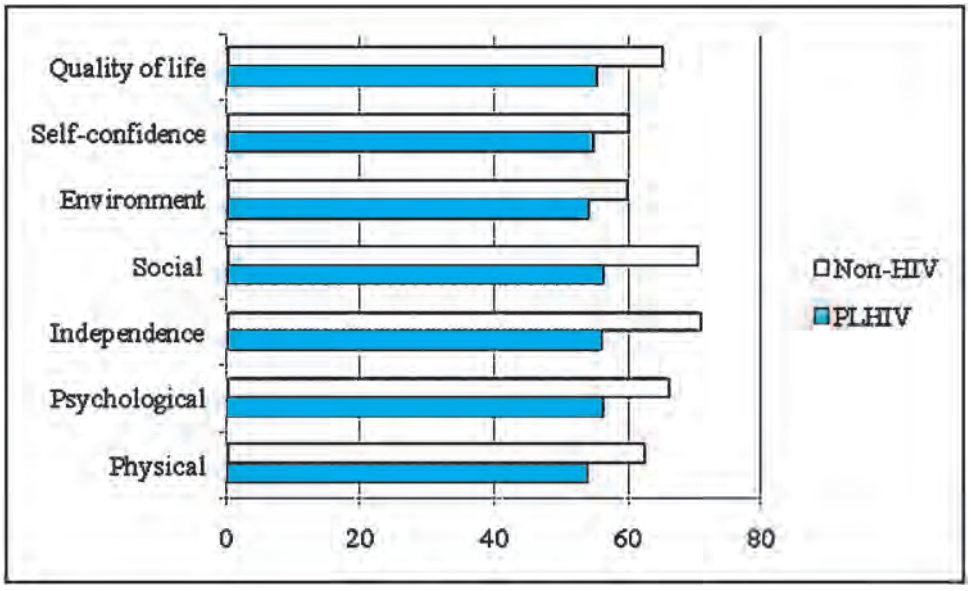
However the most striking differences in quality of life between PLHIV and non-HIV are found in the areas of social life and independence. The independence criterion measures capacity for action, daily life capacity, dependence on medicine and medical treatment and work capacity. The social criterion assesses personal relationships, social support, sex life and so on. The differences indicate that the drop of life quality for PLHIV arises most of all from a decline in work capacity and daily life capacity, and the deterioration of social relationships.

There is little difference between provinces in terms of these findings; the quality of life ranking for PLHIV is much lower in all of them.

Table 11.1 Quality of life ratings, by province

Province	Respondent	Categories						Quality of life
		Physical	Psychological	Independence	Social	Environment	Self-confidence	
Yunnan	PLHIV	58.3	60.6	61.1	61.7	58.0	56.0	59.3
	Non-HIV	64.9	68.0	73.0	71.6	62.0	61.0	66.8
Guangxi	PLHIV	50.8	52.1	51.2	49.0	49.5	52.9	50.9
	Non-HIV	59.1	62.6	68.4	67.9	56.0	58.2	62.0
Sichuan	PLHIV	42.4	47.8	47.1	47.2	49.3	51.3	47.5
	Non-HIV	58.2	63.7	68.7	67.5	57.0	57.9	62.2
Hubei	PLHIV	49.9	56.9	52.4	61.1	54.9	55.8	55.2
	Non-HIV	64.8	69.4	71.4	72.8	64.7	64.3	67.9
Shanxi	PLHIV	52.1	52.6	55.5	56.2	52.8	56.5	54.3
	Non-HIV	64.4	65.3	68.2	73.0	60.4	60.9	65.3
Total	PLHIV	53.8	56.2	55.9	56.2	54.1	54.7	55.1
	Non-HIV	62.5	65.9	70.8	70.3	59.8	60.1	64.9

Figure 11.1 Quality of life ratings



11.2 PLHIV quality of life by gender

The quality of life by gender is presented in Table 11.2. The rating of male PLHIV is lower than for females in all respects. For non-HIVs, however, the overall quality of life rating is higher for men than for women, and the ratings for men are higher in all criteria other than social and environment. At the same time, both male and female PLHIV show lower quality of life than non-HIV according to all six of our criteria. The areas in which male PLHIV are affected more than female are the physical, psychological, independence, social and environmental criteria. Female PLHIV show a sharper decline than male only with respect to self-confidence. This is strong evidence that HIV/AIDS has a markedly greater impact on qualify of life of male PLHIV than female, although both genders are affected negatively.

When we distinguish between male and female PLHIV we find some differences between provinces. The results in Yunnan and Guangxi are roughly the same as for the group as a whole.

Table 11.2 Quality of life ratings, by gender

Province	Respondent	Sex	Categories						Quality of life
			Physical	Psychological	Independence	Social	Environment	Self-confidence	
Yunnan	PLHIV	Male	57.1	59.7	59.9	60.8	57.3	57.3	58.7
		Female	60.1	61.9	62.9	62.9	59.0	54.1	60.1
	Non-HIV	Male	65.6	68.7	72.5	71.6	62.3	61.2	66.9
		Female	64.3	67.5	73.5	71.6	61.9	60.8	66.6
Guangxi	PLHIV	Male	50.9	51.4	49.2	46.6	48.8	54.8	50.3
		Female	50.7	53.8	56.0	54.7	51.2	48.6	52.5
	Non-HIV	Male	60.6	64.1	69.8	67.9	55.5	58.5	62.7
		Female	57.3	60.8	66.6	68.1	56.6	57.8	61.2
Sichuan	PLHIV	Male	42.0	49.6	45.9	45.5	48.9	55.3	47.9
		Female	43.3	43.7	49.9	51.2	50.4	42.4	46.8
	Non-HIV	Male	60.5	62.8	69.0	67.2	54.9	58.1	62.1
		Female	56.7	64.3	68.5	67.6	58.4	57.7	62.2
Hubei	PLHIV	Male	53.0	59.9	53.3	61.7	55.4	57.7	56.8
		Female	46.1	53.2	51.3	60.3	54.2	53.6	53.1
	Non-HIV	Male	66.1	71.9	73.2	72.5	65.2	68.8	69.6
		Female	63.7	67.2	69.9	73.0	64.2	60.5	66.4
Shanxi	PLHIV	Male	52.7	54.8	56.4	55.3	52.7	58.6	55.1
		Female	51.1	48.8	53.7	57.6	53.0	52.9	52.9
	Non-HIV	Male	63.2	66.7	67.8	73.3	62.0	62.3	65.8
		Female	65.6	63.8	68.7	72.6	58.7	59.4	64.8
Total	PLHIV	Male	53.2	55.7	54.3	54.3	53.2	56.3	54.5
		Female	54.8	57.2	58.7	59.5	55.6	51.8	56.3
	Non-HIV	Male	63.3	66.7	71.1	70.1	59.5	60.6	65.2
		Female	61.7	65.1	70.6	70.4	60.1	59.6	64.6

11.3 PLHIV quality of life by marital status

Marital status has a clear impact on PLHIV quality of life. Although for non-HIV the quality of life for unmarried individuals is as high as that of married people, a large quality of life gap emerges between married and single PLHIV, with respect to the overall index and in each of the six criteria (Table 11.3). A possible explanation would be that unmarried PLHIV lack the supportive environment and social interactions that married PLHIV have.

Table 11.3 Quality of life ratings, by marital status

Respondent	Marital status	Categories						Quality of life
		Physical	Psychological	Independence	Social	Environment	Self-confidence	
PLHIV	Single	48.4	49.7	52.3	46.8	49.4	51.1	49.6
	First marriage	55.0	57.7	56.4	59.0	55.3	55.2	56.4
	Divorced	53.8	54.9	56.9	51.7	53.1	56.7	54.5
	Widowed	56.7	61.3	59.4	59.6	56.7	57.4	58.5
	Remarried	53.8	55.6	56.2	58.5	53.9	53.9	55.3
Non-HIV	Single	62.6	65.1	67.5	67.0	58.7	62.7	63.9
	First marriage	62.7	66.2	71.3	70.9	59.8	60.1	65.2
	Divorced	58.1	50.8	67.8	61.8	51.8	52.7	57.2
	Widowed	60.5	60.7	70.0	62.1	61.6	59.5	62.4
	Remarried	59.0	69.2	67.0	69.7	63.1	55.4	63.9

11.4 PLHIV quality of life by occupation

The quality of life ratings by the occupation of respondents is presented in Table 11.4. The impact of HIV/AIDS on quality of life is most serious for unemployed PLHIV; although the life quality rating for unemployed non-HIV is not very different from those who are employed, unemployed PLHIV score sharply lower than other PLHIV. For unemployed PLHIV, the rating with respect to physical life quality is their lowest indicating that they face the worst health conditions, which might also be the reason for their unemployment.

There is no big difference in quality of life among PLHIV who are working; the rating is roughly the same for all kinds of occupations studied, with the exception of the rating of 67.1 for those in “other occupations”. These are largely salaried employees who have steady jobs and income.

Table 11.4 Quality of life ratings, by occupation

Respondent	Occupation	Categories						Quality of life
		Physical	Psychological	Independence	Social	Environment	Self-confidence	
PLHIV	Cultivation	55.6	57.9	57.9	59.7	54.6	55.3	56.8
	Migrant worker	56.7	58.3	60.3	54.1	55.1	54.6	56.5
	Business	55.0	61.8	55.6	56.3	58.8	57.9	57.6
	Others	56.0	62.4	64.0	62.3	61.0	64.5	61.7
	Unemployed	48.0	50.0	49.0	49.3	51.1	52.2	50.0
Non-HIV	Cultivation	61.9	65.5	71.0	70.1	60.1	59.2	64.7
	Migrant worker	61.9	64.8	67.4	68.1	57.3	60.8	63.4
	Business	70.8	71.4	75.0	73.9	62.0	66.8	70.0
	Others	62.5	66.8	73.1	72.8	62.1	63.4	66.7
	Unemployed	60.7	66.2	70.6	71.1	57.8	59.4	64.3

11.5 PLHIV quality of life by level of education

The quality of life by education level is presented in Table 11.5. PLHIV and members of non-HIV households show opposite trends; for PLHIV, the quality of life goes down with the rise of education level. For the respondents from non-HIV households, the quality of life goes up with education. This counter-intuitive finding for PLHIV may be related to some other factors correlated with years of education, such as the concentration of highly educated PLHIV in Sichuan, where quality of life indicators are lower than other provinces. The trends in each criterion are almost the same as the whole.

Table 11.5 Quality of life ratings, by level of education

Respondent	Education years	Categories						Quality of life
		Physical	Psychological	Independence	Social	Environment	Self-confidence	
PLHIV	0	59.0	62.4	62.1	63.7	58.6	58.4	60.7
	1-6	55.4	56.8	57.2	56.8	54.7	53.9	55.8
	7-9	51.5	53.8	53.3	53.4	52.4	54.5	53.2
	>10	44.9	51.5	49.5	49.8	49.8	53.0	49.7
Non-HIV	0	62.3	62.2	69.7	69.3	57.4	55.3	62.7
	1-6	63.0	64.6	70.1	70.0	59.5	56.9	64.0
	7-9	61.5	67.4	71.6	70.9	60.6	63.5	65.9
	>10	63.2	68.2	71.0	69.7	59.8	66.2	66.3

11.6 PLHIV quality of life by household income

The quality of life when the respondents are sorted by household income is presented in Table 11.6. The results are as would be expected; quality of life goes up with the rise of household income, but is lower -- both overall and in all criteria -- for PLHIV in every income group than for non-HIV of the same income level.

Table 11.6 Quality of life ratings, by household income

Respondent	Household income (Yuan)	Categories						Quality of life
		Physical	Psychological	Independence	Social	Environment	Self-confidence	
PLHIV	<10,000	52.3	54.2	53.5	53.2	50.7	53.4	52.9
	10,000-30,000	53.9	57.8	57.7	58.3	56.1	54.7	56.4
	>30,000	60.5	59.9	61.1	61.7	62.6	60.8	61.1
Non-PLHIV	<10,000	60.3	62.9	68.5	68.8	57.3	54.8	62.1
	10,000-30,000	62.6	66.7	71.2	70.3	59.6	61.6	65.3
	>30,000	66.4	69.3	74.5	73.1	65.5	66.4	69.2

11.7 Multivariate regression analysis on the quality of life of PLHIV

In order to analyze the factors that influence quality of life and the degree of influence, we have taken the quality of life rating as our dependent variable, and taken the following factors as independent variables -- age, sex, years of education, marital status, household size, per capita income, whether or not outside support is received, whether or not respondent has had HIV symptoms in the preceding month, CD4 count, whether the respondent has disclosed their HIV status, whether they have encountered discrimination. The linear regression model has been designed as follows:

$$F = a_0 + \sum_{i=1}^{14} a_i \mathbf{X}_i$$

"F" is the quality of life rating, "a_i" is regression coefficient, x_1 stands for age, x_2 stands for gender, x_3 stands for years of education, $x_{4\text{-}7}$ means marital status, x_8 means household size, x_9 means per capita income, x_{10} means whether or not outside support is received, x_{11} means whether or not respondent has had HIV symptoms in the preceding month, x_{12} means CD4 count, x_{13} means whether the respondent has disclosed their HIV status, x_{14} means whether they have encountered discrimination.

The researchers adopted the stepwise regression method to obtain the multivariate linear regression models. In the model, there are ten independent variables that could affect the quality of life, and four independent -- age, divorce, household size and whether or not outside support is received -- that were dropped.

$$F=59.009-0.803X_{2}-0.292X_{3}-6.225X_{4}+2.675X_{6}-3.584X_{7}+0.794X_{9}-3.184X_{11}$$
$$+0.708X_{12}-5.155X_{13}-9.066X_{14}$$

The results of regression analysis are presented in Table 11.7 ($F=247.865$, $P<0.05$). The results show that the regression model has significance. The multiple correlation coefficients (R) of the model is 0.526, indicating that the dependent variable was moderately correlated with independent variable. The R Square is 0.277, indicating the fitting effect is not very good. Furthermore, the results of the t test of partial regression coefficient of different independent variables show that all P are less than the confidence level (here α is 0.05). The expansion factor VIF of every independent variable is less than 10, indicating no significant multicollinearity.

The standardized regression coefficients show that the most important factor that influences PLHIV quality of life is whether they have encountered discrimination followed by per capita income, whether they have disclosed their HIV status, whether unmarried, whether had HIV symptom in the preceding month and CD4 count. In these factors, “per capita income” and “CD4 count” are positively correlated with quality of life, the others are negatively correlated. The finding that facing discrimination is the most powerful determining factor of PLHIV quality of life, even more important than income, is quite significant.

Table 11.7 Fitting effect of the regression model

	F	P	R	R Square	Adjusted R Square
PLHIV	247.865	0.000	0.526	0.277	0.276

Table 11.8 Coefficients of regression model about quality of life of PLHIV

Variable	B	S.E.	Beta	t	P	95% Confidence interval for B Lower Bound	95% Confidence interval for B Upper Bound	Tolerance	VIF
Constant	59.009	.525		112.301	0.000	57.979	60.039		
X_9-Per capita income	0.794	0.036	0.242	22.236	0.000	0.724	0.864	0.939	1.065
X_{12}-CD4 count	0.708	0.072	0.106	9.897	0.000	0.568	0.849	0.971	1.030
X_6-Widowed	2.675	0.548	0.054	4.879	0.000	1.600	3.750	0.913	1.095
X_2-Sex	-0.803	0.317	-0.028	-2.536	0.011	-1.423	-0.182	0.912	1.096
X_7-Remarried	-3.584	0.656	-0.059	-5.464	0.000	-4.869	-2.298	0.947	1.056
X_3-Education years	-0.292	0.046	-0.072	-6.337	0.000	-0.383	-0.202	0.864	1.157
X_{11}-Whether had HIV symptoms in preceding month	-3.184	0.307	-0.113	-10.385	0.000	-3.786	-2.583	0.947	1.055
X_4-Single	-6.225	0.394	-0.174	-15.802	0.000	-6.997	-5.453	0.920	1.086
X_{13}-Whether disclosed HIV status	-5.155	0.305	-0.187	-16.875	0.000	-5.754	-4.556	0.908	1.101
X_{14}-Whether has encountered discrimination or not	-9.066	0.333	-0.303	-27.213	0.000	-9.719	-8.413	0.901	1.110

Note: 1)Sex: 0-Female, 1-Male;
Martial status: Unmarried, widowed, divorced, remarried is 0-1dummy variables--refer to first married and the spouse live together;
Whether have HIV symptom in last one month: 0-No, 1-Yes;
Whether disclose or not: 0-No, 1-Yes;
Whether has discrimination or not: 0-No, 1-Yes;
2) Quality of life, education years, per capita income, CD4 count is distance variables. The unit of per capita income is "thousand Yuan", the unit of CD4 count is "hundred";
3) The independent variables--age, divorce, household size and whether receive supports or not were not involved into the regression model.

11.8 Observations

In this chapter we have analyzed the quality of life of respondents from HIV and non-HIV households, according to the quality of life questionnaire introduced by WHO. Key findings are that: a) the quality of life of PLHIV has decreased significantly; b) the quality of life of male PLHIV has decreased more than female; c) impact on life quality is particularly harsh for unmarried and

unemployed PLHIV.

The most striking finding of this analysis is that the biggest influencing factors on PLHIV quality of life are discrimination and income, and that the impact of discrimination is greater than that of income.

The quality of life questionnaire is an evaluation based on the subjective feelings of respondents; hence, different people usually have different estimations even for the same living conditions. Although this method of evaluation has this subjective nature, the results of this survey are consistent with the other findings of this survey. More holistic care and support for PLHIV, fully factoring in the importance of psychological well being, confidence and social interactions, can play a large role in letting PLHIV lead the most satisfying and productive lives that they are capable of.

Chapter 12 HIV/AIDS and Gender

Gender inequality persists in China today because of the influence of traditional attitudes. It is particularly serious in economically underdeveloped parts of the country. Our survey found that gender gaps are exacerbated by HIV/AIDS. For example, the added burden on the female PLHIV and household members is greater than for men, women have more difficulty in getting their share of family medical resources and the impact on education of girl children of PLHIV is more serious than on boys.

12.1 Gender differences in work force participation rates and time use patterns

In comparison with male PLHIV, female PLHIV face considerable pressure to continue earning income and support their families, despite their HIV status (Table 12.1). The work force participation rate (WFPR) of women aged 15-59 in non-HIV households is about 6 percent lower than male (male 89.1% and female 83.2%), while the WFPR of female PLHIV is about 6 percent higher than male PLHIV (male 73.7% and female 79.7%). Furthermore, the decline in ability to work of PLHIV in their productive years (as seen from the fact that their WFPR is lower than that of non-HIV), requires other household members to make up the loss, and much of this burden is found to fall on older women and young girls. In HIV households the WFPR of girls aged 0-14 and of women older than 60 are significantly higher than for those groups in non-HIV households. In China, especially in rural areas, the traditional concept has long been “Men do the work outside and women do the housework at home”, which meant that men have tended to assume the lead responsibility for supporting their family. However this traditional division of labor is being undermined by HIV/AIDS; even while women continue to bear the burden of housework, their responsibility for income earning activities outside the home has also increased.

Table 12.1 Work force participation rate by gender

(Percent)

Age (years)	HIV household						Non-HIV household members	
	PLHIV		Non-HIV members		Total			
	Male	Female	Male	Female	Male	Female	Male	Female
0-14	0.0	0.0	1.4	3.7	1.4	3.6	1.9	0.1
15-59	73.7	79.7	82.9	80.9	78.2	80.5	89.1	83.2
60+	73.9	100.0	66.8	45.3	67.7	47.5	45.5	39.1

The time use pattern of PLHIV and their non-HIV family members in the age group 15-59 is presented in Table 12.2. This is an age when people are normally actively engaged in productive labor, if they are not in school. However this table shows that PLHIV work fewer hours per day than non-HIV, and that the reduction in work time by male PLHIV (42 percent) is markedly higher than the reduction for female PLHIV (28 percent). If we look at total productive time (work time plus housework time), the total productive time of women in non-HIV households is 0.7 hours per day more than men's, while female PLHIV work 2.2 hours more per day than male PLHIV. We see that HIV/AIDS intensifies the work pressure on women PLHIV.

Table 12.2 Time use pattern of family members aged 15-59

(Hours/day)

Time use pattern	HIV household				Non-HIV household members	
	PLHIV		Non-HIV members			
	Male	Female	Male	Female	Male	Female
Work time	4.6	4.8	7.1	5.8	8.0	6.7
House work time	1.1	3.1	0.8	2.8	0.7	2.7
Total productive time	5.7	7.9	7.9	8.6	8.7	9.4
Non-working time	18.3	16.1	16.2	15.4	15.3	14.6

Note: Non-working time includes personal health time, relaxation and sleep time, etc.

Figure 12.1 Time use pattern of family members aged 15-59

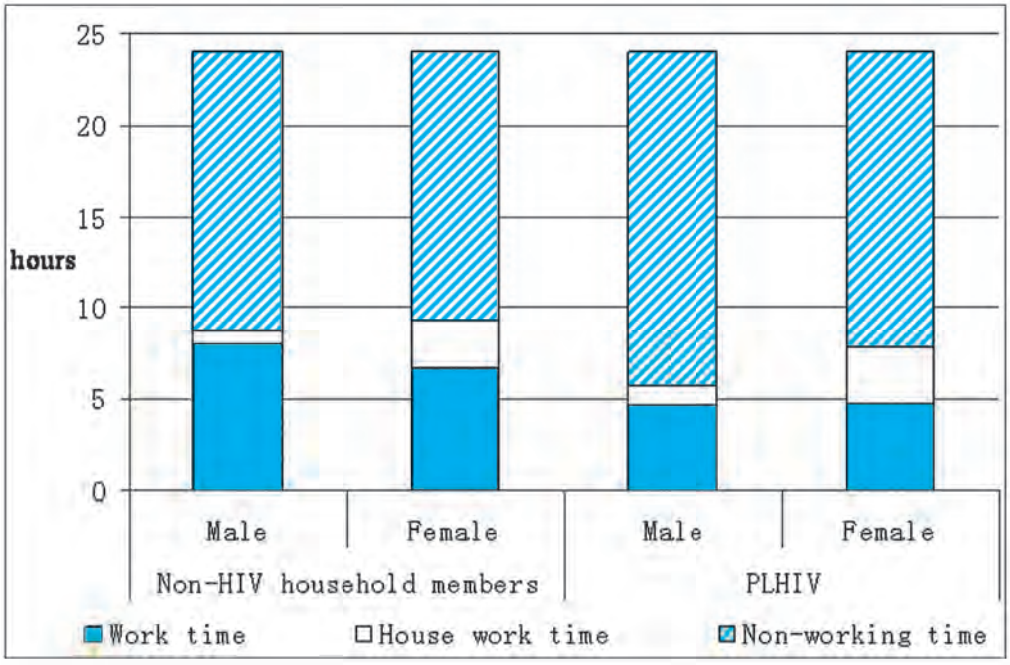


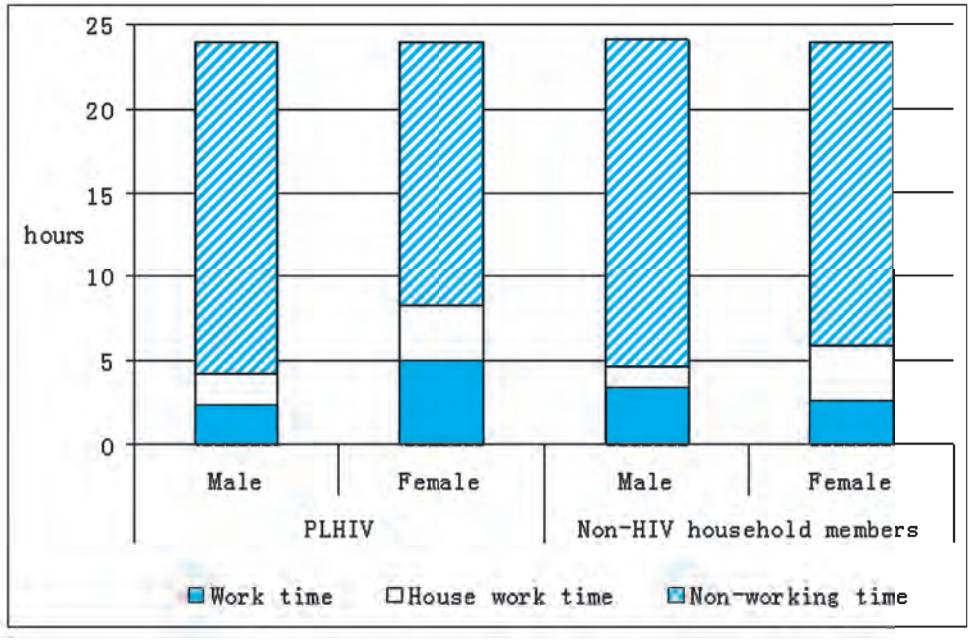
Table 12.1 showed that the work burden of older women in HIV households has increased, compared to non-HIV households. Table 12.3 reconfirms this fact, by studying the time use pattern of people aged 60 and above. The elderly often spend less time in productive and household work as compared to the younger generation, but elderly women who are HIV positive spend significantly more time in productive work (5.0 hours) as compared to their male counterparts, as well as to elderly non-HIV persons. The impact on old female PLHIV seems very severe, in some cases because members of this group lose their traditional means of livelihood; the support of their family or children.

Table 12.3 Time use pattern of family members aged above 60

(Hours/day)

Time use pattern	HIV household				Non-HIV household members	
	PLHIV		Non-HIV members			
	Male	Female	Male	Female	Male	Female
Work time	2.3	5.0	3.3	2.5	3.4	2.6
House work time	1.9	3.3	1.1	2.6	1.3	3.2
Total productive time	4.2	8.3	4.4	5.1	4.7	5.8
Non-working time	19.8	15.7	19.6	18.9	19.4	18.2

Figure 12.2 Time use pattern of family members aged above 60



The time use pattern of spouses in households where both spouses are HIV positive is presented in Table 12.4. If we take the time use pattern of spouses in non-HIV households as an indication of the pattern before contracting HIV/AIDS, we see that the work time of the male PLHIV spouse is reduced by 31 percent, and that of the female PLHIV spouse is reduced only 23 percent. When we look at total productive time (work time plus housework time), the total productive time of the female spouse in non-HIV households is 0.7 hours/day more than the husband's whereas in HIV households the wife works 1.3 hours per day more than her husband. Even when both spouses face HIV/AIDS, the work pressure on the wife increases.

Table 12.4 Time use pattern of spouses in HIV household where both spouses are HIV positive

(Hours/day)

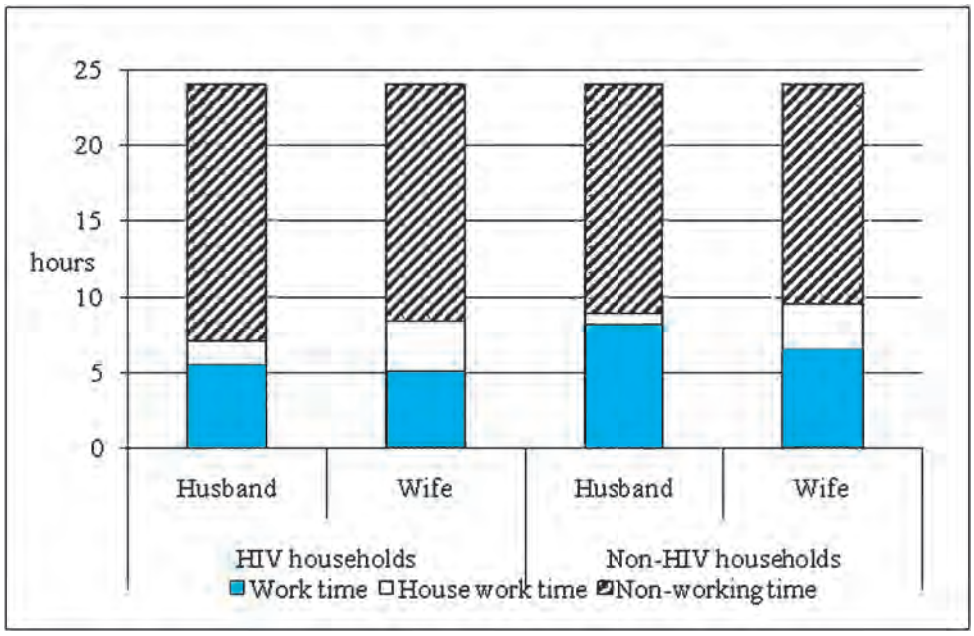
Sex	Time use pattern	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Male	Work time	6.7	3.6	1.4	5.6	6.3	5.5
	House work time	1.4	1.3	1.8	2.2	1.2	1.5
	Personal time	12.1	12.3	12.7	12.7	11.8	12.2
	Relax time	3.8	6.8	8.1	3.5	4.7	4.8
	Non-working time	15.9	19.0	20.8	16.2	16.5	17.0
Female	Work time	6.2	3.5	1.3	4.4	4.2	5.0
	House work time	3.5	2.8	2.0	4.6	3.2	3.3
	Personal time	11.4	12.3	12.7	12.2	11.7	11.8
	Relax time	2.9	5.4	8.0	2.8	4.9	3.9
	Non-working time	14.3	17.7	20.7	15.0	16.6	15.7

Table 12.5 Time use pattern of spouse in non-HIV household

(Hours/day)

Sex	Time use pattern	Yunnan	Guangxi	Sichuan	Hubei	Shanxi	Total
Male	Work time	8.0	8.5	7.5	7.5	7.6	8.1
	House work time	0.8	0.6	1.0	0.6	0.6	0.7
	Personal time	12.1	11.4	11.7	12.2	11.6	11.8
	Relax time	3.2	3.4	3.8	3.7	4.2	3.4
	Non-working time	15.3	14.8	15.5	15.9	15.8	15.2
Female	Work time	7.0	6.6	4.8	5.6	4.8	6.5
	House work time	2.7	3.1	3.9	2.9	4.1	3.0
	Personal time	11.5	11.3	11.8	12.1	11.2	11.5
	Relax time	2.9	3.0	3.5	3.3	3.8	3.0
	Non-working time	14.4	14.3	15.3	15.5	15.1	14.5

Figure 12.3 Time use pattern of spouse



12.2 Gender differences in education

The impact of HIV/AIDS on children's education can be very severe. Our survey found that the education of girls in HIV households is affected more than that of boys, a reflection of gender inequality and the traditional attitude "treat woman as inferior to men". Compared to the enrollment ratio of non-HIV households, the enrollment ratio of boys in HIV household decreases by only 3.3 percent, while the ratio of girls decreases by 12.9 percent. For boys, the average number of years of schooling completed by the children who have dropped out of school is roughly the same in both

HIV and non-HIV households. However for girls the average number of years of schooling is 4.6 years less for the girls of HIV households than for girls from non-HIV households. Girls in HIV households are required to drop out of school and engage in work much more often than boys and much earlier than girls from non-HIV households, sacrificing their futures. This is related to the findings presented above in Table 12.1, which indicated that the WFPR of young girls is higher than boys in HIV households.

Table 12.6 Enrollment ratio and average number of years of education for dropout children by gender

Household	Sex	Enrollment ratio (%)	Average number of years of education for dropout children (years)
HIV household	Boy	92.3	4.8
	Girl	86.2	1.4
Non-HIV household	Boy	95.6	4.7
	Girl	99.1	6.0

Figure 12.4 Enrollment ratio of children 10-14 years by sex

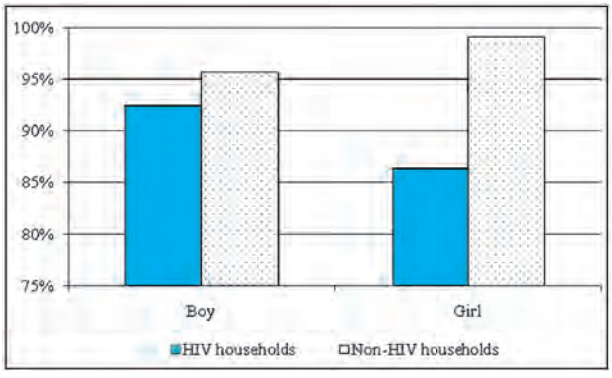
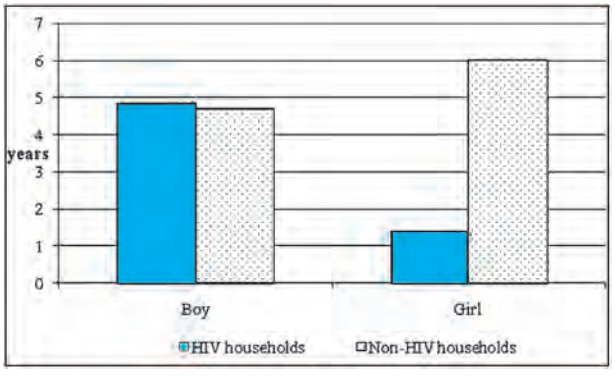


Figure 12.5 Average number of schooling for dropout children by sex



Gender discrimination in education in HIV households is closely linked to household income and the parents' education level (Table 12.7 and Table 12.8). Discrimination against girls in HIV households is particularly marked where the household income level is low and the parents are less educated. As household income and parents' level of education increase, the gender gap steadily declines, until it disappears altogether at the higher levels.

Table 12.7 Enrollment rates of children (10-14 years) by annual household income categories

(Percent)

Household income level (Yuan)	HIV households		Non-HIV households	
	Boy	Girl	Boy	Girl
0-9,999	86.4	80.2	100.0	97.7
0-4,193	87.4	62.6	100.0	100.0
10,000-19,999	100.0	94.8	86.8	100.0
20,000-29,999	100.0	96.0	100.0	100.0
30,000-39,999	100.0	100.0	100.0	100.0
40,000+	100.0	100.0	100.0	100.0

Table 12.8 Enrollment rates of children (10-14 years) by level of education of respondents

(Percent)

Education years	HIV households		Non-HIV households	
	Boy	Girl	Boy	Girl
0	91.3	78.5	82.9	100.0
1-6	93.4	85.2	94.5	98.3
7-9	98.1	98.4	100.0	100.0
10-12	100.0	100.0	100.0	100.0
13+	100.0	50.0	100.0	100.0

12.3 Gender differences in health-seeking behavior

There is no gender difference in the level of health facilities visited by members of non-HIV households (Table 12.9 and Table 12.10). However in HIV households a higher percentage of women -- both among PLHIV and non-HIV family members -- sought treatment at the local village level clinic, while men are more likely to go to higher level, better medical facilities. As a result, on an average the male spends considerably more money than his female counterpart. This shows that the households are willing to spend more on the treatment of male members of the household. Even at the county hospital level, although Table 12.9 shows that male and female PLHIV go their for treatment in roughly equal proportions, Table 12.10 shows that the amount spent there on treatment for men is nearly three times higher than for women. This is further demonstration of biased allocation within households of resources for medical expenditures.

Table 12.9 Health seeking behavior in the preceding month

(Percent)

Level of hospital	PLHIV		Non-HIV in HIV Households		Non-HIV households members	
	Male	Female	Male	Female	Male	Female
Village	29.2	42.9	29.4	52.9	53.5	53.1
Town	27.4	16.0	32.8	20.5	23.2	19.5
County	33.4	32.2	12.4	11.9	12.6	15.9
City	5.3	3.0	7.2	5.8	3.9	4.1
Others	4.7	5.9	18.1	8.8	6.8	7.5

Table 12.10 Medical expenditures in the preceding month

(Yuan)

Level of hospital	PLHIV		Non-HIV in HIV Households		Non-HIV households members	
	Male	Female	Male	Female	Male	Female
Village	131	225	141	179	85	286
Town	652	168	136	173	423	632
County	1,204	493	2,080	696	1,126	589
City	1,139	800	1,599	611	4,241	1,144
Others	584	564	66	116	48	114
Total	700	326	504	260	460	426

12. 4 Observations

"Social Gender" means the social difference and power relationship between males and females, which are not present within us at birth but rather occur due to the influence of society, economy and culture. It also refers to the expectations and assessment criteria that society holds for the characteristics, role, activities and responsibilities of men and women. Madhu Bala Nath has pointed out in "Gender, HIV and Human Rights: A Training Manual" that the epidemic of HIV/AIDS was in many respects a problem of social gender. Females were more easily infected by HIV/AIDS due to biological, epidemiologic and social characteristics. She also pointed out that one key aspect of the socio-economic impact of HIV/AIDS is the feminization of poverty (Madhu Bala Nath, 2000). As a result, social gender is an important aspect of prevention and treatment of HIV/AIDS. Currently, UNICEF has conducted some care and support activities for female PLHIV. Some projects have chosen the All China Women's Federation as a social gender collaborator. Although these and other examples from international experience indicate that HIV/AIDS could be prevented

and controlled efficiently only when social gender factors receive sufficient attention, in China today activities relating to social gender are still lacking.

Designing government programs to deal with the gender dimensions of HIV/AIDS will require an analytical foundation. However studies done to date of the relationship between social gender and HIV/AIDS in China have focused almost entirely on epidemiological trends. Gender-based studies of the impact of HIV/AIDS are still lacking. This survey has taken a first step in this respect, by using quantitative analytical tools to study the impact of HIV/AIDS on gender. The results indicated that the impact on women is more serious with respect to marital status (See in Chapter 10), WFPR, distribution of work burden within the family, education of children, health seeking behavior and others. However, social gender is a broad concept that includes other aspects not looked at here, including regional, class and nationality distinctions, and further in-depth studies are needed to adequately factor social gender into the prevention and treatment of HIV/AIDS.

Chapter 13 Conclusions and Recommendations

As documented in this report, the HIV/AIDS epidemic is affecting the health and the lives of people throughout China, impact that is already spreading beyond its harsh impact on individual PLHIV and their families. Although the overall prevalence of HIV/AIDS epidemic is still low in China, the prevalence rate is fairly high in certain areas. As a result, the epidemic's socio-economic impact is being felt on many specific localities, even while overall macroeconomic impact is not yet great.

HIV/AIDS is the object of great attention in China, and is viewed as a high priority issue by government at all levels. The national government of China has introduced a series of policies and measures and local governments have also explored and implemented new care and support activities for PLHIV, based on national policy and drawing on successful international experience. These initiatives are having some positive effect on reducing the impacts of HIV/AIDS on individuals and households have been reduced. There have also been a number of useful studies about HIV/AIDS, which have already had some impact on policy-making.

This study has been undertaken under this background. The research for this study was conducted in five high prevalence provinces of China and aimed at analyzing the socio-economic impact of HIV/AIDS at the household and individual level. Specific areas of focus were the impact on household structure, income, consumption, education of children, stigma and discrimination, quality of life and gender.

This chapter will present some of the main findings in this survey and, based on its findings and on lessons from domestic and international experience, discuss options for the government to address some of the problems facing China's PLHIV, and conclude with a set of policy recommendations.

13.1 Conclusions

By combining the survey results and the discussions throughout the report a clear picture emerges of the seriousness of the socio-economic impact of HIV/AIDS on individual and households.

Furthermore, these problems at the household level may also cause broader social and economic problems, such as an increased gap between the rich and the poor, worsening gender inequality, a reduction of the education prospects of children in poor families and an increased public health burden. Based on our findings, the main socio-economic impact of HIV/AIDS at individual and household levels are the following:

(1) Disrupting the household economy. HIV/AIDS has an enormous impact on the household economy, causing a drop or loss of work capacity of PLHIV, the loss of work opportunities for both PLHIV and family members, and a reduction in personal and household income. The share of low income HIV households is larger than for non-HIV, showing that HIV/AIDS is causing families to fall into poverty. HIV/AIDS also widens the gap between rich and poor.

The survey found that many PLHIV have lost the chance to go to work outside due to HIV/AIDS-related discrimination, and due to the health impact of the disease. The proportion of migrant laborers has decreased 6.1%, while the proportion of unemployed has increased 7.8%. As a result, the personal annual income of PLHIV has decreased by about 23 percent. The income and employment of other family members is often also affected, due to the need to care for their ill household members and due to discrimination that is extended to them. The personal annual income of other family members in HIV households decreased by roughly 12 percent on average. Although HIV households receive assistance from the government or other organizations, the average household income of HIV households was 14,910 Yuan in 2007, 21 percent less than the average 18,875 Yuan of non-HIV households. This is consistent with results of an earlier survey conducted in 2004 in Henan by Guo Jinling, which found that HIV household income was 25 percent lower than non-HIV. About half of the HIV households belong to the low income group, which is 16 percent more than non-HIV households, indicating that HIV/AIDS make the gap between rich and poor more serious.

(2) The presence of an HIV positive person generally forces households to change their consumption pattern; with more spending on health care and less spending on several important categories of goods.

The household consumption pattern for HIV household changes for a number of reasons, arising out of a distressing combination of greater medical needs and lower household income. HIV

households spend 17.4 percent of their total consumption on medical expenditures; about 10 percent higher than the percentage for non-HIV households (7.9%) and the expenditures on nutrition, education and durables has worked out to be much lower. As total spending falls due to the decline in income, the absolute spending per household member on food, education, durables and other important expenditures for quality of life is sharply lower than in non-HIV households. Although the Government of China provides free ARV treatment and some local governments also offer free or subsidized treatment for opportunistic infections, HIV households still incur large expenses from transportation, examinations, and most of the OI treatment expenses when the PLHIV is hospitalized. It is important to note that most of the PLHIV interviewed are still in good health condition at this time. Their medical expenditures will increase if their health situations turn worse, which will mean an even heavier shock for household consumption.

(3) In dealing with the economic burden caused by HIV/AIDS, the main coping mechanisms used by HIV households are; borrowings from friends and relatives and increased income earning work by other family members especially children and elderly household members. As a result, a number of children lose the chance to obtain an education. At the same time, government assistance to HIV households, including broader social safety net programs such as the MLSA, have already played an important role in helping PLHIV and reduced the impact of HIV/AIDS on individuals and households. However, there are still challenges.

Facing severe economic challenges, HIV households have to devise coping mechanisms to reduce their hardship. Borrowing from friends and relatives seems to be the major coping mechanism adopted by HIV households. However, because of their worsening economic situation and because of the long-term nature of HIV/AIDS, households often are unable to repay their loans, and soon find that they are unable to borrow any further. At the same time, other family members in HIV household have to take on new and longer hours of work to compensate for the loss of income. As working age family members were already working long hours, the main burden of additional work tends to fall on children and elderly household members. The WFPR of the elderly (above 60 years old) is significantly higher in HIV households (55.9%) than in non-HIV households (41.7%), and even some children in HIV households have to leave school and start earning income in work.

40.4 percent of HIV households interviewed have received assistance from the government, NGOs or projects, and the average amount of support per household is 1,405 Yuan. This assistance has

mitigated some of the impact of HIV/AIDS on individuals and households. However, as noted above, even when this assistance is factored in, the survey found that there is still a 21 percent income gap between HIV and non-HIV households.

HIV households are far more dependent on outside support than non-HIV. This is going to lead to increasing demands on the financial resources of the society. The survey found that 22.9 percent of HIV households interviewed have received the MLSA, 13.6 percent have received other support from the government and 20.3 percent have received income support from projects or NGOs. Assistance from projects or NGOs were usually temporary; once the project finished or the NGO changed its plans, support for PLHIV would not be continued.

(4) HIV/AIDS could undermine the marriage of PLHIV, change the household structure, and weaken the family function.

The proportion of PLHIV who are in their first marriage is lower than non-HIV, while the proportions of divorced and widowed are higher for PLHIV. The marriage prospects of PLHIV can be affected severely. The number of households with single parents is likely to increase, due to instability of marriage or to the death of the PLHIV. In comparison with non-HIV, there are more married PLHIV living with their elderly parents. The share of stem families among HIV households is significantly higher than for non-HIV; 41.1 percent of HIV households have stem family structures, while for non-HIV households this percentage is only 33.4%. In traditional stem families, grown children generally support their elderly parents even while they raise their own children. However, in stem family HIV households, it is often the elderly family members who have to look after both the PLHIV and their children. This increased burden on old persons in HIV households is a break from normal household functioning.

(5) There is still a great deal of stigma and discrimination against PLHIV. PLHIV who disclose their status have encountered stigma and discrimination in their community\ies, health facilities and schools. Their family members also frequently face the same discrimination. The quality of life of PLHIV and their households could be improved greatly by reducing discrimination.

The survey found that nearly 35 percent of PLHIV who disclosed their HIV status in their community reported facing stigma and discrimination in the community, mostly in the form of

people avoiding visits to them and gossiping about them. Nearly 10 percent of the PLHIV reported they have been neglected and isolated by doctors in the health facilities and about 20 percent reported that they have been excluded by other patients. About 80 percent reported that their children have also encountered stigma and discrimination at school, mostly when other children refuse to play or sit together with them. The stigma and discrimination is very serious in some of the cases.

Stigma and discrimination stand in the way of detecting HIV positive cases and carrying out prevention and control activities. Fearing discrimination, nearly half of the PLHIV interviewed do not disclose their HIV status, making it difficult to access health care and other assistance that are available to the PLHIV. In the focus group discussions, the PLHIV and the staff, involved in the HIV/AIDS prevention and treatment activities believed that stigma and discrimination make their activities difficult and worsen the living environment of PLHIV. Although there are a lot of public education activities, there is an urgent need to establish closer cooperation among various sections of the society, who should combine their efforts so that the knowledge could be transformed into changes in actual behavior.

It is found in the multivariate regression analysis on the quality of life that discrimination is the most important determining factor of the quality of life of PLHIV, more important than loss of income and more important than health conditions. This powerful finding makes clear that the quality of life for PLHIV could be improved significantly by even stronger efforts to reduce discrimination.

(6) The impact of HIV/AIDS on the education of children can be very severe. The enrollment ratio and the average schooling years decreased in HIV households, especially for households in the low income level.

The economic and structural impact of HIV/AIDS on households frequently has an impact on education opportunities of children in the households. The enrollment rate of children aged 10-14 from HIV households is 8 percent lower than non-HIV households. It is about 20 percent lower for children aged 15-17. China's policy of nine years of free compulsory education for all children somewhat reduces -- but does not eliminate -- the impact on young children, but for older children, for whom no government support is available, HIV/AIDS has a major effect on education and development. Children from poor HIV households are affected the most. The lack of education for

these children leaves them less able to support their PLHIV family members later, or to establish secure and comfortable lives of their own.

(7) HIV/AIDS worsens gender inequality.

The HIV/AIDS epidemic tends to affect women very seriously. Compared to males, females suffer more pressure to increase productive work and housework when a family member contracts the disease. The WFPR rate of female in non-HIV households is about 6 percent less than male, while the WFPR rate of female PLHIV is about 6 percent higher than male PLHIV. The total productive time (income earning work plus housework) of women in non-HIV households is 0.7 hours per day more than male, while female PLHIV work 2.2 hours per day more than male PLHIV. In addition, women have more difficulties to get medical resources in the family, as males in HIV households are more likely to go to higher level, better medical facilities. The impact on education of girls is more serious than on boys, a direct manifestation of bias against women.

13.2 Recommendations

The government of China places high importance on prevention and control of HIV/AIDS, and has introduced a series of policies and measures and is implementing many care and support activities. The government of China has already achieved great success from these initiatives. However, there are still some challenges, first of all in the prevention and control of HIV/AIDS, and also to reduce the epidemic's impact on the lives of the Chinese people. In this latter area a lot of work is needed. Based on the findings of the survey, the followings measures are recommended:

(1) The expansion of anti-discrimination education and its integration into all IEC activities should be a high priority both in high prevalence areas and elsewhere in the country. The aim of HIV/AIDS awareness education should not only be to strengthen the knowledge of HIV/AIDS, but also to change the attitude and behavior of people towards PLHIV. Appropriate legal steps should be undertaken, including through new legislation, to protect PLHIV from stigma and discrimination, with a particular focus on institutional discrimination and healthcare settings.

This survey found that stigma and discrimination against PLHIV are undermining progress in every key aspect of their lives; employment, marriage, access to health care, the education of their children, their entire quality of life. New and more effective initiatives to combat stigma and discrimination are a precondition for success in all these areas.

Provide targeted public education in community, health facilities and schools. At present, public education has already attained some achievements, but most of the activities are simply a scaling up of knowledge and policy. It is necessary to involve anti-discrimination education into public education, and the activities should be focused on the specific problems faced by the PLHIV such as seeing a doctor, finding a job or schooling for the children, so as to change the attitude and behavior towards PLHIV. Public education should be designed and provided based on the needs of PLHIV, and should encourage PLHIV participation. PLHIV are the direct beneficiaries of improvement in the community environment, and they are the direct victims of stigma and discrimination. In order for public education to have its desired impact it is necessary to encourage PLHIV to participate in the process, the design and conduct of public education.

(2) The needs of PLHIV and their households should be integrated into social security/protection schemes and food programmes. By doing this and funding these crucial programs adequately to cover all in need including, but not only PLHIV, the government will achieve greater impact and equity. Specifically;

- Efforts to improve medical care for PLHIV should focus on including them in the new social insurance initiatives that the government is already pursuing; the New Rural Cooperative Medical System (RCMS) in the rural areas, and basic medical insurance and others in urbanareas. Reliable long-term medical care for PLHIV is needed, but as of today medical assistance to PLHIV is not included in social insurance programs. The survey also found problems that arise during provision of existing medical assistance programs; in some cases the facilities were not professional enough, government policy was not properly implemented in some places, and so on. New means of delivering this urgently needed care to PLHIV are needed, and should be centered around the RCMS and social insurance, which are now being rapidly expanded by the government. Commercial medical insurance, which currently excludes HIV/AIDS, should be required to include it as a matter of social justice.
- Life support for PLHIV should be incorporated into broader existing government support programs by advising the Ministry of Civil Affairs to expand the scope of the Minimum Living Standard Assistance (MLSA) to cover PLHIV. The survey found that HIV households lacked coping mechanisms when they were facing economic problems such as loss of income and increase of medical expenditures. Most of the coping methods they adopted were simple and unsustainable. This finding indicates that PLHIV need sustained support from the government or society, not one-time assistance from one different source

after another. The MLSA, conducted by MOCA, is a well established monthly support allowance which could ensure the daily lives of HIV households. Although 40.4 percent of HIV households already receive support, the remaining 60 percent do not, and only 22.9 percent of HIV households have received the MSLA. One specific point raised in the "Four Frees and One Care" policy is that PLHIV in poverty should be brought into the government social safety net. MOCA should allow more PLHIV to receive the MLSA.

- Income generation activities for PLHIV should be combined with broader anti-poverty and development programs, in order to advance HIV households' own abilities to cope with the burdens of the disease themselves. In order to improve the lives of PLHIV and to help them build up self-confidence, it is necessary to explore new types of income generation activities for PLHIV. International and domestic organizations have already gathered useful experience in the areas of sustainable income for PLHIV and their families. One key is combining income generation activities for PLHIV with long-term anti-poverty programs to make them more professional and sustainable. Thus the coping capacity of the HIV households would be advanced.

(3) Strengthen intervention in the education of HIV-affected children, especially for girls. Establish a targeted education support system for HIV families. Renew and consummate the contents of the "Four Frees and One Care" policy to provide education support and free skill training for older children.

The "Four Frees and One Care" policy was introduced five years ago, and it includes an important "Free tuition for HIV orphans" component. However the "Four Frees and One Care" policy mostly focuses on the children in the nine year compulsory education levels. There are no rules or guidelines for providing assistance to the education of older children. In recent years, the socio-economic situation and policies of China have changed a lot, and as a result, it is necessary to make some further adjustments and consummation to this policy. One key change would be to extend "free tuition" to include free education support and work skill training for older children.

At the same time, it is necessary to provide targeted education support for HIV affected children, especially for girls. Most of the current instruments for such assistance are defined unclearly and do not have necessary regulations regarding their use. As a result, although these programs have lightened the economic burden of HIV households somewhat, the education of children was not

improved significantly. In order to decrease the adverse impact on children's education, the support for education should be defined more clearly, including specifying that this aid should be used only for children's education.

Conduct occupational skill training and work capacity training programs for older children, and explore this program as a key component of income generation activities for HIV households. The survey found that most of the older children in HIV households feel that they have lost the chance to get educated, and they lack guidance for their future development. Hence, in order to reintegrate the children into the community and lighten the burden caused by HIV/AIDS, activities should be conducted to help the older children learn appropriate skills.

(4) Combine various efforts to provide day to day support to HIV households, especially households with single parents and elderly. This would help in reducing the stress and improving the living standard of the family.

Build up the care and connect system at the village level (village committee or community committee) through better inter-department cooperation, including the civil administration, Women's Federation, Family Planning and Communist Youth League, and so on. Involve HIV households in broader existing care and support systems which help all families in difficulty, in order to provide more reliable daily life support for HIV households in need.

Pay greater attention to psychological care activities, along with daily life support. The survey found that most PLHIVs and their family members have psychological problems, due to the disruption of normal household functioning and to household economic hardship. As of now, the activities aimed at helping PLHIV mostly focus on scaling up of knowledge activities about HIV and about government policies. Hence, the psychological care activities should receive more attention and be conducted scientifically and efficiently, in order to enhance the ability of PLHIV and increase the pool of peer educators. The psychological care activities could help PLHIV to lighten their psychological pressure and rebuild their confidence to reintegrate themselves into society.

(5) Pay more attention to female PLHIV. Take up targeted measures to reduce their vulnerability. Special steps should be undertaken to strengthen the access of women living with HIV to services, credit and livelihood options. Focused efforts are also needed to ensure access to health care service.

Prevent sexual transmission in marriage. Most of the female PLHIV contract the disease through sexual interactions with their husbands or partners, so the interventions must be strengthened among the couples where only the husband is positive.

Strengthen income generation activities that target female PLHIV. Income generation activities can help women improve their chances to earn income, which would help them build up confidence and pride, enhance their status in the family, and reduce gender inequality. The activities could also improve the disease prevention capacity of women and encourage them to use health services more efficiently.

Pay more attention to the health of women. The survey found that HIV households are willing to spend more on the treatment of male members of the household; women tend to seek treatment in lower level health institutions, which make it more difficult for them to get proper diagnosis and necessary information and treatment. More attention must be paid to women's health, and to increasing the consciousness of women of their right to good medical treatment. Interventions are needed to ensure that women can make the best use of community health services.

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