AIDS IN CHINA

BACKGROUND INFORMATION ON THE EPIDEMIC AND THE RESPONSE

AUG 2009
Overview of epidemic

Overall HIV prevalence in China remains low – estimated at less than 0.1 per cent of the total population – but the epidemic continues to grow in all parts of China. HIV transmission associated with the sale of blood and blood plasma in central China in the 1990s appears largely contained and the majority of new HIV infections are related to injecting drug use and sexual transmission.

By the end of December of 2007, 700,000 adults and children were estimated to be living with HIV, up from 470,000 in 2001 (Figure 1). In 2007, there were estimated 85,000 AIDS cases and 50,000 new HIV infections. The 2009 HIV estimation exercise is being carried out and the new estimates will be available in time for the WAD 2009.

Reported HIV Infections:

China CDC now has a real time web based HIV and AIDS case reporting system which captures new cases from the county level onwards. As of December 2008, 276,335 HIV cases including 82,322 AIDS patients have been reported cumulatively since the beginning of case reporting. Six provinces of Yunnan, Henan, Guangxi, Xinjiang, Guangdong and Sichuan account for 80.5% of the total reported cases. Most of the cases with HIV identified in the southwestern and northwestern parts of China came from the drug-injecting population. On the other hand, most of the HIV cases identified in the southeastern China and the major cities of China came from the population of sex workers and their clients.
According to both the reported cases of HIV in 2008 and the 2007 estimation of HIV in China, the predominant mode of HIV transmission is heterosexual transmission. Recent surveys have shown high rates of HIV infection among MSM in large cities.

Figure 2: Distribution of cumulative reported HIV infected
- 276,335 up to end of 2008

Figure 3: Transmission routes of the estimated population living with HIV
as of 2007, China

(State Council AIDS Working Committee Office and the UN Theme Group on AIDS, UNGASS Country Progress Report: China (January 2006 – December 2007))
The AIDS epidemic remains a formidable challenge and several factors in China are fuelling the epidemic, including shame, fear, stigma and discrimination associated with AIDS, low awareness of HIV within the general population, rural poverty, mobility, availability and affordability of prostitution, a rapidly expanding MSM epidemic and injecting drug use.

**Different HIV epidemic dynamics in China**

There is no single 'China epidemic'. China is large and diverse, and HIV epidemics across the country reflect that diversity. Although the epidemic continues to be driven by high-risk behaviour within particular sub-groups – injection drug users, men who have sex with men, sex workers, infected former plasma donors – and seem to follow similar patterns to other Asian epidemics (2008, Commission on AIDS in Asia) the country contains many simultaneous HIV epidemics, still largely localized, which are developing in different populations and at different rates within provinces.

The highest HIV infection rates are found among former plasma donors in Central provinces, injecting drug users in Southern, South western, and far Western (Xinjiang) China. More recently, drastic increases in HIV prevalence among MSM in major cities across the country has been reported. HIV prevalence rates in sex workers and their clients are comparatively low currently, but the infection has been detected in almost all sex work settings.

The extent and types of risky behaviors amongst most-at-risk population can explain the rapid growth and diversity of HIV epidemic in China: For instance, 40% of IDUs share needles; 60% of sex workers do not use condom every time; 70% of MSM have had sex with more than one partner in the past 6 months and only 30% use condoms during anal sex. The total number of people who have a high risk of exposure to HIV could be 23-50 million.

**Figure 4: Estimated size of most-at-risk populations, China**

<table>
<thead>
<tr>
<th>Population size estimate (range)</th>
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<tbody>
<tr>
<td>Injecting drug users (IDUs)</td>
</tr>
<tr>
<td>Female sex workers (FSW)</td>
</tr>
<tr>
<td>Clients of FSW</td>
</tr>
<tr>
<td>Men who have sex with men (MSM)</td>
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<tr>
<td>Total</td>
</tr>
</tbody>
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There is no consensus estimate of MARPs in the country. Estimates are arrived at by different agencies for different purposes (for GF grants, for UNGASS and other international reporting requirements, for internal reporting etc.) and there is a need to harmonize these in a consultative exercise involving civil society organizations and provinces.

**Injecting drug use:** has been spreading HIV constantly and seeding sexual transmission

The first outbreak of HIV amongst injecting drug users (IDUs) occurred in Ruili, Yunnan Province in 1989. The provinces and autonomous regions hit hardest by the HIV epidemic amongst IDUs included Yunnan, Xinjiang, Guangxi, Guangdong, Sichuan, and Hunan and Guizhou. As of 2007, injecting drug use in China accounted for 38.1% of the estimated 700,000 individuals infected with HIV. Nearly 90% of HIV among IDUs was concentrated in the seven provinces, where HIV infection among IDUs were commonly 20% or higher. In certain communities such as Yili City in Xinjiang province, as many as 89% of IDUs were HIV positive. In 2008, IDUs accounted for 27.9% of new reported infections nationwide.

![Figure 5: HIV prevalence amongst injecting drug users in selected sentinel sites, China, 1996-2007](image)

In a study of three different cohorts of IDUs in Xinjiang, Guangxi and Sichuan, findings confirmed HIV prevalence amongst IDUs in sentinel surveillance -- the HIV prevalence was 29% in Xinjiang, 25% in Guangxi and 11.3% in Sichuan. This study also found that the annual HIV incidence of the 12 month cohort was 8.8% in Xinjiang, 3.1% in Guangxi and 3.2% in Sichuan.
Sentinel surveillance data shows that a high proportion of IDUs in China shared syringes and needles among themselves. The level of syringe and needle sharing has been stable at 40%. Different ad hoc studies found an even higher level of sharing in places where there is a concentration of IDUs amongst the population. For example, a study of detoxification centers in Guangxi and Yunnan in 2002 showed that almost 80% of IDUs in the survey practiced sharing of syringes and needles. Comprehensive surveillance in 20 counties in Guangxi province in 2007 showed that the level of sharing syringes and needles amongst IDUs was as high as 64.8%.

Regarding sexual risk behaviors, IDUs reported having multiple sex partners. Reports indicate that they had sex with their wives/girlfriends, casual sex partners and with FSWs. A surveillance in eight provinces and autonomous regions found a high proportion of IDU in some places having sex with FSWs. Almost 50% of IDUs in Xingyi and 23% in Donguan had sex with FSWs. Overall, 11.2% of IDUs in the surveillance round had sex with FSWs.
While a high proportion of IDUs had sex with FSWs, the level of condom use with their sexual partners was low. For instance, a study in Anhui showed that 71% of IDUs practiced unprotected sex with their sex partners.

There is a lack of comprehensive approach to preventive interventions among IDUs. Preventive approaches are often isolated, piecemeal components selected from a package that has been proven successful elsewhere with modifications that suit local beliefs. At any one point of time there could be about half a million people held in closed settings for compulsory detoxification or for re-education. Policies on AIDS response in closed setting have been unclear and non-supportive in terms of informed testing, ART and targeted intervention activities. Needle exchange programmes are not promoted enough and condom provision/STI treatment is neglected for IDUs.

**Sex trade: Rising HIV epidemic, especially among lower level location based SWs**

Data from sentinel sites indicate a steady increase in HIV prevalence amongst FSWs, which is up to 0.5% in 2007 from 0.02% in 1996, while in selected areas where HIV epidemic so far was mainly driven by drug injection, HIV prevalence is over 1%. For instance, HIV infection rates in sex workers reached 5% in 3 counties in Yunnan province, according to the report from Yunnan CDC.
10.5% (Sichuan) and 5.2% (Hunan) HIV prevalence rates were also observed among sex workers.

Currently lower class sex workers (such as street-based) are at even higher risk of HIV infection than sex workers in hotels and Karaoke facilities in terms of lower level of condom use, higher drug-taking behaviors and higher STI prevalence, which was demonstrated by a survey conducted in Guiyang in 2007.

**Figure 8: HIV prevalence among FSWs in Yunnan, 2007**

- 3 Counties >5%
- 18 counties 2-4%
- 25 counties 1-2%
- 43 counties <1%
- 19 counties 0
- 21 counties NA

**Figure 9: Higher risk for street-based sex workers, Guiyang, China, 2007**

Another survey on high risk behaviors among street-based FSWs and their male clients in a city of Sichuan province reveals that street-based FSWs served 14.1 male clients per week on an average reported using condom with 36% clients in the last sex. Among them, 37.2% were injecting drugs.

A study on high risk behaviors and HIV/STD infection among 734 FSWs in Kaiyuan city Yunnan province in 2006 revealed that SWs of lower level had more number of male clients, lower condom use rate, and higher proportion of drug-taking behaviors, which resulted in higher prevalence of HIV/STDs. HIV prevalence was 19.54% among rented rooms & street-based SWs, 15.71% among Karaoke bar & barbershop based SWs and 5.07% among hotel & night club-based SWs, respectively, while prevalence of syphilis was 22.99%, 7.37%, and 5.67%, respectively. Additional, the positive rate of Urine opiate was 12.64%, 26.6% and 6.57%, respectively.

**Sex between men: A fast growing epidemic**

It has been estimated that there are about 2.0-7.1 million high risk MSM in China. More recently, alarming high HIV prevalence among MSM in major cities across the country has been reported (figure 10).

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**Figure 10: HIV and syphilis prevalence among MSM in selected cities, China, 2007**

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The results from a nation-wide survey conducted among 18101 MSM in 61 cities in 2008 showed that the overall HIV prevalence rate among MSM in China was 4.9%, which was over 10% in south-west area including Guiyang, Chongqing, Kunming and Chengdu, around 7% in east area and 4-5% along coast area in the south and north-east area.

In 2008, an ad hoc survey was carried out on risk behaviors among MSM in China GF R5 AIDS program funded areas. Snow-ball sampling was used in six representative cities: Changchun, Shenyang, Harbin, Anshan, Lanzhou and Chongqing. Condom use rate measured as condom use during the last anal sex was 32.2% (Figure 12)

**Figure 12: Level of condom use among MSM in selected cities, China, 2008**
A survey of HIV/AIDS related behaviors among 2250 MSM in nine major cities of China conducted in 2006 revealed that 13.2% of MSM exchanged sex for money, with an average number of persons of $4.7 \pm 7.4$, 75.1% ever used condom in the last anal intercourse and 6.1% experienced condom rupture. 0.5% reported injecting drugs.

**Migrants: huge size and remained under-understood vulnerable groups**

Approximately 120-200 million rural poor move to urban areas annually fulfilling the demand for cheap, low-skilled workers created by rapid urbanization. Migrants with a rural Hukou (household registration) working in urban areas are unable to access public education and subsidized health care in the cities in generally. Less than 2% of rural to urban migrants have unemployment insurance and 80% are without health insurance.

A study conducted among 3090 workers in Yunnan, Guangdong and Anhui provinces by International Labour Organization (ILO) and the United States Department of Labour (USDOL) in 2007 revealed that rural-to-urban migrant workers were in more vulnerable situation:

- Knowledge on HIV among migrants is poor; 45% were not able to identify all of the three transmission modes, around 95% could not identify all of the six non-transmission modes, and 85% were not able to identify the four preventive measures.

- Stigma was pervasive. A third showed a totally un-accepting attitude towards people living with HIV; 77% would not accept services provided by HIV positive people, and 74% said they would not share a room with an HIV positive people.

- Risk behaviors were significant. 17.5% reported having engaged in casual or commercial sex, while 49.3% using condoms during the last casual or commercial sex. Workers from the employment agencies, construction, mining sectors, comprised mainly of younger, lower educated migrant workers reported the highest rate of casual and commercial sex (up to 40.2%).

Another study conducted among 4009 migrant worker in Guangdong, Hunan, Guangxi, and Sichuan provinces in 2008 reported similar results. 8.3% had basic HIV knowledge (according to UNGASS indicator and definition), 10.1% reported having commercial sex in the last year, among which 59.3% used condoms in the last sexual intercourse. 0.6% reported using drugs and 0.3% having homosexual acts. 11.8% reporting having casual sex.
Projection of HIV infections to 2020

In 2008, China made projections of HIV epidemic up to 2020 using different models and methodologies, with results suggesting that the average number of people living with HIV is 850,000 in 2010, 1,200,000 in 2015 and 1,500,000 in 2020 respectively.

Figure 13: Estimated number of HIV infection, China, 1986-2020

<table>
<thead>
<tr>
<th>Methodology</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delphi</td>
<td>850,000 (800,000–900,000)</td>
<td>1,100,000 (1,000,000–1,200,000)</td>
<td>1,500,000 (1,400,000–1,600,000)</td>
</tr>
<tr>
<td>AEM</td>
<td>670,000</td>
<td>1,115,000</td>
<td>1,710,000</td>
</tr>
<tr>
<td>Rough Estimation</td>
<td>850,000 (830,000–870,000)</td>
<td>1,170,000 (1,120,000–1,220,000)</td>
<td>1,590,000 (1,490,000–1,690,000)</td>
</tr>
<tr>
<td>Spectrum</td>
<td>1,170,000</td>
<td>1,370,000</td>
<td>1,550,000</td>
</tr>
<tr>
<td>Workbook</td>
<td>850,000 (600,000–1,100,000)</td>
<td>1,150,000 (1,000,000–1,200,000)</td>
<td>1,510,000 (1,300,000–1,720,000)</td>
</tr>
<tr>
<td>Total Average</td>
<td>850,000 (680,000–1,200,000)</td>
<td>1,200,000 (1,000,000–1,400,000)</td>
<td>1,500,000 (1,300,000–1,700,000)</td>
</tr>
</tbody>
</table>

Data source: China 2020 HIV Infection Projection Report, which has not been endorsed by MOH and only been used internally.

Achievement of UA targets and challenges

Universal access process in China neatly coincided with the National Five year plan period, and the targets set for universal access are similar to those laid out in the National plan. Advocacy and efforts to attain these targets are carried out on a national scale.

Comprehensive HIV prevention initiatives are increasingly focused on behavioral change among the most-at-risk populations including a number of advocacy campaigns directed at migrants, women, youth and minority populations. Coverage of intervention programmes for IDUs has been extended with methadone maintenance treatment clinics open in 22 provinces, and 1109 needle exchange stations established. Expanding access to free antiretroviral treatment under the ‘Four Frees and One Care’ policy has also been a priority, with coverage extended to 1574 counties in 31 provinces (autonomous regions and municipalities).

In spite of progress however, a significant gap exists in the response in terms of the low coverage of most-at-risk populations with preventive services and PLHIV with quality first line and second line ARV drugs. The current coverage figures for prevention and treatment were well behind the National Five year plan targets for 2007 and for 2008 which came out of the mid term review of the Five year plan and
it seems that the 2010 Universal Access targets will be a difficult target to meet. (Fig 14)

**Figure 14: Coverage of intervention programmes for most-at-risk populations, targets & achievements, China**

By the end of December 2008, PMTCT activities had been expanded to 333 counties in 130 prefectures in all provinces (autonomous regions and municipalities). In 2007, China had an estimated 6,800 pregnant women living HIV needing ART for PMTCT, of which between 6% and 14% received antiretroviral.

For the **UNGASS 2008** report, China reported that 46% of sex workers, 25% of IDU and 38% of MSM were covered with preventive interventions. One has to see this in the light of the fact that no denominators or an estimate of number of sex workers, IDU or MSM has ever been made public. The methodology used to calculate this was based on a BSS carried out in a few places as recommended by UNAIDS. The surveys were conducted in populations that were covered by interventions and the programme admits that UNGASS coverage figures are falsely high. There has been more believable MARP coverage figures calculated for GF grants etc. after the UNGASS report that showed much lower coverage figures. The midterm review coverage rates shown above also shows much lower coverage figures than reported in the UNGASS report. This should be seen as a methodology issue with UNGASS indicators. The extremely high condom use rates in sex work settings reported for UNGASS (as in almost all countries in the region) also come from surveys conducted in intervention populations. Further the denominator used for ARV treatment needs in the UNGASS report is not appropriate. Currently no consensus estimate of people in need of ART is available, which makes it hard to calculate the coverage of ART.
A significant challenge in achieving these targets is the lack of national and provincial cost strategic plans. Programme management structures at Central and provincial levels are not structured to make quick, evidence informed decisions at the Central or provincial levels. Procedures are often complicated and do not promote accountability. In the context of the preparation for the drawing up of the work plan for GF grant consolidation there is a push towards actually drawing up provincial strategic plans that are evidence informed, prioritized and cost.

Secondly, enhanced civil society involvement through facilitating NGOs to register in their own right, their capacity building and financial empowerment are crucial. However, significant legal and policy issues as well as formal and informal obstacles constituted by non-health government agencies are hampering the effective functioning of civil society organizations, for instance, most CBOs find it very difficult to legally register as civil society entities making it difficult for them to receive funds directly. Several basic issues need to be addressed to facilitate an improved realization of the potentially resourceful contribution of civil society and a positive change in the human rights situation of HIV positive people and most at risk populations (MARPs).

The Chinese government have understood and articulated the need for a stronger involvement of civil society in the response to AIDS and in the past few years some space has opened up for AIDS related NGOs and CBOs in China. In parallel with this change in the attitude of the government, the number of community based organizations (CBOs) in China has grown significantly in number over the past 5 years. There are estimated to be around 400-500 CBOs. Chinese civil society is increasingly playing an important role in the AIDS response in China, especially in advocacy and provision of prevention services amongst high-risk behaviour populations and with treatment adherence education and counseling. Data from AIDS CARE China has already shown that with community approaches the traditional government approaches can be dramatically improved with detection, enrolment of AIDS patients and retention of those on treatment (figures 18 and 19). Another good example is the China Global Fund CCM, where two member seats are reserved for CBOs and people living with HIV. These two sectors have seized the opportunity and initiated a transparent and open process for electing their own representatives to the CCM as the CCM provides civil society an equal footing with other stakeholders in the Global Fund governance structure.
Thirdly, stigma and discrimination towards people living with HIV undermines the AIDS response, which widely exists in general population, professionals (including health care staff, journalists and teachers, etc) and people at risk, and fueled by some policies, such as discriminatory insurance policies. In a recent survey, 65% of adults surveyed in a survey of 6000 people living in 6 Chinese cities said that they would be unwilling to live in the same household as a person living with HIV. 47.8% would be unwilling to eat with a person living with HIV, and 41.3% would be unwilling to work with a person living with HIV. These attitudes mean that very few
Chinese people living with HIV are willing to come out publicly, which worsens misconceptions and stigma regarding AIDS. As a result, few people are actively willing to be tested for HIV, a large proportion of the people estimated to be living with HIV are unaware of their status, and are less likely to take any preventive measures.

**Treatment related issues:**

No official treatment estimates on number of people in need of ARV treatment is available but could be well above 120,000. This is also due to the finalization of national treatment guidelines which aims to start ARV to PLHIV with CD4 count less than 350. The lack of a commonly accepted estimate has resulted in the inaccurate projection of resource needs and improper planning for ART program.

Second line ARV treatment is still at early stage of scaling-up in the treatment programme with less than 1,000 patients being provided with 2nd line drugs, though resistance to first line ARV drugs is being increasingly detected and there are urgent needs for 2nd line ART, especially in Henan and Anhui provinces where free ARV treatment program began in 2003 (figure 17). Drug resistance resulting from low adherence levels is one of the most worrying problems related to treatment, sometimes because of a lack of sufficient information relating to drugs, adherence, side effects and risks of resistance to first line drugs for patients. It could be estimated that upto 8-10,000 patients would be requiring second line drugs in China. In addition, late diagnosis puts people living with HIV at risk of developing serious opportunistic infections (OIs). The high cost of OI treatment is unaffordable for most of people and their families, especially as the social welfare system is still weak and medical insurance does not cover AIDS-related diseases.

**Figure 17: Drug resistance rates in surveillance sites, China, 2008**

![Drug resistance rates in surveillance sites, China, 2008](image)

Notes: (1)ARV therapies used in Guangxi, Yunnan and Xinjiang are mainly AZT/3TC/NVP and d4T/3TC/NVP, while mainly AZT/ddI/NVP and d4T/ddI/NVP in Henan and Anhui.
There are a number of quality issues that need to be addressed in the ART programme implementation. In addition to the adherence and drop out issues addressed above, there needs to be a rational definition of ‘stock out’ of ARV drugs in the implementing centres. The current definition of stock outs will not indicate a stock out in any circumstance.

**HIV/AIDS financing and expenditure**

The Central government has continued to increase its investment in HIV/AIDS prevention and care. The national budget for HIV prevention and care rose from RMB 390 million (~US$48.75 million) in 2003 to RMB 983 million (~US$144.13 million) in 2008. Local investment has increased from less than RMB 100 million (~US$12.5 million) in 2003 to RMB 600 million (~US$88.0 million) in 2008.

Currently, international cooperation project are underway in all 31 provinces and autonomous regions. External funding including that from Global Fund have ranged between 80-95 million USD annually in the past few years. In 2008, the international community invested approximately RMB 632 million (~US$ 92.7 million) to support China’s response to AIDS. A land mark 500 million RCC-Grant consolidation proposal was approved by the Global Fund in Feb 2009.

Overall, central and provincial budgeting accounts for approximately two-thirds of the total with international sources contributing the remainder.

**Other issues:**

- **Real political momentum:** Commitment shown by senior leaders of the Chinese Government to HIV/AIDS including President Hu Jintao and Premier Wen Jiabao and evidence in policies such as the Decree and Action Plan on AIDS issued in March 2006. The government committed US $120 million to AIDS in 2007 and US $ 140 million in 2008.

- **But** commitment needs to be sustained at all levels and by all sectors and needs to be translated into effective actions on the ground in the provinces as per the provincial action plans. And

  - Non-health sectors, including private Chinese owned companies, NGOs, mass media, and academic institutions need to be more involved in the AIDS response.

  - It is especially important that the judicial system and the public security find ways to collaborate and support public health efforts to prevent HIV among IDU, MSM and sex workers.

  - Also more needs to be done to mobilise the educational sector to provide sexual health education to young people.
- Some MSM groups have successful collaboration with local Centre for Disease Control offices and more and more MSM groups become active in the response to HIV.

- But this is a local phenomenon and not a nationwide approach. The MSM community remains a significant at-risk group that also faces discrimination and harassment. A recent statement by the Beijing health authorities indicated a steep increase in infections among MSM and estimated that 5 percent of gay men in Beijing are HIV positive.

- Methadone maintenance treatment, clean needles and syringe exchange for drug users has been introduced with the establishment of a total of 1500 MMT clinics expected by the end of this year.

- But more comprehensive approaches including extended harm reduction, community participation and social-cultural re-integration are needed. The requirements to qualify for treatment should be made less complicated. Currently, most MMT clinics require that one has to fail de-addiction efforts three times before qualifying for the methadone programme, even though the latest policies allow for direct recruitment through clinic staff. Needle exchange programmes are not promoted enough and condom provision/STI treatment is neglected for IDUs.

- Sex workers are targeted by the 100% condom use model and a few national and international groups are able to work with sex workers.

- But sex workers remain a very difficult group to reach. The 100% condom use model can mainly be used in highly controlled brothel settings and many more needs to be reached. Approaches using peer intervention or close involvement of civil society are not encouraged sufficiently. Sex workers in China are highly mobile internally and trafficking particularly on the borders with Mongolia and Myanmar may contribute to fuelling the epidemic. Condom use is generally too low.

- HIV/AIDS prevention and awareness targeting migrant workers is a priority for the Chinese government. There are about 200 million migrant workers in China.

- But migrants do often not qualify for government services including health services, are subject to discrimination, have few resources, and due to their mobility are a difficult target group to reach and are hence significantly underserved.

- Provider initiated HIV testing is being promoted in China,

- But it should be ensured that they are voluntary and confidential, free of charge and linked to good quality and easily available counselling and access to treatment.
Opportunities: Global Fund RCC and Grant Consolidation

China was successful in its application of a US$ 500 million consolidated grant through Round 3 Rolling Continuation Channel (RCC), which is entitled “Scale up HIV/AIDS prevention, treatment and care in China to achieve universal access for high-risk populations and PLHIV (2010-2015). The consolidation will enable the national HIV/AIDS program to move away from a project management approach towards a programmatic approach and allow a scale-up of the national AIDS response. China is currently in the grant negotiation stage and a Management Review is planned to assist in finding a strong, efficient and accountable management structure which is in line with, and fully supports, the revised programme approach. In addition, all 31 provinces will develop costed strategic plans and operational plans by the end of the year. This strategic planning process should feed into the planning and development process for the next 5-year AIDS Action Plan (2011-2015). UNAIDS, has been providing strategic guidance and technical assistance to the Chinese government throughout the process. Consolidated RCC will provide a unique opportunity and entry point to facilitate development of costed, evidence-based, results-focused strategic plans.