Chapter 9

Limiting the Future Impact of HIV/AIDS on Children in Yunnan (China) *

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Summary..China has three simultaneous HIV epidemics. In the central provinces, the main mode of transmission of HIV/AIDS is the transfusion of tainted blood and plasma products; in the coastal areas it is commercial sex; while in the west and on the border with the Golden Triangle, where the province of Yunnan is found, the infection is predominantly transmitted by intravenous drug use.
In Yunnan, HIV/AIDS prevalence has been rising exponentially since 1993-94, hand in hand with sexually transmitted diseases, which facilitate the spread of infection in the general population.
While the impact on children is still limited (the mother to child transmission represents a very limited share of the total infections in the province), it is bound to rise rapidly over the next decade because of the absence of clear policy in this area. Even if the government started to recognize the potential impact of the disease, specific program activities are still lacking, social values and norms prevent the issues from being tackled openly, and a reluctant bureaucracy often conceals the problem. The weakness of the social infrastructures and of the health care system is also a factor that increases the potential impact of AIDS in the province. So far Yunnan has benefited little from the considerable experience gained in countries such as Thailand on prevention and mitigation of the HIV/AIDS epidemic.

JEL: D13, I31, I32, J11, J13

*** This study presents the views of its authors and not the official UNICEF position in this field.**

UNICEF-IRC (www.unicef-icdc.org) Florence, June 2002

This is chapter 9 of the overall study "AIDS, Public Policy and Child Well-Being" edited by Giovanni Andrea Cornia.
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AIDS, PUBLIC POLICY AND CHILD WELL-BEING *

edited by Giovanni Andrea Cornia

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* This project was started in 2000 at the UNICEF's Innocenti Research Centre under the leadership of the Director of the Centre and of the Regional Director of the Eastern and Southern Africa Region Office (ESARO) of UNICEF. Giovanni Andrea Cornia of the University of Florence took care of the framing, implementation and finalisation of the study, with the assistance of Leonardo Menchini. The project could not have been implemented without the support of many colleagues in many UNICEF offices around the world. The financial support of the Italian Government and UNICEF ESARO is gratefully acknowledged. **The papers included in this study present the views of their authors and not those of UNICEF.**

1. Overview of HIV/AIDS in China

1.1. Three epidemics

China has three simultaneous HIV epidemics. The three epidemics are beginning to coincide. In the west and on the border with the Golden Triangle, intravenous drug use is the principal mode of transmission. In the central provinces, tainted blood and plasma predominate in the transmission process, while in coastal areas, commercial sex is the predominant mode.

In 2002, all indications point to HIV/AIDS in China as being on the brink of explosively widespread epidemics in a greater number of areas and among a large number of people. The already disquieting but practically overlooked increase in factors that facilitate the spread of HIV seem to herald a future HIV tragedy.

The number of infections is rising exponentially and the number of people living with HIV is increasing rapidly (chart 1). and the national rate of increase doubled between 2000 and 2001, from 30% to more 60%. In August of 2001, the Ministry of Health (MOH) reported 3,541 new infections in the first six months of 2001, a 67% increase from the 2,115 cases reported in the first half of last year. UNAIDS has warned that HIV could begin to increase faster in Asia than it does in Africa [1]. In Yunnan, the average rate of increase is above 30% per annum.

HIV/AIDS started in China in Yunnan's Ruili County, with the first case of AIDS having been identified in 1986 [2]. During the 1980s, HIV infections were sporadic and were mostly associated with people with international contacts. By the early 1990s, Yunnan had a more established epidemic, especially among intravenous drug users. Since 1995 that has spread along truck routes across and beyond Yunnan, in addition to the other epidemics related to heterosexual contacts and tainted blood.

Chinese HIV researchers explain the relatively low incidence of HIV/AIDS in China (0.08%) by saying that drug users and prostitutes have begun to mingle in recent years only. Formerly, drug users were generally found in ethnic minority areas and rural parts of Yunnan Province and the Xinjiang region and were usually poor and less mobile. Prostitutes were more mobile and generally resided in urban areas. This situation is changing rapidly [3]. This coincided with the substantial reduction in restrictions on travel in the early 1990s, approximately when the epidemic started taking off.

1 Kathleen Cravero, UNAIDS deputy director general at the 57th Economic and Social Commission for Asia and the Pacific session in Bangkok (April 2001)

[2] The first case of HIV in China was actually identified in Xian and then transferred to Beijing in 1985, but this was a foreigner.

[3] US Embassy. From Drugs to Blood to Sex. A December 2000 report from the US Embassy China.

By 2001, China had more than 23,000 reported HIV infections – more importantly, however, was the estimated number of more than 1,000,000 infected people (about 0.08% of the population). And even that estimate might have been low because surveillance is sparse outside provincial capitals where HIV is known to be a problem, and in rural areas, where two-thirds of the epidemic is found (a worst-case scenario puts the number closer to 2 million). But, even if we consider only those 23,000 reported cases, China still ranks 4th in Asia and 17th in the world according to UNAIDS, and the projections to 2005 and 2010 (table 1) show a further rapid increase.

Chart 1: HIV Reported Cases and Estimates for China and Yunnan

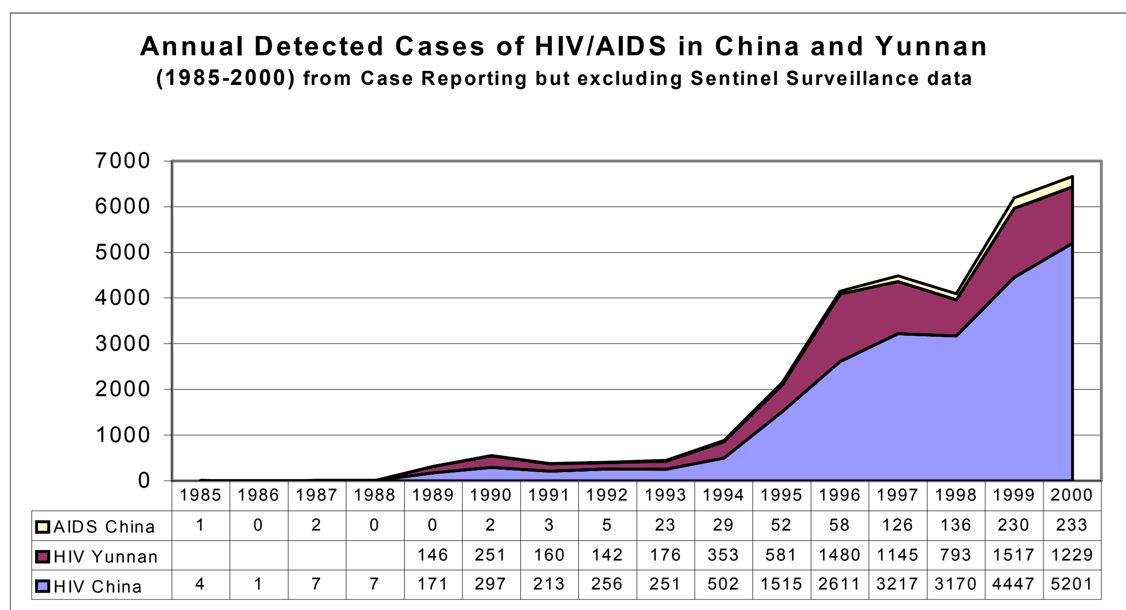

Table 1: Estimated HIV prevalence rates for the whole China † * [4]

Variable	1990-1995	1996-1997	1998-1999	2000-2001 *	UNAIDS Estimate for China 2005 **	UNAIDS Estimate for China 2010 ***
Population	1,211 M	1,236 M	1,259 M	1,279 M	1,316 M	1,359 M
Estimate total Adult HIV	10,000	100,000	500,000	>1,000,000	5,000,000?	20,000,000
Adult HIV prevalence rates	<0.002%	<0.02%	<0.1%	<0.2%	<1%	<3%
Male/Female Ratio	9 to 1	7 to 1	5 to 1	4 to 1	3 to 1	2 to 1
Male HIV prevalence	<0.01%	<0.05%	<0.2%	<0.5%	-	-
Female HIV prevalence	<0.001%	<0.01%	<0.02%	<0.01%	-	-

Remarks:† All figures exclude numbers for the epidemic in Henan province, which went unreported but probably is more serious, or at least of comparable seriousness to Yunnan's.
*Past estimates are based on official estimates by MOH and the Chinese Academy of Preventive Medicine.
** Current and future estimates are based on the assumption that the epidemic doubling time is 30 months (annual increase of 30%) and the total estimate in January 2001 was 1,250,000.
***The MOH Mid-/Long Term Plan of 1998 describes a total of 10 million people possibly infected with HIV by 2010, if no successful countermeasures are taken.

[4] UN Country Team China. AIDS Titanic-Draft. 2001.

1.2. Surveillance system in China

A major problem (probably shared by most countries) is that of the accuracy of estimates of HIV/AIDS and of the surveillance systems being used.

Surveillance and monitoring of HIV is done with a systematic collection of HIV rates at 101 national sites and a large number of provincial sites. It targets groups like injecting drug users (IDU); prostitutes; patients with sexually transmitted infections (STI) who visit public clinics; antenatal screening facilities in high prevalence areas like Guangdong, Guangxi, and Sichuan province and the Xingjiang region; and long-haul lorry drivers. Each of the national sites is expected to collect 400 blood samples, twice annually. Data from the sites is used to calculate HIV distribution among risk groups and its prevalence. It is also used to make estimates [5]. However, scientifically valid data on current estimates and future trends remain incomplete because reported data do not contain results from sentinel surveillance and prevalence rates do not include case reported data. In addition, sentinel surveillance sites are located in cities, whereas more than two-thirds of the HIV epidemics are in rural areas.

Surveillance systems were simply not designed with the kind of blood related epidemic of China in mind. This is hardly surprising since China's blood epidemic is unprecedented. What this means is that there are hugely high rates of prevalence in localized areas - and surveillance systems do not pick this up. Rapid assessments, better use of opportunistic infection data, or use of available data as an early warning system are needed.

Table 2: Percentage distribution of HIV/AIDS infections by mode of transmission in China

Variable	1990-1995	1996-1997	1998-1999	2000-2001*
IDU	60.0%	75.6%	77.0%	65.4%
Hetero-sexual	7.4%	6.2%	6.9%	8.6%
Homo-sexual	0.4%		0.4%	0.3%
MTCT	0.1%	0.1%	0.1	0.2%
Unknown	32.2%	18.1%	15.6%	25.5%

1.3. China: Injecting drugs and sharing needles

The most frequently occurring modes of HIV transmission across China, in 2001, are still the sharing of contaminated needles by drug users (IDUs, injecting drug users) and the unsanitary practice of collecting blood from poorly-paid donors (perhaps as many as 200

[5] Estimation methodology of the National Center for AIDS Prevention and Control goes thus: in province x, 40,000 drug users (according to Public Security, which estimates that there are 10 times as many drug users who are not detained), of which 10% have HIV (from Epidemic Station tests in selected sentinel sites of drug users detained) = 40,000 HIV+ drug users.

million people are at risk from unsanitary medical practices, either in blood collections or injections given during the course of medical treatment).

The 5 areas with the worst intravenous drug use problems are: Yunnan, Sichuan, and Guizhou provinces and the Xinjiang and Guangxi regions.

UNDCP estimates that around 60% of the drugs like heroin, opium, and the new “ice” (crystal methamphetamine) originate in the Golden Triangle, are brought through China by traffickers, and that large amounts of these drugs are consumed on the mainland. Despite government attempts to control drug traffic, less than 10% of drugs are intercepted, according to Public Security sources.

Nationally, while HIV infections from all sources are increasing in absolute numbers, most reports of new HIV infections (66.5%) are still related to needle sharing by drug users. This finding may be related to the increase in the amount of HIV testing. There are more drug users, more drug users are injecting, and an increased number of these people are sharing needles. The Public Security Bureau detained 860,000 drug users in 2000, but estimates that the real number is 10 times that. From 1997 to 2000, the number arrested increased 65% (from 520,000 to 860,000). According to national sentinel surveillance, somewhere at 10-70% of the drug users are using drugs intravenously with an average of 53.3%. According to the same statistics, needle sharing among IDUs hovers at 10-100%, with around 37% on average. HIV rates among IDUs are around 20-70%.

Intravenous drug users share equipment to an increasing degree, partly to save money, and partly because they see no danger in doing so. Researchers find a “blind confidence” among drug users when it comes to HIV infections. Moreover, studies show that male drug users are unwilling to use condoms when (after coming off drugs) they have sex, and female drug users (a small proportion of the total users) often engage in commercial sex activities, again without using condoms.

1.4. China: Sexual transmission

The spread of HIV through sexual intercourse is gaining momentum. This includes both heterosexuals (especially among the 4-5 million female sex workers with an estimated 1% of all men, who are clients with low rates of condom use) and homosexuals (among an estimated 8 million). Sexual transmission occurs predominantly in the eastern provinces.

In 2000, nationally, seven sexually transmitted diseases (STDs) accounted for more than 50% of all infections reported, out of 35 identifiable diseases. STDs are increasing at an alarming rate. In 1998, reported infections in the first half of the year increased 41 percent over 1997. In that year there had been an increase of 16 percent over the 1996 rate (see chart). According to the National Centre for Leprosy and STD Prevention and Control, in 1999, the number of STDs increased nationally by 30% from the previous

year. The reported figures are estimated to be about 1/10 of the actual number of cases. This means that, in 2000, approximately 10 million people had STD infections.

The epidemic of STDs is also notable in several of the wealthier parts of China. The cities of Shanghai and Beijing, and Zhejiang, Jiangsu, Guangdong, and Hainan provinces are reporting the highest incidence of STDs [6] and the number of cases has quadrupled since 1994. Guangdong can be taken as an example. Reported STDs there in the 1994-1996 period, on the whole increased from 77,728 to 90,066. Syphilis reports increased from 286 in 1994 to 4,179 in 1996, and went up to 7,001 in 1997. Mother-to-child congenital syphilis rates doubled in 1999.

1.5. China: Discrimination

General attitudes toward people with HIV and AIDS are very negative in spite of MOH directives stating that people living with HIV/AIDS are not to be discriminated against. Ethnographic and anecdotal evidence indicates people being shunned, dismissed from their jobs, evicted from their homes, and chased out of town when it became known that they were infected with HIV. People generally are unaware of the ways HIV can be contracted and many even think that using the same chopsticks can pass an infection on. Levels of fear are very high. In one inland province there is a particular village known to have a high incidence of HIV prevalence. A mere ID card that identifies a person as being from that village is a sufficient reason for people in surrounding areas to deny that person a hotel room or a job or to make a social pariah of him or her. After unsubstantiated press reports that Henan farmers might be injecting watermelons with blood in an effort to exact revenge, the villagers in Henan found it next to impossible to sell their produce, compounding their economic hardships.

2. Overview of HIV/AIDS in Yunnan Privince

2.1.Yunnan: Socio-economic profile

Yunnan is in the south-central part of China and has a 4,061-kilometre border with Myanmar on the west and the Lao PDR and Vietnam on the south. Its western edge is on the "Golden Triangle" of Myanmar, Laos and Thailand. Yunnan covers 390,000 square kilometres of land, 84% of that covered by fertile hills and mountains. It has mild temperatures and a large number of ethnic minorities, most of whom live in the mountainous border regions. It is also one of China's poorer provinces.

The province has a population of 42 million, which is larger than that of many of the world's countries. Of that number, 28 million are Han and the rest are ethnic minorities: More than 4 million Yi; more than 1 million Bai, Hani, and Dai; 0.5-1 million Miao, Lisu, and Muslims; and 0.1-0.5 million Lahu, Wa, Naxi, Yao, Tibetan, and Jingbo.

[6] US Embassy. From Drugs to Blood to Sex. A December 2000 report from the US Embassy China.

The mortality rate for children below the age of five is reported to be less than 50 per 1,000, and the MMR is around 100 per 100,000. In rural areas, 73 percent of the people have access to safe drinking water, and 34 percent have access to sanitation.

In 1999, Yunnan's average per capita GDP was approximately US$500 per annum (4,295 RMB), but average rural incomes were below US$175. This discrepancy was mainly accounted for by tobacco farming, processing and sales, which bring in good revenues that were not reflected in tobacco prices at the farm level. However, cigarette tax revenues do allow the Yunnan government to fund more basic social services than can be found in many of the other western provinces.

A 1998 Yunnan Statistics Bureau study found that 2.7 million of Yunnan's people (6.4%) were living below the poverty line, compared with a national average of 4.6% of the rural people and 1% of the registered urbanites [7]. State Statistics Bureau rural household data for 1996 show Yunnan with 3.6% of China's 919.4 million rural people, but 15.3% of China's 58 million rural poor. By the end of 2000, in 63% of Yunnan's counties (73 out of 115) there was extreme poverty [8]. These 73 counties, the highest number for any Chinese province, represent approximately 12% of the nation's officially designated poor counties. Average per capita grain production of peasants there was 364 kilograms per annum [9] and average per capita net income was 1,100 RMB/annum. China's average GDP growth for 2000 was 7.1%; Yunnan was the only province with negative growth of 2.4%.

The province has 12 million children (below age of 15), with almost 5 million in primary school (NER of 99%). It has 24,600 elementary schools and 22,250 middle schools with enrolments of 99.02% for urban school-age children, 97.42% for rural children, and 95.4% for ethnic minority children. The five-year retention rate is 80%. Although the government now reports very high enrolment rates for primary education (98.8 percent in 1996), the UNDP (1998) has stated: "Actual school enrolment rates may be somewhat lower than [the] officially reported rates." In some areas, enrolment rates are as low as 46 percent. Girls account for three-quarters of the children not enrolled in school[10].

The incidence of malnutrition in children below the age of 5 in Yunnan, in 2000, was 15.9% (15.1% for boys and 16.8% for girls), with malnutrition being much more prevalent in rural areas (20.4% vs. 6.1% in urban areas).

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[7] The government sets the official poverty line at the equivalent of US$0.66 per person per day, versus a World Bank standard of $1 per person per day.

[8] Provincial rosters did, in some cases, compensate for the incorrect exclusion of counties with average per capita income levels below the national minimum standard. The Yunnan provincial roster included all the counties that should have received central government support for absolute poverty reduction (i.e. 15 counties with average per capita income of between Y120 and Y150, in 1985).

[9] The State Council's Leading Group on Poverty Reduction used 18 indicators to calculate poverty status (LGPR, 1989). They included per capita income and grain output (grain production of less than 200 kg. per year); also included were: 1) access to safe drinking water, road transport, and other basic infrastructure 2) amount of arable land 3) demographic factors, and 4) other measures of economic output and fiscal strength.

[10] UNDP, China Human Development Report, February 1998, p.41.

Circumcision is not widely practiced. Out of an average of 800,000 births per annum, there were about 200 male circumcisions in Yunnan's First People's Hospital in the city of Kunming according to one study, and 60-80 operations in a private hospital there. Approximately 80-100 circumcisions were performed in the Ruili People's Hospital in the city of Ruili (Li Jianhua, 2001) (Table 3).

Table 3: Estimated HIV prevalence rates for the whole China † * [4]

Variable	1990-1995	1996-1997	1998-1999	2000-2001*	UNAIDS Estimate for China 2005 **	UNAIDS Estimate for China 2010 ***
Population						
China	1,211 M	1,236 M	1,259 M	1,279 M	1,316 M	1,359 M
Yunnan	39.90 M	40.94M	41.92M	42.90M	44.61M	46.93M
Estimate total Adult HIV						
China	10,000	100,000	500,000	>1,000,000	5,000,000?	20,000,000
Yunnan [11]	5,100	27,000	40,000	54,000	200,000 ?	600,000 ?
Adult HIV prevalence rates						
China	<0.002%	<0.02%	<0.1%	<0.2%	<1%	<3%
Yunnan	0.0125%	0.054%	0.095%	0.17%	0.44%	1.32%
Male/Female Ratio						
China	9 to 1	7 to 1	5 to 1	4 to 1	3 to 1	2 to 1
Yunnan	10 to 1	6 to 1	6 to 1	5 to 1	4 to 1	3 to 1
Male HIV prevalence						
China	<0.01%	<0.05%	<0.2%	<0.5%	-	-
Yunnan	0.02%	0.09%	0.16%	0.27%	0.68%	1.91%
Female HIV prevalence						
China	<0.001%	<0.01%	<0.02%	<0.01%	-	-
Yunnan	0.002%	0.02%	0.03%	0.06%	0.18%	0.69%

2.2 Yunnan: Changing pattern of infection

In the 1990-1995 period, Yunnan accounted for 3% of China's population, but 50% of China's HIV infections. The latter went down to around a third in the 1996-1997 period, and dropped more dramatically as the epidemic began spreading to other parts of China (Yunnan had almost 10% of China's HIV population in 1999, but 5% in 2000). According to projections, that proportion will decrease further over the next 10 years to 3% of China's estimated HIV cases.

[11] In Yunnan, new reported HIV infections detected through case reporting between 1989-2000: 146 (1989), 251 (1990), 160 (1991), 142 (1992), 176 (1993), 353 (1994), 581 (1995), 1,480 (1996), 1,145 (1997), 793 (1998), 1,517 (1999), 1,229 (2000). These numbers exclude data from sentinel surveillance.

As was stated, the first indigenous AIDS case detected in China was in Yunnan's Ruili County, on the Myanmar border, in 1986. The AIDS victim was identified as an intravenous drugs user who had been infected by sharing contaminated needles. Yunnan by now has 8,317 detected cases of HIV and 448 cases of AIDS, with 326 AIDS deaths having been reported. Sero-prevalence of intravenous drug users has been increasing fast. In sentinel surveillance sites it often reaches 50%; in one particular case it was 80% of all drug users.

The infection is showing signs of moving beyond the community of drug users. The proportion of HIV carriers who are drug users fell from 87% in 1997 to the 70% now, with 14% of HIV infections in Yunnan now being ascribed to unprotected sexual activity.

Table 4: Distribution of HIV/AIDS Infections in China and Yunnan [4]

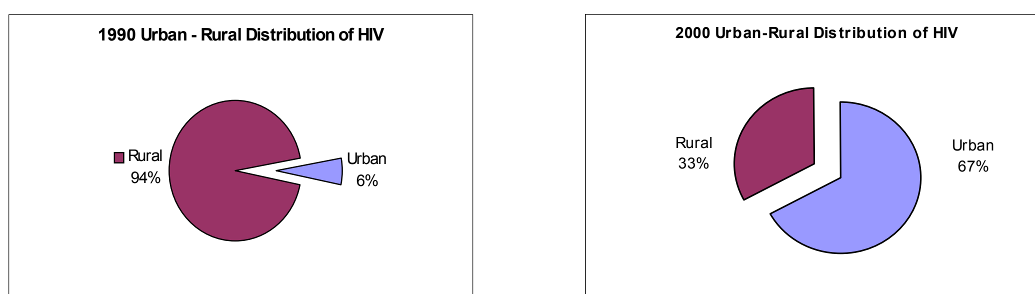
Variable	1990-1995	1996-1997	1998-1999	2000-2001*	Estimate 2005 **	Estimate 2010 ***
Distribution of Infections						
IDU						
China	60.0%	75.6%	77.0%	65.4%	?	?
Yunnan	92.4%	88.7%	80.83%	68.9%	71%	53%
Hetero-sexual						
China	7.4%	6.2%	6.9%	8.6%		
Yunnan	5.1%	6.3%	11.0%	14.7%	23%	38%
Homo-sexual						
China	0.4%		0.4%	0.3%	-	-
Yunnan	-	-	-	-	-	-
MTCT						
China	0.1%	0.1%	0.1	0.2%	-	-
Yunnan	0.1%	0.1%	0.1%	0.2%	2%	3%
Unknown						
China	32.2%	18.1%	15.6%	25.5%	-	-
Yunnan	2.5%	4.9%	8.1%	16.2%	4%	6%

The pattern of infection is also changing from the predominantly rural, ethnic-minority people living in border areas, to a more urban setting often far from the borders [12].(chart 2) In the cases reported in 1990, HIV infection among peasants and farmers predominated (93.8%); that proportion fell gradually until it was only 32.9% in 2000. The

[12] With the number of facilities doing HIV tests increasing, figures show an increase in the number of areas reporting HIV infections, following highway routes from the border. If each county or city is taken as one unit of reported infection, the number of infected units among the province's 125 counties and cities (109 counties, 13 cities, 3 municipalities) in the 1989-2000 period was: 3 in 1989, 11 in 1990, 14 in 1991, 15 in 1992, 17 in 1993, 22 in 1994 and 36 in 1995; from there it jumped to 66 in 1996, and hit 99 in 1997; it continued to rise until it reached 102 in 1998, 111 in 1999, and 115 in 2000.

percentage of infected people who were officially unemployed, however, increased from 7.6 % in 1990 to 44.1% in 2000. In the same period, the percentage of infected workers (i.e. salaried employees) rose from zero to 4.7%, sounding a warning that HIV was spreading from the countryside to the cities. The other 18.3% were self-employed workers, truck drivers, taxi drivers, etc.

Chart 2: Urban-rural distribution of HIV in Yunnan



HIV is predominantly a problem among young people: 78% of the HIV infections are found in the 15-30 age group. Among men infected with HIV in Yunnan: people below 15 account for 0.3 %; 15-19, 10.5%; 20-29, 65.2%; 30-39, 20.1%; and above 40, 3.0%. For women infected with HIV it is: below 15, 0.3%; 15-19, 12.6%; 20-29, 68.8%; 30-39, 15.0%; and above 40, 3.3%.

Table 5: HIV among the general population in Yunnan (from one surveillance site in a general hospital in the capital city of Kunming)

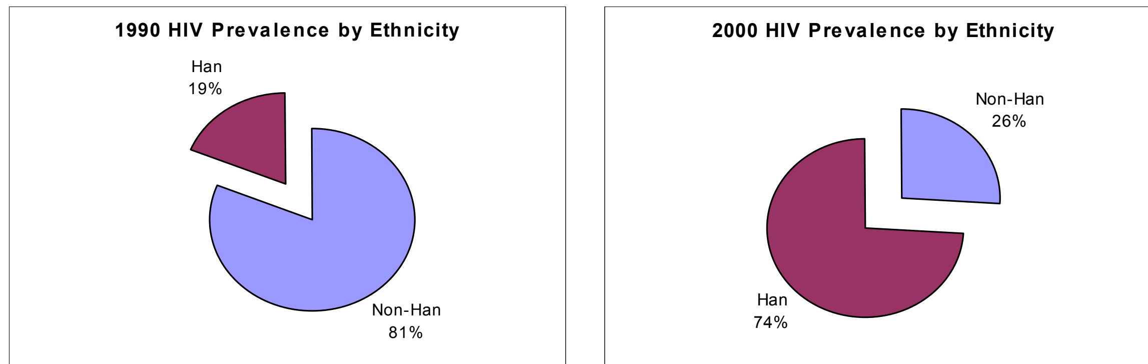
Year	Patients Tested	HIV positive cases	Percentage HIV +
1992	2,388	4	0.2%
1993	1,776	9	0.5%
1994	2,048	4	0.2%
1995	795	6	0.8%
1996	800	5	0.6%
1997	807	3	0.4%
1998	800	1	0.1%
1999	800	11	1.4%
2000	805	11	1.4%

HIV infections are also a male problem, but decreasingly so. In 1990, the ratio of males to females with new infections was 12:1. That ratio fell to 4:1 in 1997, and is now 3:1[13]. For China as a whole, the ratio is still 4:1, but falling.

Although ethnic minorities account for 33% of Yunnan's population, in 1990 they accounted for 81.3% of the people with HIV infections. By 2000, their proportion of new HIV infection dropped to 25.1%, while the percentage of Han Chinese rose to 73.9 %.

[13] The male-female ratio of HIV infections in Yunnan has dropped over the years: 40:1 in 1990, 19:1 in 1992, 11:1 in 1993, 11:1 in 1994, 9:1 in 1995, 6:1 in 1996, 4:1 in 1997, 3:1 in 1998, 6:1 in 1999, and 6:1 in 2000.

Chart 3: Changing Pattern of HIV Distribution among Ethnic Groups in Yunnan



2.3 Yunnan: surveillance system

Yunnan has the best reporting in China, which probably explains why the majority of reported cases are from Yunnan. Still, in spite of this relatively good system of reporting, estimates of HIV infection by county, or even prefecture (administrative area above county-level) are not accurate enough.

Table 6: Yunnan Provincial Sentinel Surveillance Sites

Year	**Provincial Sentinel Surveillance Sites**					
	IDUs	CSWs	STD Clinics	Antenatal	General	Total
1992	11	2	9	2	1	25
1993	12	2	10	4	1	29
1994	13	2	10	5	1	31
1995	13	3	12	5	1	33
1996	14	3	17	6	1	40
1997	15	1	16	9	1	42
1998	14	1	15	11	1	42
1999	15	1	17	9	1	43
2000	15	1	15	10	1	42

In Yunnan the majority of case reports come from the sentinel surveillance system. Surveillance is not done unlinked, and therefore it is weakened, because it can only be done (in the main) compulsorily on incarcerated populations. Yunnan has two national sentinel surveillance sites in its capital, Kunming (one for CSWs, the other for STDs). These facilities are part of the 42 site provincial sentinel surveillance system (table 6).

IDU surveillance sites are set up at compulsory detoxification centres. The commercial sex worker (CSW) surveillance sites are in female re-education centres. STD surveillance sites are at selected STD clinics in various cities. All blood donors in Kunming and in the 15 prefecture capitals must be screened for HIV. But, although blood collection sites conduct the largest number of HIV laboratory tests, they are excluded from provincial sentinel surveillance sites. Antenatal surveillance sites are set up in antenatal departments of general hospitals in different cities. The general population site is based in one hospital for unlinked sero-surveillance, a feature that does not exist in the national system.

The Yunnan Provincial Maternal and Child Health (MCH) system surveys 350,000 women annually for syphilis, gonorrhoea, and genital warts. Women from the general population and clients from MCH clinics are included in these surveys. This information is kept within the MCH reporting system and does not reach the STI surveillance system.

2.4 Yunnan: Injecting drugs and sharing needles

From 1992 to 1994, intravenous injections by drug users accounted for about 30% of total use in Ruili, Longchuan and Luxi counties. It increased to about 50% in the three counties in 1995. Intravenous injections as a percentage of the total were already close to 90% in Kunming, Kaiyuan, and Wenshan.

The 1997 data analysis of the 15 drug-abuse surveillance points across Yunnan showed an average incidence of needle sharing of 54.3% among drug users. From 1992 to 1995, the percentage of needle sharing was 80-90% in Ruili, 70-90% in Longchuan, and 30-70% in Luxi. In other parts of Yunnan, the percentage of needle sharing among drug users has reached almost 100% in recent years. The 1994 fragment survey of 1,548 young men, aged 18 to 29, in 82 villages in one county found 192 (44%) injecting drug abusers out of 433 drug abusers and a 73% incidence of needle sharing among the 192 (see Annex 1).

Table 7: HIV and Injecting Drug Users (IDUs) in Yunnan

Year	Number of Surveillance sites	Number of IDUs Tested	HIV positive cases	Percent HIV Positive
1992	11	1,395	84	6%
1993	12	1,353	72	5%
1994	13	2,016	132	7%
1995	13	2,569	175	7%
1996	14	2,340	524	22%
1997	15	1,630	431	26%
1998	14	1,467	358	24%
1999	15	1,204	335	28%
2000	15	2,985	791	27%

Case study of Kaiyuan City in Yunnan Province

Kaiyuan, located in southeast Yunnan, has territorial area of 1,950 kilometers, most of which (91.4%) is covered by mountains and hills. It has a population total of 292,094, consisting of 33 nationalities with Han, Yi, Hui, Miao and Zhuang as major ones. The Kunming-Hanoi railway that runs through the territory from south to north and a very well developed road network make it a hub of communications facilitating a daily population flow of over 30,000. Kaiyuan City is only 300 kilometers away from the Sino-Vietnamese border; all border trade exports go by way of Kaiyuan City.

By the end of 1998, the number of registered drug abusers in Kaiyuan had reached 1,884; 70% of the drug abusers were intravenous injecting drug users among whom 73% had a needle sharing history. Surveillance results indicated an incidence of 44.9% HIV infection among the intravenous drug abuser in 2000. Kaiyuan City as a distribution center in southeast Yunnan with a

great of migrant people has stimulated the development of entertaining industry. There are now 34 beauty and massage salons, 61 disco pubs, 124 Karaoke bars, 5 saunas, employing over 2,000 service girls most of whom are between ages 16-25. The city has a total number of over 10,000 drivers and 70% of them are long-distance truck drivers. By the end of 2000 the total number of people tested HIV-positive had reached 332 and most of them were intravenous drug users.

2.4.1 Drug abuse and its trend in Yunnan Province

Expert estimation puts the real number of drug users in Yunnan at 100,000-150,000. The characteristics of drug users and drug abuse-related problems are as follows:

- Age: Drug users are mainly youngsters. Most boys and girls begin smoking, and a few of boys and girls start injecting between 18-22 years. In general boys and girls who are smoking drugs will convert to injection after half a year to one year. National data is not available for comparisons.
- Sex: Men drug users outnumber women drug users, but there is a trend towards a yearly increase in the number of women drug users.
- Occupation distribution: Young peasants are the main drug use group in the rural areas; people with unstable jobs, the jobless, self-employed, taxi-drivers, transport workers, and service workers, are the main drug use groups in the city. Drug use has gone beyond the occupation boundary in the recent years.
- Ethnic composition: There is no big difference between different ethnic groups; it mainly depends on whether the drug use problem has affected the ethnic area or not.
- Levels of education: Drug users in general have low levels of education and most of them only have middle or primary school education.
- Drugs of abuse: Opium smoking was the main drug of abuse in the border areas at the beginning. Drug consumption market has been taken over gradually by heroin. In some poverty and remote mountain areas, however, opium smoking is still the main drug of abuse for a quite proportion of drug users, in particular among the middle-aged and old people. Heroin smoking and injection are the two main drugs abuse in the city. A multi-drug abuse pattern has taken shape and the trend is towards a graduate increase. The other most common drugs of abuse include benzodiazepines substances (such as diazepam, triazolam), alcohols, narcotics (such as morphine, pethidine, DHE) and other substances such as headache powder, tramadol, and anti-psychosis drugs (such as chlorpromazine). The use of stimulants has been gaining popularity among the adolescents and youngsters usually in poor rural areas, the most commonly used stimulants include “ head-swinging tablets” (Ecstasy) and “ice” (Methamphetamine).
- Social impact: Crime rate triggered by drug abuse and drug trafficking remains high, with 70-80% of robberies, theft and drug dealing conducted by drug users.
- Relapse rate: Relapse after detoxification in most cases is above 90%. New drug users continue to emerge: a 1994 survey of all the 1,548 male youngsters between ages 19-28 in the 82 selected natual villages with a high incidence of drug use found a 19.6% yearly incidence of new drug use.

Table 8: Profiles of Registered Drug Abusers in Yunnan

Year			**1998 Number (%)**	**1999 Number (%)**	**2000 Number (%)**
Number of Drug users	Male		40,253 (90%)	39,482 (89%)	39,293 (89%)
	Female		4,656 (10%)	5,074 (11%)	4,949 (11%)
	Total		**44,909**	**44,556**	**44,245**
Type of drug Abuse	Heroin		18,630 (64%)	19,763 (67%)	19,910 (69%)
	Opium		10,581 (36%)	9,855 (33%)	9,026 (31%)
	"ice"		0 (0%)	44 (0.1%)	37 (0.1%)
	Total		29,211	29,662	28,973
Injecting Heroin users	Number of People		15,662	14,872	15,247
	Percentage among heroin abusers		84%	75%	77%
Age Distribution	Below age 17		813 (2%)	956 (2%)	961 (2%)
	between ages 18-25		14,207 (32%)	14,755 (33%)	14,707 (33%)
	between ages 26-35		16,669 (37%)	16,254 (36%)	16,789 (38%)
	between ages 36-60		10,435 (23%)	10,032 (23%)	9,572 (22%)
	Over age 60		2,765 (6%)	2,559 (6%)	2,216 (5%)
	Total		**44,889**	**44,556**	**44,245**
Occupation distribution	Workers		3,409 (8%)	3,280 (7%)	3,113 (7%)
	Peasants		27,255 (61%)	27,079 (61%)	27,325 (62%)
	Cadres		214 (0.5%)	212 (0.5%)	209 (0.5%)
	Self-employed workers		1,378 (3%)	1,446 (3%)	1,238 (3%)
	Unemployed		12,143 (27%)	12,163 (28%)	11,973 (27%)
	Total		**44,399**	**44,180**	**43,858**
Levels of Education	Illiterates		10,270 (23%)	9,532 (21%)	8,576 (19%)
	Primary school		14,826 (33%)	15,161 (34%)	15,781 (36%)
	Junior high		16,958 (38%)	16,980 (38%)	17,017 (38%)
	Senior high		2,768 (6%)	2,762 (6%)	2,765 (6%)
	College		87 (0.2%)	121 (0.3%)	109 (0.2%)
	Total		**44,909**	**44,556**	**44,248**
Consequences	**Disease**	HIV	1,706	1,415	1,507
		STDs	519	609	482
		Other related diseases	962	858	839
		Handicapped	64	54	51
	Deaths	Deaths caused by drug use	157	117	182
		Other deaths	59	60	115
	Drug related crimes		2,420	2,399	2,252

Cadres: civil servant leaders of factories, institutions, communities, police and military.

The frequency of extramarital sexual behaviour among drug users was four times the average among non- drug-users; condom use was only 2.5% in these sex acts.

There is little reporting on the state of HIV and HBV infection among drug-use groups. Random testing of the Provincial Epidemic Prevention Station from 1989 to1990 in Ruili showed an extremely high incidence of hepatitis C virus (HCV) infection (81%) among the intravenous drug users with a prevalence of HIV infections; the incidence of HCV infections among non-intravenous drug users was much lower (14%).

Table 9: Intravenous injection and sexual behaviours in relation to HIV-positive results (843 IDUs in 2 counties and 1 city, Yunnan Province)

Injecting and sexual behaviours		N	HIV positive %
The first injection time	1984-1985	3	100.0
	1986-1987	13	76.9
	1988-1989	103	60.2
	1990-1991	155	40.6
	1992-	13	30.8
		287	
Place of injection	Myanmar	50	74.0
	Ruili	40	67.5
	Longchuan	151	47.7
	Luxi	38	5.2
		279	
Injection frequency	1-3 times/month	70	32.9
	1-6 times/week	27	37.0
	1-2 times/day	182	67.7
	3 or more times/ day	37	45.9
		316	
Needle sharing	Yes	226	53.5
	No	62	33.9
		288	
Premarital sexual Behaviour	Yes	75	56.1
	No	81	44.4
		156	
Extramarital Sexual behaviour	Yes	19	50.0
	No	89	75.5
		108	
Frequency of Sexual behaviours	Once or less / month	42	47.6
	1-3 times/month	76	94.9
	1-2 times/week	42	100.0
	3 or more times/ week	25	48.0
		185	

Sexual behavior among IDUs in Yunnan

For six consecutive years from 1992-1997, a follow-up survey of the spouses of HIV-infected men was conducted in Ruili on the incidence of HIV infection through husband-wife transmission. The results show the incidence of HIV infection through husband-wife transmission was 3.1% in 1990, 9.8% in 1992, 7.4% in 1993, 0% in 1994, 10.3% in 1995 and 12.3% in 1997.

In another survey conducted in Ruili in 1995, 128 men intravenous drug users and their spouses were both given HIV anti-body testing. The results show 16 couples (12.5%) were both HIV-positive and they never used condoms; among them 1.6%, 3.9%, 7.8%, 10.9% of the women became infected one year, two years, three years and four years after their husbands were infected respectively.

A research project conducted in Kunming found 80.6% of the 364 heroin users surveyed had more than two sex partners; among them 39.6% had several (2-4) sex partners, 41.0% had many (more than 5) sex partners; and 85.2% never or only occasionally used condoms in sex activities. These figures show the unprotected of high-risk sexual behaviors among intravenous drug users will be a direct cause of HIV transmission to general people.

Li Jianhua's in-depth interviews with 74 "ice" users in three counties in the border areas in 2001 show the high availability of " ice" has created quite a large number of "ice" consumers. During the interviews, "ice" users claimed that there were a high proportion (approximately 50%) of regular or occasional "ice" users among people working in casinos, hair salons and entertaining places.

Twenty-four interviewees (32.4%) claimed they felt sexual desires under the "ice" effect: 7 (9.5%) every time after the dosage, 4 (5.4%) very often, and 13 (17.6%) sometimes; 4 (5.4%) became sexually violent. The survey also showed that "ice" users, men or women, all felt sexual urge and hypersexual power for quite a period of time in the early stage of"ice" use. Among the 74 "ice" abusers in the survey, 87.5% had at least two or more sex partners. Except 4 persons who often used condoms, most of them never or seldom used condoms. Attention and concern, therefore, should be given to the problem of sexual violence as a result of "ice" use and the impact of high-risk sexual behaviors on the prevalence of HIV infection.

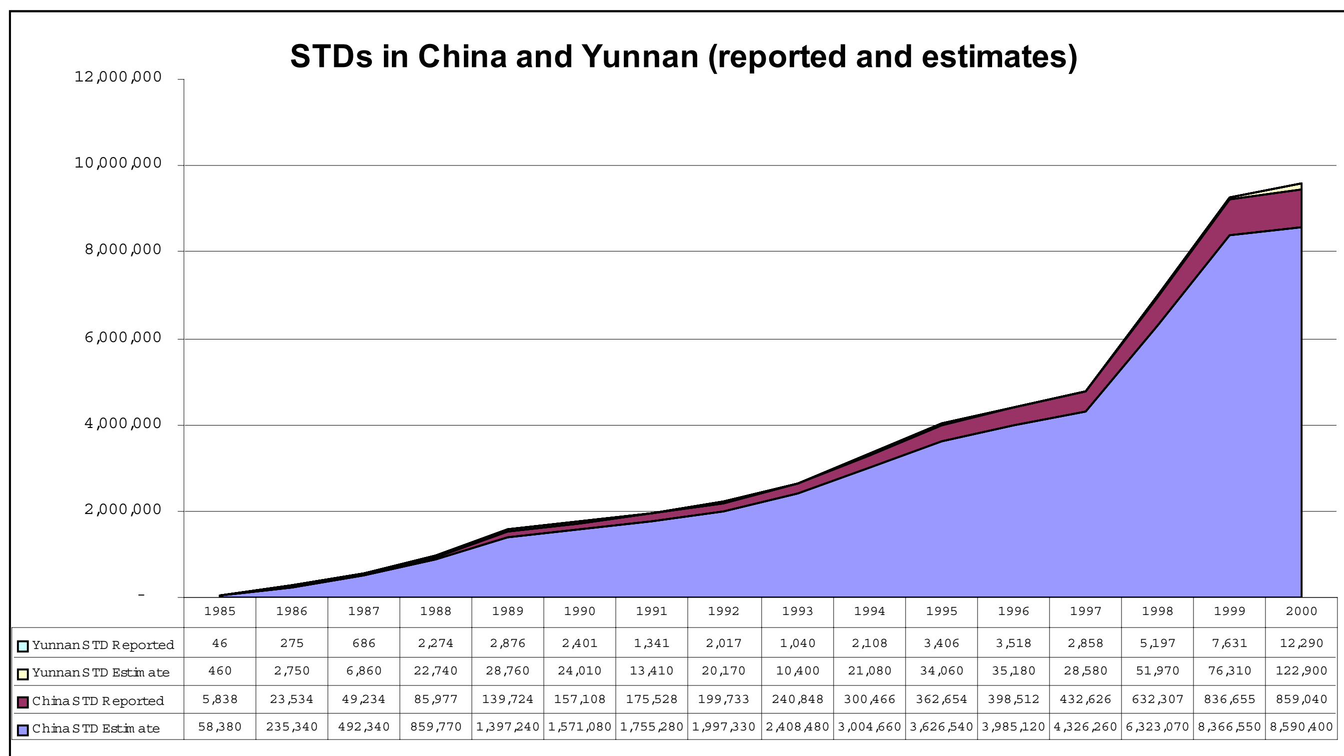
2.5 Yunnan: sexual transmission

Sexually-transmitted diseases in Yunnan, and China as a whole for that matter, are increasing the risk of HIV infection, but are also a taboo subject that causes many infections to be self-medicated or treated by private practitioners (or quacks). These practices are both ineffective and unreported. Even this indirect indicator of HIV levels is, therefore, unfortunately strongly under-reported. There is an alarmingly high level of behavioural risk among the population of Yunnan (again, as there is in China as a whole). A reluctance to talk about sex, drugs, or risky forms of behaviour are combined with new social freedoms that have allowed the numbers of prostitutes, drug users and practising homosexuals to rise rapidly. The MOH recognised the latter category for the first time in August 2001.

2.5.1 Heterosexual transmission

In Yunnan sexual transmission started to increase since mid-1997 and the overall percentage of sexual HIV in 2000 reached 15%. Provincial sentinel surveillance among STI patients produced evidence that sexual HIV epidemics had started in 1997 in a number of sites including Ruili, Dali and Lijiang. In 1999, there were significant HIV infection increases among male STI patients in Baoshan, and among sex clients in Kunming City. In 2000, HIV prevalence among male STI patients reached up to 8% with an average of 2.7%. HIV infections among male STI patients rapidly increased in Binchuan, Gengma, Chuxiong and Kunming. Among female STI patients the rates reached up to 13% with an average of 1.9%. Places with rapidly increasing STI incidence are Gejiu, Gengma, Baoshan and Ruili. Prostitutes in Kunming have HIV prevalence rates of 2.9%.

Chart 4: Sexually Transmitted Diseases in China and Yunnan



	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Yunnan STD Reported	46	275	686	2,274	2,876	2,401	1,341	2,017	1,040	2,108	3,406	3,518	2,858	5,197	7,631	12,290
Yunnan STD Estimate	460	2,750	6,860	22,740	28,760	24,010	13,410	20,170	10,400	21,080	34,060	35,180	28,580	51,970	76,310	122,900
China STD Reported	5,838	23,534	49,234	85,977	139,724	157,108	175,528	199,733	240,848	300,466	362,654	398,512	432,626	632,307	836,655	859,040
China STD Estimate	58,380	235,340	492,340	859,770	1,397,240	1,571,080	1,755,280	1,997,330	2,408,480	3,004,660	3,626,540	3,985,120	4,326,260	6,323,070	8,366,550	8,590,400

Table 10: HIV among Patients consulting for Sexually Transmitted Diseases (STDs) in Yunnan

Year	Surveillance sites	Number of STD Cases Tested for HIV	HIV positive cases	Percent HIV Positive STD Patients
1992	9	2,040	1	0.0
1993	10	2,112	2	0.1
1994	10	2,170	4	0.2
1995	12	3,595	5	0.1
1996	17	4,316	53	1.2
1997	16	3,927	126	3.2
1998	15	3,658	57	1.6
1999	17	4,430	84	1.9
2000	15	4,245	103	2.4

Experts estimate that about 0.5-1% of adult males visit commercial sex workers. There are very few studies of the clients of commercial sex workers, but a survey of STD patients in Yunnan provided the educational patterns of male patients.

Table 11: Characteristics of Patients attending STD Clinics [14]

Age Distribution	Between 15-19 years	5%
	Between 20-29 years	46%
	Between 30-39 years	32%
	Between 40-49	11%
	Over age 50	5%
Occupation distribution	Workers	14 %
	Peasants	28 %
	Cadres	14 %
	Self-employed workers	13 %
	Drivers	4 %
	Promoters	2 %
	Students	1 %
	Other	10%
	Jobless	14%
Levels of Education	Illiterate	3%
	Primary school	18%
	Middle school	70%
	College	9%

Change in the concept of sex

In the survey on the behavior of Chinese youth, 59% of 191 single women in Kunming had boy friends and 40% of them had sex with their boy friends; 51% of the 207 single men had girl friends and 43 of them had sex with their girl friends. In Menglian County, 28% of the 64 single women had boy friends and 56% of them had a sexual relationship with their boy friends; 29% of the 101 single men had girl friends and 38% of them had a sexual relationship with their girl friends. In the survey of 149 married people in Kunming, 10% of the women and 12.5% of the men had extramarital sexual partners. Premarital and extramarital sex are increasing in frequency.

The prevalence of STDs (sexually transmitted diseases) and RTIs (reproductive tract infections) in Yunnan

A cumulative total of 49,955 STD cases were reported from 1985 to 2000 in Yunnan Province from 26 STDs surveillance sites set up in 16 prefectures, 9 counties/cities and 1 women's re-education center. In 2000 there were 12,290 reported STD cases, an increase of 61.05% over 1999. In view of the unreported cases, this figure is way below the real prevalence level. In a survey conducted by the Yunnan STD Prevention Monitoring Center in 1999 on unreported STD cases in 135 state-owned hospitals and health institutions, and 167 clinics in eight prefectures, in Yunnan Province, the percentage of unreported cases was 19.1% in state-owned institutions, 62.4% in health centers, 79.3% in medical institutions, and 100% in private-owned hospital and clinics. A survey of 222 people with STD symptoms visiting a doctor for the first time shows (Zeng Yong, 1999) that 41% visited public health STD clinics, 42% visited private hospitals and clinics, and 17 % clients went to pharmacies for self-treatment [15].

An RTI monitoring system is still non-existent at the provincial level. As a result, there is lack of information on the prevalence of reproductive tract infection (RTIs) (mycosis, trichomoniasis, bacterial vaginitis and cervical erosion). Currently, the limited data available on the epidemic in certain areas and special groups can be roughly divided into two categories: (a) the general survey of gynaecologic diseases by health centers for women and children from clinical files of gynaecologic patents; (b) research data. Almost all the data available is on the incidence of infection among women; data on the incidence of infection among men is lacking.

[14] Zeng Yong, "Health Seeking and Reproductive Health Behavior of Persons with STDs" 1997. Conducted in three public sector general hospitals in Kunming. The subjects were 222 STDs clients visiting hospitals.
[15] Zeng Yong, "Clinic Behaviors of STD Patients and Reproductive Health Service," *Reproductive Health Service and Research—Theory and Practice*, 2000:pp370-396.

Available RTI data shows that this category of diseases is the most frequent-occurring among women in Yunnan, although the incidence varies from group to group in different regions. It is also very hard to predict which is the most vulnerable group as the incidence and prevalence fluctuates among different groups and nationalities. In a survey of 2,020 rural women conducted by Yan Lingqing and some researchers in Chengjiang and Luliang counties, the incidence of trichomoniasis, mycosis, bacterial vaginitis and cervical erosion were 16.2%, 19.9%, 14.7% and 58.2% respectively; with 9% of women infected by more than two diseases. In a general survey of 317 married women in Jinhong City conducted by Xishuangbanna Health Center for Women and Children, the incidence of chronic cervical erosion and vaginal diseases were 58% and 26% respectively. In a general survey of 2,218 married women of child-bearing age conducted by Kunming Wuhua District Health Center for Women and Children between March 1992 to October 1993, the incidence of trichomoniasis, mycosis, bacterial vaginitis and cervical erosion were 0.45%, 3.6%, 5.55% and 23.7% respectively. In a survey of 263 Dai women conducted by Li Tianling and his group in Xishuangbanna, Mengna county, the incidence of mycosis vaginitis, bacterial vaginitis and trichomoniasis were 15.2%, 9.5% and 2.3% respectively.

A comparative study of RTIs in women of childbearing age in cities and in the countryside indicated that rural women had higher incidences than those in urban areaaas. For example, in a RTI survey of 3,045 women conducted by Liu Fengying in the towns and three villages in Chengjiang and Lulinag counties, the incidence of RTIs was 70.4% in rural areas and 55.7% in urban areas. Incidence was related to age, level of education and economic status. Another RTI survey of childbearing women conducted by Yang Liqing in Yunnan also came out with similar results: the incidence of mycosis vaginitis was 1.4-2.9% in the city and 26.3-35.7% in the countryside; the incidence of trichomoniasis was 0.9-1.8% in the city and 7.4-16.2% in the countryside. With regard to age, the majority of cases were between 20-30 year olds, accounting for 50-60% of the total, in both rural and urban cases.

Testing among high-risk groups such as sex workers usually focuses on STDs and not RTIs. As a result, there have been few identified cases of RTIs in CSWs. Some research, however, has indicated that the incidence of gonococcal cervical erosion is as high as 23.1%, similar to mycosis vaginitis and trichomoniasis, followed by condyloma acuminatum. Among the high-risk women, the incidence of RTIs is higher in young age groups, with 65% of the total found in 14-20 year olds.

3. Facilitating factors

3.1. Facilitating factors: sexual transmission

(i) Abortions

The number of abortions also provides an indicator of levels of unprotected sex. In 2000, the State Family Planning Commission registered 3 million abortions by married women. For the same period, the State Statistics Bureau estimated 7 million abortions by both married and unmarried women. If the reports that approximately 50% of these women used a "morning after" pill because it is easily obtainable in pharmacies without a prescription, then the total number of abortions is much higher.

(ii) Reproductive tract infections

Numerous studies indicate high levels of reproductive tract infections, especially among rural women. There are reports of as many as two-thirds of women of reproductive age

with some type of RTI. These can serve as a reliable proxy for STDs, which in turn serve as a reliable proxy for HIV [16].

(iii) Homosexual transmission [4]

There are an estimated 8 million homosexual men in China. Because of social norms, most homosexuals are married. Studies indicate that 2.2% of rural married men have had sex with men. For urban married men, it is 0.5%. Other studies have found up to 5% of men having sex with men (MSM) to be HIV positive [17].

A survey among 857 MSM (average age 30 years) from throughout China in 2000 gave the following information on sexual practices [18]:

In the past year:
- 86% had oral sex
- 77% had anal sex
- 59% also had sex with a woman
- 9% bought sex from men

Ever in their lives:
- 182 of the 857 had at least one STI
- 71 of 857 had taken a HIV test and 3 tested positive

Active partner's use of condom during sex:
- 9% always
- 16% most of the time
- 20% not frequently
- 12% never
- 16% not applicable

For Yunnan we were unable to collect any data on homosexual activities.

(iv) Prostituition

Female prostitution

In recent years, China's rapidly expanding prostitution trade is increasing the risk of HIV infection for urban populations [19]. In 2000, over 600,000 commercial sex workers were arrested. But, the Public Security Bureau (PSB) estimates the number to be 5 to 10 times that. Some Chinese researchers estimate as many as 20,000,000 and the number of prostitutes is increasing. From 1996 to 2000, the number of CSWs arrested by police increased 43%.

[16] UNAIDS/WHO. Consultation on STD interventions for preventing HIV: what is the evidence? WHO/HIS/2000.02. May 2000.
[17] Gay community left on sidelines in Aids-prevention plan, RAYMOND LI, Thursday, August 16, 2001 http://china.scmp.com/today/ZZZMSS4ZEQC.html
[18] Zhang Beichuan, 2001: "A surveillance investigation report on male homosexual/bisexual behaviors in the year 2000," *Friends Exchange*, No 19/20. (In Chinese)
[19] This article can be found at: at http://www.usembassy-china.org.cn/english/sandt/index.html.

Most experts say that some prostitutes are IV drug users, and that the two populations have begun to intermingle. Commercial sex workers have many different sexual partners and can spread HIV more widely and more rapidly than IV drug users (who transmit HIV only within a circle of drug users). Prostitution and drug use are both considered to be crimes and offenders are sent to rehabilitation camps and centers. Ironically, these centers offer a further risk when inmates engage in do-it-yourself tattooing with non-sterilised needles.

Sex workers are especially at risk, since most have little access to health information, health services, counselling, or testing for HIV/AIDS. They also find it difficult to get clients to use condoms. Although HIV infection rates among sex workers are still thought to be low, the government reports that an average of 30 percent of the sex workers in Women's Custody and Education Centres were infected with STDs. Unofficial studies have put the rate much higher. One that used data on women in detention centres as well as on women visiting clinics found that between 42 and 85 percent of the sex workers had contracted gonorrhoea, while 49 percent had more than one bacterial STD[20]. A study of women detainees in an unidentified city in China found that 80 percent were infected with STDs or contagious hepatitis. Testing for STDs and HIV/AIDS is not available free of charge and women sometimes have to pay thousands of yuan for treatment [21]. Some doctors in public hospitals see sex workers as "money trees", so the women face discrimination from health workers. In some Women's Custody and Re-education Centres in the south, treatment for STDs is only provided to those inmates who are able to pay [22].

Police practices in some parts of the country actually discourage the use of condoms. "The main reason prostitutes give for why it is 'inconvenient to carry' condoms is that police consider carrying condoms as legal evidence of prostitution. This demonstrates that our policy of attacking prostitution has a threatening effect, since most prostitutes feel more threatened by the law than by STDs." An official told the same researchers: "It is very difficult to determine if someone is involved in prostitution. When you detain them and take them in for investigation, whether they are carrying condoms is the most important evidence. If you don't discover any condoms, only if they admit they were soliciting customers can you prove it." Although it may not be officially sanctioned, police are still using such tactics [23].

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[20] Vincent E. Gil et al, "Prostitutes, prostitution and STD/HIV transmission in mainland China," Soc. Sci. Med., Vol.42, No.1, 1996.

[21] EU programme study conducted by the National STD Control Centre in Nanjing indicated average cost for STD in public clinics was 400-500 yuan, with a range which went up to several thousand.

22 Report On Implementation Of CEDAW (Committee on the Elimination of All Forms of Discrimination Against Women) In The People's Republic Of China By Human Rights in China, Asia Monitor Resource Centre, China Labour Bulletin, Hong Kong Christian Industrial Committee. December 1998

23 "Fiscal revenues surge as tax collection net widens: Putian slaps heavy taxes on 'three-accompanies ladies'," Ming Pao, August 28, 1997. The article reported that women working in such businesses in Putian would be asked to pay 100 yuan per month to the tax department.

Survey of Condom Use among Commercial Sex Workers in Yunnan

Li Jianhua and his group interviewed 40 “street” sex workers in Kunming City, Menglian County, Jinhong County and Ruili City in 2001. Their average age was 27.54±5.32, the youngest 19 and the oldest 36. For every sex intercourse they charged 20–50 RMB. The number of visitors they received varied from day to day with a maximum of three clients and a minimum of one visitor per night. All 40 interviewees had condoms with them all the time; most of them would ask their clients to use condoms, but 92.5% (37/40) would not insist if the visitors didn’t want to use them. As a way to prevent diseases, they would “ find out whether the clients carry any disease through observation of their reproductive organs” and “ if he carries any disease, I would not have sex with him for sure.” Thirty-one interviewees had “ boy friends or husbands” in their life, but none of them used condoms when they had sex with their “ boy friends or husbands.” and among them 26 persons admitted they were once infected with “sexual diseases.” Thirteen interviewees had abortions when they became pregnant. When they became sick, they would rather go to “small clinics” for treatment or just buy remedies at “drug stores” for self-treatment because it was “cheap,” “time-saving,” “ convenient” to do that and doctors in these places “were nice to them.”

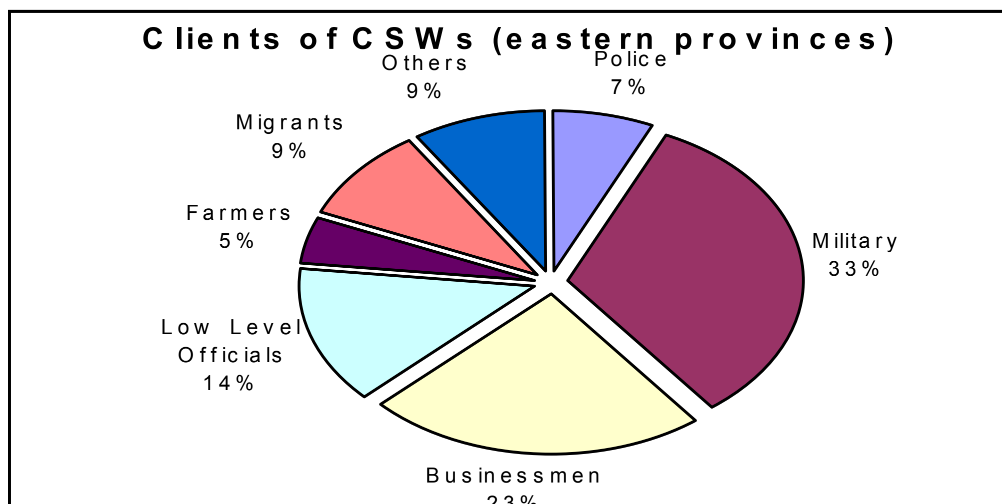
Wang Yanguang of the Chinese Social Sciences Academy’s Philosophy Institute, in an April 2000 article titled "Strategy of Tolerance and HIV/AIDS Prevention in China", argued that prostitution in China is widespread and has many different forms and that neither the "strike hard" approach of the Chinese police nor the "red light district" strategy suggested by some scholars could be successful. "The rapid growth of China's sex industry is not simply a matter of the moral fall of those women who sell themselves. The context of this problem includes rapid economic development, a growing gap between rich and poor, in both cities and countryside, unemployment, poverty, and a big buyer's market. Under these conditions, there are no simple solutions that could make the sex trade disappear in a short time.”

Table 12: HIV among Commercial Sex Workers (CSWs) in Yunnan

Year	Nr Surveillance sites	Total CSW tested	HIV positive CSWs	% HIV Positive CSWs
1992	2	426	0	0.0%
1993	2	126	0	0.0%
1994	2	83	0	0.0%
1995	3	1,050	5	0.5%
1996	3	824	12	1.5%
1997	1	588	9	1.5%
1998	1	575	14	2.4%
1999	1	847	19	2.2%
2000	1	820	24	2.9%

Recent research among CSWs in the eastern part of the country reveals that their clients are skilled government workers and businessmen: military (30-40%), businessmen (20-30%), low level officials (10-20%), migrants (10%), police (5-10%), farmers (5%), and others (10%).

Chart 5: Clients of CSWs in Eastern Chinese Provinces



So, whereas in Yunnan clients are from lower classes whose supply of labour is great (inferred from STD clinic attendees Table 11), in the east clients come from socially important categories, and heterosexual transmission represents a real risk in bridging HIV from high-risk groups to the general population. To have an idea how the epidemic will progress in Yunnan, more research needs to be done among CSWs (see Annex 2 for issues related to Cross Border Prostitution).

Prostitution in Yunnan

The Yunnan Provincial Government Health and Epidemiology Center, reporting in the October 2000 edition of the "Journal for China AIDS/STD Prevention and Control," stated that about 2% of prostitutes and 2% of STD patients in Yunnan Province have HIV. In addition, about 1% of those who patronize prostitutes are infected. (Although these percentages seem low, the numbers of people involved is quite high. The big tourist boom in Yunnan of the past few years, in particular, has increased sex tourism and prostitution there. One informed Yunnan observer said that Public Security in Yunnan often turns a blind eye to prostitution to the region's sex industry) [24]. The results of the above surveys conducted among people in general, sex workers and drug abusers indicate that the high-risk behaviors of different groups of people are not isolated; they are interactive and interchangeable under certain conditions. For example, in the HIV/AIDS monitoring report by Yunnan Province, the sero-prevalence of HIV among women sex workers was 2.9% in 2000, but the sero-prevalence of HIV among women drug users arrested because of their engagement in prostitution activities was as high as 10.3%. The sero-prevalence of HIV among those once infected with STD was 2.4%. When sex workers had sex with their clients, boy friends, or friends, their wish to use condoms varied in degrees. A complicated AIDS prevalence web was formed by many other variables such as sexual excitement after dosage, sexual relationships with multi-sex partners and prostitution among women drug users.

[24] Vincent E. Gil et al, "Prostitutes, prostitution and STD/HIV transmission in mainland China," Soc. Sci. Med., Vol.42, No.1, 1996.

Male prostitution is found in large cities and consists predominantly of migrants from rural areas.

(v) Low condom use

Throughout China the use of condoms remains very low. Special research on the use of condoms has been quite limited in Yunnan; the related data available mainly comes from research on AIDS, STD, and RTI prevention and on family planning. Statistics from one area in Yunnan indicated that in 1995 only 201 married women (1.6%) had used condoms among a group of 15,978.

In the 1995 survey of some 900 young people on AIDS-related knowledge, attitudes and behaviors jointly conducted by Australian Red Cross, Yunnan Red Cross and Yunnan AIDS Prevention Center in Kunming City and Menglian County, 95% of the 524 youths surveyed in Kunming could tell where to buy condoms, but 53% of them thought the use of condoms was mainly for birth-control purpose; over 40% of the 397 youths surveyed in Menglian didn't know what kind of thing a condom was and among those who had heard of condoms 35% didn't know where to buy them and 40% thought the use of condoms was for birth-control purpose; 19 persons among the 283 men surveyed in Kunming admitted they had visited sex workers and among them 13 never used condoms and 6 used condoms sometimes; and 7 persons among the 200 men surveyed in Menglian said they had visited sex workers and they never used condoms when they did that. In a survey on sex health conducted by Li Xiaoliang and his group in the countryside of some area in Yunnan in 1999, only 6% of those surveyed used condoms and all for birth-control purpose.

Some research shows ethnic minority groups seem to regard the use of condoms as a kind of "taboo." For example, the Dai people wouldn't want to use condoms and the Dai women said they never used them; most of the Naxi women never used condoms either. The incidence of condom use is generally very low whether it's among people in general or among high-risk groups, although condom use is related to many faucets of life such as traditional concepts, education levels and economic capabilities.

In the survey conducted by Xu Yansheng and her groups in one reeducation-thought-labor camp for women in Kunming, 33.3% of the women undergoing reeducation through labor there used condoms every time when they had sex with sex visitors, 11.9% never used condoms and 91.4% said the use of condoms was to prevent diseases; 61.1% had visitors who refused to use condoms and among them 59.1% said they were resolute in refusing their visitors who wouldn't want to use condoms, 36.4% said it was all right and 4.5% said it didn't matter if they were paid a lot money.

In the 1997 survey conducted by Wu Zunyou and his group of 75 service girls in 52 bars and hear salons in Luxi, Ruili and Longchuan, Dehong Prefecture, Yunnan Province, of the 40 service girls who provided sex service only 4 persons (10%) in Ruili said they used condoms every time. In another survey of 173 people working in 34 entertaining places conducted in the same period of time, 41.3% the service girls used condoms when

they had sex with sex visitors, but only 11.7% of them used condoms when they had sex with their boy friends, spouses and friends.

In the survey conducted during March-October 1997 of 173 people working in 34 entertaining places in one county, Yunnan, 41.3% used condoms when they had sex with sex visitors and among them 66.1% had sex with other people such as their boy friends (85.1%), spouses (6.8%) and friends (8.1%) in addition to having sex with their visitors.

Yang Fang and Wu Zunyou conducted surveys on the state of condom use by drug abusers in 1998 and 2000 respectively. In Yang Fang's survey, 48.26% (36.33% men and 60.08% women) of the 364 drug abusers said they didn't know how to use condoms; 94.5% knew of condoms, but only 55.2% said condoms could prevent sexual disease and 44.8% knew condoms could prevent AIDS. In Wu Zunyou's survey, high-risk behaviors were very common among drug abusers; not only was the incidence of premarital and extramarital sexual behaviors very high, the incidence of multi-sex partners was very high too; the incidence of condom use was low; 50.0% of the women drug abusers had sex with sex visitors and only 7.0% of them used condoms every time they had sex with their sex partners while 66.2% of the women drug abusers never used condoms.

3.2 Facilitating factors: blood plasma

On August 23, 2001, the MOH held its first official press conference on HIV/AIDS discussing a problem that had been reported in Chinese media for several years: The illegal collection of blood and plasma products. Blood from farmers with the same blood type was being pooled and centrifuged to separate out the plasma, which was then sold to make gamma globulin and albumin. The remainder of the pooled blood, mostly red cells, was re-injected into the farmers. This was to allow them to give blood more frequently, which many did several times a month for a fee of about $5. Although some Chinese researchers estimate that in Henan Province (population of about 100 million) alone there are approximately 1,000,000 people infected with HIV from illegal blood donations. There are also HIV-infected blood donor villages in Hubei (pop. of 60 million), Hebei (pop. of almost 70 million), Shanxi (pop. over 30 million), and other provinces. In certain blood donor villages, up to 62% of the people who were paid for their blood tested HIV positive.

An October 1998 law banning blood donations for pay has helped reduce the scale of this activity. But chronic blood shortages and the financial incentive for migrants to sell their blood have made it more difficult to eliminate entirely. In October, a newspaper Southern Weekend, which is known for its investigative reporting, told of the high rates of blood-borne disease among several thousand illegal blood donors in Gansu Province. According to Chinese officials, authorities in one other Chinese province have found several illegal blood plasma collection stations in the past two years. When HIV tests were done on nearly 100 paid donors at the blood plasma collection stations, 75 tested positive.

Blood donors are usually peasants, who account for 70% of the population but only 30% of consumer good sales and 19% of bank savings [25].

In Yunnan, the contraction of HIV via blood plasma sales does not appear to represent a major problem.

3.3. Facilitating factors: unsafe injections

WHO estimates that 50% of the curative injections in China are unsafe. Certain studies have found 88% to be unsafe because of improper sterilization of equipment (17%) and unsafe injection practices (40%), or both (43%). In this study, over 50% of the medical workers didn not know how to sterilise properly and 56% said they only changed needles when they noticed blood on the syringe [26].

The over-use of injections is common, with children below five years receiving, on average, 6 injections per year. Most injections in rural and poor areas involve reusable syringes and there is widespread reselling and reuse of disposable syringes. Up to two-thirds of all Chinese have Hepatitis B (antibody; 9-10% of the population have HBV antigen-HBsAg). In children below the age of 2, it is as follows:

Below 5 injections:	9.4% HbsAg
6-10 injections:	20.0% HbsAg
Above 10 injections:	41.7% HbsAg

One major consequence of unsafe injections and other dangerous medical practices is that China's hepatitis epidemic takes the lives of 300,000 people annually from liver cancer and cirrhosis. Liver cancer ranks no. 1 among China's cancer killers, compared with no. 14 in the United States. Earlier surveys have shown two-thirds of China's 1.26 billion people infected with hepatitis (antibodies). This compares with 1 in 20 Americans. China has the biggest hepatitis B epidemic in the world.[27] About 60 percent of those who have had the disease caught it during childhood, usually during routine vaccinations [28].

Modelling conducted by WHO in 2001 suggests that 130 million of the 372 million HBV (hepatitis B virus) infections (35%), 97 million of the 177 million HCV infections (55%), and 668,000 of the 33 million HIV infections [29,30] (2%) can be attributed to unsafe injections.

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[25] By He Aifang, November 28, 2000, Posted on the http://bbscity.com/news/rdxw/forum.html Corruption forum among the postings of November 28. http://bbscity.com/cgibin/anyboardc.cgi/news/rdxw/?cmd=get&cG=63030373&zu=36303037&v=2&gV=

[26] Chinese Journal of Epidemiology. December 1999.

[27] Luo Huiming of the Guangdong Disease Control and Prevention Center

[28] Liu Chongbo, a researcher at the China Academy of Medical Prevention

[29] There have been major outbreaks of horizontal transmission in Romania with 20% HIV infection in orphanages, with a strong association between infections and injections [29]. By Dec. 31, 1990, of 1,168 AIDS cases reported in Romania, 1,094 (94%) were less than 13 years of age, of which 92% were 3 years

These 2001 figures, when compared to similar WHO estimates from 1999, are 11 times for HBV, 28 times for HCV, and 6 times for HIV.

The potential risk of unsafe injections in Yunnan

If one considers that 50-88% of rural injections are known to be unsafe, in Yunnan's general sero-prevalence of 0.2%, with the risk of HIV transmission through each injection being 3%, and the average child below the age of 5 receiving 6 injections a year, the risk of contracting HIV each year is 0.03%.

Over a 6-year period, the child has a 2-in-1,000 chance of becoming infected with HIV. The child has twice the chance of contracting HIV that a man has of getting it through unprotected sex (1 per 1,000 sexual encounters with HIV positive women, according to WHO WPRO).

Yunnan has an under-five child population close to 4 million. If we assume the conditions stated above to hold true, this would lead to 1,267 new infections each year in children below the age of five. This figure is 15% greater than the estimate of HIV infections derived from MTCT (1,103) in the year 2000.

On average, rural Chinese receive 7 prescriptions per year for various bouts of illness. Of those prescriptions, 70% involve injections, either intravenous or intramuscular. If we consider that 50% of these are unsafe, it means that in Yunnan's rural population, 3,347 new HIV infections per annum come from unsafe and unnecessary injections, which is three times the number of HIV infections from MTCT.

3.4. Facilitating factors: mother-to-child transmission

The only reported cases of FTMTC (father to mother to child) transmission have been detected in Yunnan [31]. FTMTC transmission is facilitated by the fact that health authorities do not usually inform people who test positive for HIV of their status [32]. Interestingly, the rate has remained relatively constant at approximately 0.2 % since 1992, when the screening of pregnant women was first introduced.

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or younger. By Dec. 31, 1990, 45% of the mothers of children with AIDS had been located and tested; of these, only 37 (8%) were HIV positive

[30] Also in Libya after a major outbreak of human immunodeficiency virus (HIV) infection in 400 children in 1998 in Libya, HIV, hepatitis C virus (HCV), and hepatitis B virus (HBV) markers were found in 148 children and epidemiological data was collected in a subgroup of 37 children and 46 parents. HIV infections were detected in all children but one, with HCV or HBV co-infection in 47% and 33%, respectively. Vertical transmission was ruled out by analysis of parents' serology. The children visited the same hospital 1–6 times; at each visit, invasive procedures with potential blood transmission of virus were performed

[31] In 2000, Johns Hopkins conducted a study in the northwestern region of Xinjiang and identified 0.1% of all women giving birth as being infected with HIV, and 1% of all women belonging to ethnic minorities.

[32] The National Infectious Disease Law states that individuals have to be informed of their HIV status only when confirmed by Western Blot testing. What usually happens is that if two ELISA tests are positive in health facilities, the blood sample is then referred to the local anti-epidemic station for confirmation. The anti-epidemic station conducts two more ELISA tests, and if these are positive then the remaining sample is sent to provincial epidemic stations, which are the only facilities able to conduct Western Blot tests. Samples are

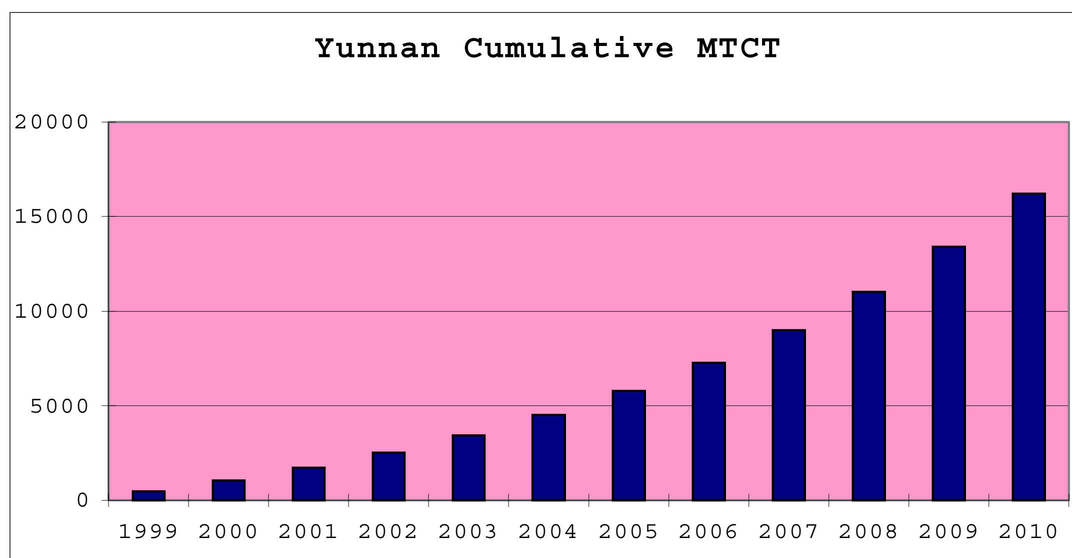
There are already estimates in Yunnan of 500 children infected by their mothers. With an increasing number of women becoming infected without knowing their status and then giving birth, the number of HIV positive children will increase. Assuming a 3 year survival time for an HIV infected child, by 2005, we estimate that almost 6,000 children will be infected, and, by 2010, more than 16,000 (see chart 6). These children will suffer from difficult to treat chronic illnesses, and, on average, a third of them will die in their first year of life. Those that live, with their parents ill, will most certainly be orphans.

Table 13: Screening for HIV in Antenatal Clinics

Year	Surveillance sites	Antenatal Consultations Tested for HIV	HIV positive cases	Percent HIV +
1992	2	1,240	2	0.2%
1993	4	1,346	2	0.1%
1994	5	2,875	4	0.1%
1995	5	2,896	2	0.1%
1996	6	3,275	8	0.2%
1997	9	5,751	8	0.1%
1998	11	6,521	12	0.2%
1999	9	6,417	14	0.2%
2000	10	8,698	21	0.2%

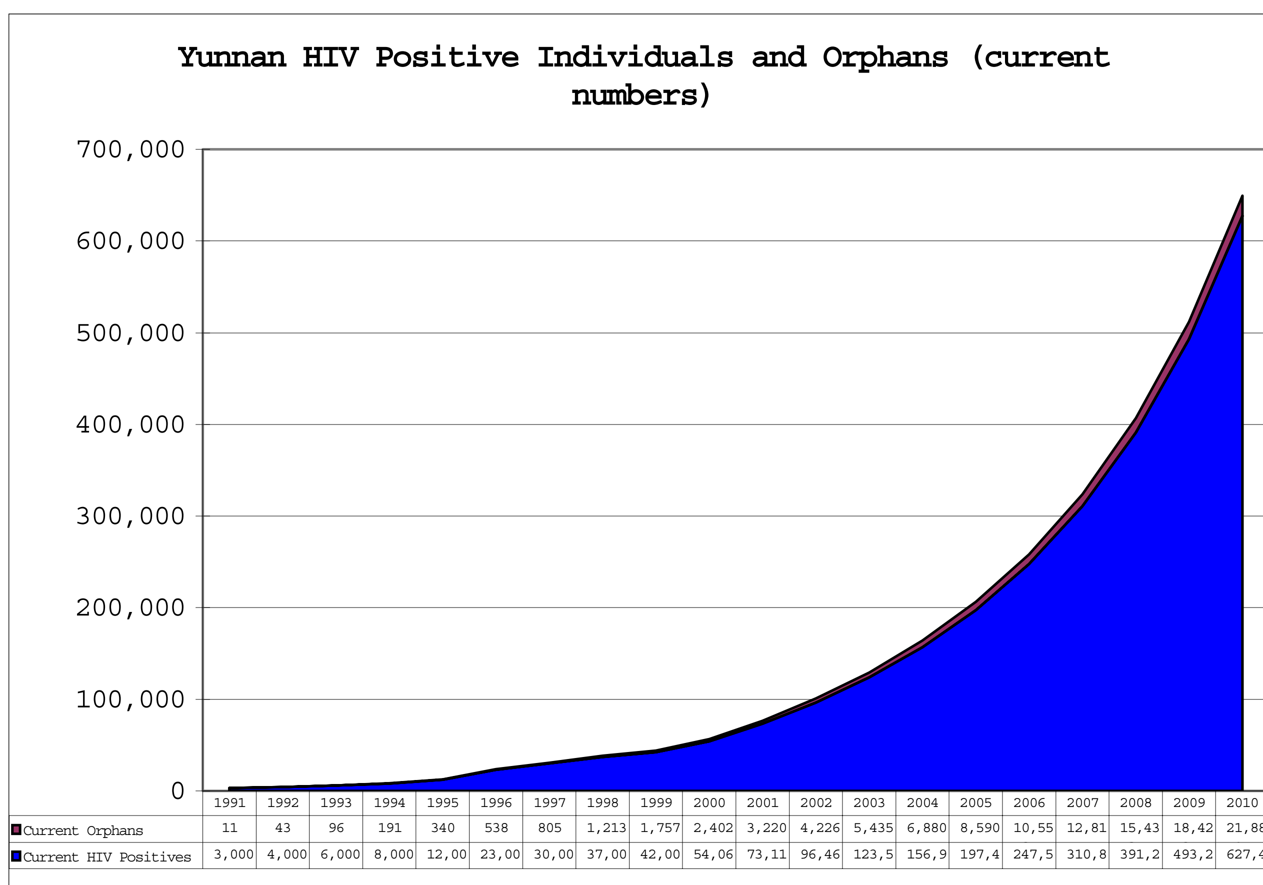
One out of six interventions in current MTCT packages refers to family planning and counseling services. China has had formidable success in controlling its population through the one child policy. International experts consider that avoiding unwanted births through access to safe, effective, voluntary contraception can be considered as an intervention. There is increasing discussion about the option of voluntary abortion as a possible intervention in countries where this is legal. From this perspective, China and Yunnan have the potential to limit the number of infants who get HIV from their parents (see Annex 8 for technical issues related to MTCT).

Chart 6: Projection of Children in Yunnan with HIV Infection from MTCT



There will be increasing numbers of children who are not infected by HIV, but have lost one or two parent to HIV/AIDS, reaching an estimated 21,000 by 2010 -- a much smaller number of people affected than infected (estimated at 627,000 by 2010) in Yunnan (chart 7). The magnitude of the orphan problem will not be as great as in other countries where fertility rates are higher (see chapters 2, 7 and 15 of this compilation of studies). However, for China, such a large number of children without one or both parents is unprecedented, and will create its own internal difficulties, where institutions do not exist or are not prepared, or where policies and financial protection mechanisms do not exist.

Chart 7: Children in Yunnan who have one or two parents dead due to HIV/AIDS



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Current Orphans	11	43	96	191	340	538	805	1,213	1,757	2,402	3,220	4,226	5,435	6,880	8,590	10,55	12,81	15,43	18,42	21,88
Current HIV Positives	3,000	4,000	6,000	8,000	12,00	23,00	30,00	37,00	42,00	54,06	73,11	96,46	123,5	156,9	197,4	247,5	310,8	391,2	493,2	627,4

3.5. Facilitating factores: health care system[33]

There are few AIDS-related health services available in China. Those that exist come under the existing system for treating infectious diseases – a system that is known to be weak, particularly in dealing with STDs. A major health risk in China is generally the danger from official or unofficial health services. In other parts of China, illegal collections of blood for plasma are a major source of (localised) infections. In Yunnan, however, this does not seem to be a problem. One problem that Yunnan does share, however, is rural health services where health practitioners (in order to make a living)

[33] UN Country Team. Common Country Assessment. 2000

over-prescribe treatment, especially injections. This tendency is coupled with an almost complete lack of supervision and sterilisation techniques become inefficient or are often not carried out at all.

In the past four decades, China has made remarkable progress in improving the health of its people. Between 1965 and 1997, China's infant mortality rate declined from 90 per 1,000 live births to 32 per 1,000. During the same time period, life expectancy at birth rose from 55 to 70 years. In the 1980's, in comparison to other Asian countries, China's performance was favourable. Its infant mortality rate was less than one-half the rate predicted for a country with its income level. This impressive health gain was the direct result of the government's political resolve in the early 1970's, when the number of publicly financed community and preventive health programmes increased access to basic health care rapidly and broadened the coverage.

Since the early 1990s, mortality rates have increased in some areas, particularly among those lagging behind in economic development. As a result, there are now greater discrepancies in health conditions between the better-off coastal areas and the worse-off western areas. The recent erosion in improved health can be attributed to several major factors. The fundamental causes lie in the substantial shift in the health payment scheme over the past 20 years, from a collective or socialised system to a more market-oriented system. This transition did not benefit from more up-to-date policies or regulations to guide health system operations. As a result, there has been a substantial erosion in both quality and efficiency of health care and a rapid escalation of costs in recent years as well as reduced access to care and preventive services for the poor. If this trend is allowed to continue, the burden on many families in the near future will be great. In addition to the decline in health in a wider area, the increase in the number of uninsured people coupled with higher costs could contribute to poverty and reduced family spending on other non-health service sectors such as education [34].

Major changes in health financing over the past two to three decades have had a great impact on current access to service. The major factor -- the decline in the rural co-operative medical system -- has left most of the rural population and half of the urban population without insurance or risk-sharing coverage. The gap has been partly filled by family out-of-pocket spending, at best, as costs to users increase as does the lack of ability to afford care.

Outpatient and inpatient costs from 1990 to 1997 increased about 400-to-500% and medications accounted for the bulk of expenditures. In 1994, the cost of drugs was 70-80% of all medical expenses. Overuse of drugs and their high prices are a major reason for escalating health costs. This cost increase far exceeds income growth and GDP growth (average of 8-10% per year). There is evidently a tendency toward accelerated market-based health care without meaningful provisions for controlling rapid cost increases. The rapid increase in user costs correlates directly with decreased utilization.

[34] Ibid.

Preventative and primary services such as immunizations and prenatal care have also declined. Maternity and childcare clinics, for example, tend to lack funds to pay personnel expenses or operating costs, and tend to cut services that do not produce income. They try to increase revenues by setting up outpatient clinics. Among mothers in poor counties, only 29% can afford prenatal exams, and only 6% can afford a hospital delivery. This problem of access to service is well known as a contributor to higher IMR (infant mortality rate) and MMR (maternal mortality rate) in poor rural areas.

These concerns often cause people not to seek or receive care when they need it. A 1992-93 survey found that, of those who had been referred to a hospital for care, 40.6% did not seek hospitalisation on grounds of excessive costs and inability to pay. The report indicates 38% of peasants receive no medical treatment whatsoever when they fall ill. The average hospital cost of 1,273 RMB at the county level and 6,244 RMB at the national level is clearly a substantial problem when per capita incomes for 1997 were 6,079 RMB. The average cost of hospitalisation can exceed the average annual income among 50% of the rural population. This is particularly worrisome in a country where insurance coverage is so rare.

A survey of China's 300 poorest counties conducted by China's MOH, with assistance from UNICEF and UNFPA, revealed that only a third of the women polled received any pre- or post-natal care; 60 percent of births were unattended by trained personnel; and only 36 percent of deliveries met basic hygiene standards.

A recent study of households living below the absolute poverty line in rural areas found that in 40% of the cases, the principal reason for their poverty was recent medical expenditures because of significant illness.

The poorest areas have been hardest hit. With less central government help, the poor provinces and counties have little money to support basic social services, but they have the worst health problems. The services often rely more on funds from lower levels and fees from patients with even less ability to pay. The average out-of-pocket costs per visit to public health services varies widely across income levels. The poorest households spend about 1.5 times more on medical care than do richer households. Of total non-food expenditures, drugs and user fees consume about 3 times the amount among the poorest quintile than that of the top quintile. As a result, health service use has decreased, with greater disparities in health status of wealthy and poor Chinese, as well as for insured and uninsured, rural and urban. Usage figures show the negative impact of public health service changes from 1980 to 1993 highest for people in the poorest provinces. The 1993 National Health Survey showed utilization varied positively as per capita income increased. Province-wide data indicate greater under-use of services in poorer provinces associated with economic reasons: 58.8% of rural and 39.8% of urban households do not use public health facilities because of economic difficulties.

For people seeking to treat themselves by going to pharmacies, there is the added risk of counterfeit medicines. According to Chinese health authorities, 194,000 Chinese died of reactions to bad medicines in 1998. This is far higher than the number of people who died

of communicable diseases that year. A drug market sampling by the State Drug Administration on February 6, 1999 (for the fourth quarter of 1998) reported that the proportion of impure drugs is highest in Chinese traditional medicine. Of 387,000 drug products sampled, 13% failed to meet standards [35].

3.6. Facilitating factors: tuberculosis epidemic[36]

MOH experts say that the tuberculosis (TB) situation in China has become critical. It is described as having “Four Highs and One Low”, meaning a high infection rate, a high drug resistance rate, a high death rate, a high incidence of infection, and a low rate of improvement in the situation.

China ranks second in the world (after India) in the total number of people with TB. A third of the population, more than 400 million Chinese, have been exposed to the TB bacillus and 6 million have active TB, while 2 million are contagious carriers of the disease. Over 150,000 Chinese die from TB each year topping the list of infectious causes of death. This is twice the number of those who die from all other contagious diseases in China combined.

The rate of resistance to anti-TB drugs in China has reached 41 percent because of improper treatment and economic hardships. Transmission of TB by these people has resulted in 28 percent of the new TB cases being drug resistant.

The rate of TB in the Chinese countryside is 2.4 times that in urban areas. China resembles other countries in that at least half of the infections, the active TB cases, and deaths are among women.

A survey found that about half of the people who are TB positive have not been registered. For various reasons, 65.9 percent of the people with TB symptoms are not diagnosed as having TB, while 75 percent of the people with active TB cases are in the 15 - 34 age group. This means that China loses 360 million working days each year to TB.

3.7. Facilitating factors: dual HIV-TB epidemic[37]

The overlapping of even a small HIV epidemic over the large TB epidemic in China poses a significant threat because of the following:

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[35] Human Life is Most Precious [Renming Guantian] -- A Report on Medical Accidents, by Cai Jianwen of Harbin. 2000.

[36] http://www.usembassy-china.org.cn/english/sandt/index.html. In Chinese on the Beijing Youth Daily website at http://www.bjyouth.com.cn/Bqb/20000324/GB/4197^D0324B0212.htm. Chinese Tuberculosis Epidemic Worsening Again --Destroys Families, Hinders Economic Progress Beijing Youth Daily, March 24, 2001

[37] WHO China. Dr. Daniel Chin, Medical Officer. The co-epidemics of TB and HIV/AIDS in China: Risks and Opportunities. 2001.

- TB is the leading cause of death among people living with HIV/AIDS (PLWH); a third of PLWH die with TB
- High percentage of PLWH die after developing TB; among PLWH who develop TB, the case-fatality rate is 30%, even with appropriate treatment
- TB accelerates the course of HIV infection and enhances HIV replication in vivo; even after PLWH are cured of their TB, their long-term survival is reduced by half compared to PLWH who never develop TB
- Populations vulnerable to HIV are traditionally also those who are vulnerable to TB

3.8. Facilitating factors: knowledge of HIV and STDs

A Chinese proverb says that one can do anything in China, as long as one does not talk about it. This holds true for sex. While there is a great deal of action, with the average age of first sexual encounter dropping and the frequency of premarital and extramarital relations increasing, little is being said about sex.

A UNICEF sponsored State Family Planning Survey in six provinces of 7,000 people (December 2000) indicated that:

- Nearly 20 per cent of respondents had never heard of AIDS.
- Just over 71 per cent said they knew AIDS was highly infectious, but most of them had no clear idea of how the disease could be spread.
- Just over 62 per cent said they knew they could take precautions to prevent getting AIDS but did not know what the precautions were.

Another UNICEF survey of 10,000 young people in 17 Pacific-East Asia countries (2001) revealed that Chinese adolescents (9-17 years) were "woefully unprepared" to handle HIV/AIDS, since 48% of children and adolescents said they knew "absolutely nothing" about HIV/AIDS or "only knew the name".

Attitudes towards discussing sex – practices of all sorts – are generally negative. And, even if the topics are discussed, there is a reluctance to admit that any kind of extra-marital sexual behavior exists, even though it does. The status of women in China is relatively good, although it is still not necessarily high enough to allow them to negotiate the use of condoms during sexual activity. Reproductive health services in Yunnan have been improving, one of the important reasons being the consistent advocacy by the Ford Foundation there.

Before 1994, condoms were not promoted for the prevention of STDs, only for the prevention of pregnancy. There have been pilot projects and research, even a marketing company has been invited to take part in condom promotion in China, but it is still a new concept.

3.9. Facilitating factors: unprecedented migration

Further complicating the question of how many people in China carry HIV is the fact that many of China's HIV-infected come from the 100 million migrants, a group accounting for 15-30% of the workforce, but one that is relatively difficult to study. The Shanxi Province Epidemiology Station reported in an October 2000 article that, out of 176 HIV cases reported (most likely only a small fraction of the actual number), two-thirds were migrant workers. Nearly half of the migrant workers were from outside Shanxi[38]. In other provinces, up to 50% of those found to be HIV positive were migrants.

Social and situational risk factors for Yunnan include mobility: approximately 1 million migrants go to the provincial capital and many other migrants leave Yunnan for Guangdong, the prosperous province to the east. Conversely, many other migrants go to local towns to look for construction work. Many migrants (especially short-distance ones) are men on their own, who are presumed to have sexual activity with sex workers. Long-distance lorry drivers are a major risk-group in Yunnan, since many rest stops and restaurants are associated with prostitution.

Case study of HIV infection, migration and prostitution

A migrant worker from Sichuan Province, male, 29 years old, married, father of a two years old child. He came to Kunming from Sichuan to do odd jobs in 1993 and sold blood at Kunming Blood Donation Center four times when he worked in Kunming 1993. His HIV anti-body test was negative during this time. At the end of 1993, he migrated to Ruili City to work at odd jobs there. During the Spring Festival holidays, he visited Burmese girls “ three times.” His HIV anti-body test became positive when he came back to Kunming selling blood in June 1994. After that, he went back to his hometown Sichuan Province with his folks. In the follow-up visit, it was found this migrant worker had moved out of the resident village with his family. No one knew where this family went.

One group with an unknown level or risk, one that could be high, is soldiers. Already a number of HIV infections have been found among new conscripts in Yunnan -- 6 in 1996, 2 in 1999, and 3 in 2000.

Yet another element that suggests that HIV infections are spreading to the general population is that, among the 329,553 blood donors screened over a period of 12 years in Kunming’s blood donation center and 16 general hospitals at the prefecture level, there was a prevalence of 7 per 100,000.

[38] US Embassy. From Drugs to Blood to Sex. A December 2000 report from the US Embassy China.

3.10. Facilitating factors: gender issues

Fieldwork data suggest that women's health is compromised by overwork, malnutrition, a reluctance to spend on health, lack of specialists and female doctors, and post-natal care. Women workers and health officials in Yunnan have emphasized that women were the most likely group to become seriously ill. The rate of women suffering from some form of reproductive illness was said by one female villager to be above 90%. The strong correlation between women' s domestic and agricultural work responsibilities and ill-health point to the importance of labor saving devices and new technology for women to ease their burdens [39].

3.11. Facilitating factors: sex ratio imbalance

China has a shortage of girls, a problem that will be exacerbated in years to come by the seriously unbalanced sex ratios at birth resulting from the traditional preference for sons.

Although estimates vary, they point to the same result. One magazine noted that there were 36.8 million more men than women in China in 1995. According to the United Nations Population Division, in 1995, there were 54,549,000 boys in the 0-4 age group, compared with 49,038,000 girls; and 61,614,000 boys in the 5-9 age group, compared with 55,988,000 girls in the same age group [40].

The discrepancy is also found in below-5 mortality rates, where the female/male ratio was 1.24 in 1997. It is even more obvious in rural/urban disaggregated data: In 1994, the mortality rate in cities in the 0-5 age group was 6.37 for boys and 7.58 for girls; and at the county level, 6.88 for boys and 8.38 for girls. Demographers found that the probability of girls dying between the ages of 0 and 4 had increased since 1981, whereas in 1978 the rates had been close: 37 per 1,000 for boys and 38 per 1,000 for girls. Altogether, the sex ratio at birth was estimated at 113 boys per 100 girls in 1987; 118 or 119 male births per 100 girls in 1994; and 118 boys per 100 girls in 1997. The imbalance was found to be even higher among migrant workers in Beijing, where an average of 139 boys per 100 girls was recorded.

3.12. Facilitating factors: minority nationalities[4]

According to the fifth population census conducted in 2000, China has 55 ethnic minorities, in addition to the Han people. Out of a total population of 1.3 billion, 106 million are minorities, 8.4% of the total, however, they represent 85% of all HIV positive cases detected through sentinel surveillance.

[39] Report On Implementation Of Cedaw (Committee on the Elimination of All Forms of Discrimination Against Women) In The People's Republic Of China By Human Rights in China, Asia Monitor Resource Centre, China Labour Bulletin, Hong Kong Christian Industrial Committee. December 1998

40 United Nations Population Division, Sex and Age Distribution of the World Populations: The 1996 Revisions, 1997.

Being of a minority population and being a woman, a young person or a migrant worker is a highly vulnerable situation. According to the 2001 World Bank Report Overcoming Poverty in Rural China minority peoples represent a disproportionate share of the rural poor. Ethnic minorities are make up less than 9% of the whole population but account for 40% of the absolute poor in China [41]. These "absolute poor" minority people often live in the deepest poverty and have typically less education, less income and worse health outcomes than other populations.

The Zhuang, Hui, Uygur and Yi nationalities are the four largest minorities. Although at present, the proportion of HIV-infected individuals among minority nationalities is greater than among the Han Chinese, nevertheless, HIV is also spreading among the Han majority population. There has been explosive spread in the mainly Han populated villages in Henan, where infection through blood donations is common.

There are several reasons for the higher proportion of HIV infections among minority populations:

- Drug use has historically been widespread among some minority nationalities.
- The minority regions where there are more HIV-infected individuals often lie on main drug trafficking routes.
- In many minority areas, low levels of education and literacy in conjunction with a lack of health services and IEC designed for minority populations affect their ability to adopt safer practices.
- As stated above, minority people are disproportionately affected by poverty. Unbalanced development and inadequate access to land and other resources make improvement of their conditions difficult. This has direct impact on their ability to cope with HIV/AIDS.

4. Central Chinese and Yunnanes Provincial Government responses to HIV

Since 1994, when the Chinese Government signed the Paris Declaration at the International AIDS Summit, some progress has been made with regard to updating national policies, laws and regulations in a number of areas pertaining to HIV/AIDS. However, many factors hindering an effective AIDS response in China remain. These factors are often intimately inter-related. They include insufficient political commitment at many levels of government, insufficient resources both human and financial, paucity of effective policies and lack of an enabling policy environment. Government funding of anti-HIV activities is hard to document, because of the decentralisation of all funding in China. Despite the image of a centralised command economy, budgets in China are, in fact, dependent on the local ability to raise funds. Therefore, although there is a central budget for HIV/AIDS, it only applies to central-level activities – provincial and county initiatives are expected to be funded from local budgets. Nevertheless, there are

[41] The World Bank, 2001. China –Overcoming Rural Poverty. A World Bank Country study,p.9. Washington: the World Bank

indications of government commitment from the central level in the amount of money allocated from the Ministry of Finance. In 1995, the funding level was 5 million RMB (US$600,000), increased to 15 million (US$1.8 million, which is many times lower than in Thailand, see chapter 7 of this compilation) in 1996 at which level it has remained until 2001 when the government decided to spend about $12 million annually for AIDS prevention and control, as well as more than $117 million in 2001 to improve blood safety [4].

AIDS awareness also remains insufficient among both public and decision makers. Involvement by civil society and affected communities remains embryonic, while the overall AIDS response remains far too medical within a health care system in deep crisis[4].

Several areas will need priority attention if a catastrophic AIDS epidemic is to be avoided in China at the start of the new millennium: Guidance for AIDS programmes needs to be sought from international consensus on best practice. Emphasis needs to be put on the great urgency for timely implementation of effective AIDS prevention. Strategic planning of AIDS programmes needs to be based on detailed and dynamic situation and response analyses. The current chaotic situation in the STI care system needs to be addressed urgently. Investment of human and financial resources into AIDS prevention needs full encouragement. Development of quality AIDS policy needs special support. The AIDS response at all levels needs to be enlarged to involve multiple sectors beyond the purely medical sector, as well the involvement of people living with HIV/AIDS. Improving AIDS awareness needs capacity building, training, information dissemination and efforts at promoting life skills and healthy habits of vulnerable youth. Last but not least, policy needs to be put into widespread action with respect to community care and safeguarding of the rights of people living with HIV/AIDS [4].

Yunnan Province has responded to the challenge of AIDS epidemic by full implementation of a series of central government laws and regulations stipulated to control and prevent AIDS and STDs including: (1) *Epidemic Prevention Regulations (1989) and Blood Donation Law* (1996 and 1998) by the Central Government; (2) related rules and regulations made by the Ministry of Health or jointly issued by the Ministry of Health and other concerning organizations such as *Resolution on Reform and Development and Implementation Considerations* by the Central Committee of the Communist Party of China, the State Council/ the Provincial Party Committee of Yunnan and Yunnan Provincial People's Government; and (3) *Views and Considerations on ADIS Prevention and Control* by the Ministry of Health and Yunnan Provincial People's Government (1995). Other central level policies and regulations being carried out include: (1) *The Medium and Long-term plan for AIDS Prevention and Control in China* (1998-2010) issued in 1998; (2) *Views and Consideration on Management of People Infected with HIV and AIDS Patients* (Ministry of Health, issued in 1999); (3) *Principles for AIDS Awareness Campaign and Education* endorsed by the Party committees of nine ministries in 1998; and (4) *The Guiding Principle for the Implementation of the Medium and Long-term Plan for AIDS Prevention and Control in China* (1998-2010) recently stipulated by the Party committees of eight ministries in 2001.

Yunnan has also made its own policies on AIDS prevention and control including: (1) *Notification of Reinforcement of AIDS Prevention and Control* by Yunnan Provincial People's Government (1996); and (2) *Responsibility of Related Departments, Committees, Offices, Bureaus and Other Entities for AIDS Prevention and Control* by Yunnan Provincial People's Government (2000). Provincial level laws and regulations being drafted now include *The Medium and Long-term Plan for AIDS Prevention and Control in Yunnan* (2000-2010) and *Control Measures for STDs Prevention and Control in Yunnan*. All these documents state specific objectives, working principles, implementation strategies, measures and requirements.

Yunnan has been very active in courting outside support for all development activities, including those protecting their population against the spread of AIDS. A brief listing of international partners (DFID, UNICEF, UNAIDS, SCF-UK, Red Cross -Australia, Oxfam -HK, Salvation Army - HK, MSF Holland, Ford Foundation) gives a feeling for the breadth of partnerships for activities that include surveillance, planning, monitoring, education/communication and advocacy.
Of all provinces in China, Yunnan has the widest variety of interventions, including training multiple sectors to respond to HIV, screening of blood, reproductive health, migration, school health education, working with intravenous drug users and commercial sex workers. China – and even Yunnan – is still a relatively low-prevalence place for HIV. Any model of the future will need to identify where the bridge between high-risk and general population, will be. The increase in sexual-related infections seems to imply that the epidemic which was previously confined almost entirely to (predominantly male and ethnic minority) intravenous drug users is now already crossing the bridge into the general population. Given the reluctance of authorities to give clear warning messages to their populations, the likelihood of a swift transition to a general-population infection is high.

4.1. Government and non-government investment

Nationwide, the Government of China spent the following amounts for HIV/AIDS prevention and control.

Table 14: Central Government budget for HIV/AIDS Programmes

Period	Currency	Amount	Comments
Year 1995	RMB	5,000,000	Central Government component(MOH)
Year 1996	RMB	15,000,000	Central Government component(MOH)
Year 1997	RMB	15,000,000	Central Government component(MOH)
Year 1998	RMB	15,000,000	Central Government component(MOH)
Year 1999	RMB	15,000,000	Central Government component(MOH)
Year 2000	RMB	15,000,000	Central Government component(MOH)
Year 2001	RMB		Central Government component(MOH)
		100,000,000	Prevention and Control
		950,000,000	Blood Safety

Some reports indicate that total national, provincial and prefecture funds allocated in Yunnan for AIDS prevention and control over the past 11 years amounted to 57 million RMB, although this figure could not be confirmed, from various sources in Yunnan (see Annex 3).

International organizations contributed over 33 million USD since 1996 towards HIV/AIDS prevention and care programs. These funds exclude the British government DFID (Department for International Development) 21 million USD contribution to China till 2005. Of that, approximately 7 million US will be in Yunnan (with the remainder provided to the national level and in Sichuan Province).

Table 15: Funds allocated from the Yunnan provincial level (in RMB)

Year	Central Gov	Provincial Gov		Prefecture Gov	Local Gov	International
		Prevention, surveillance	Infrastructure, lab, basic construction, equipment			
1990	NA	0.5 million	NA	NA	NA	NA
1991	NA	0.5 million	NA	NA	NA	NA
1992	NA	1 million	NA	NA	NA	NA
1993	NA	1 million	NA	NA	NA	NA
1994	NA	1.5 million	NA	NA	NA	NA
1995	NA	2 million	3 million	NA	NA	NA
1996	NA	2.5 million	3 million	NA	NA	NA
1997	NA	3 million	3 million	NA	NA	NA
1998	NA	3 million	3 million	NA	NA	NA
1999	NA	3 million	3 million	NA	NA	NA
2000	NA	4 million	3 million	NA	NA	NA
	5 million	22 million	18 million	NA	NA	33.4 million

Table 16: Input By International/National Organizations And NGOs

International Organization	Provincial Counterpart	Project Title	Time Frame	Funding
UNICEF	YAPCO	Yunnan AIDS Prevention, Control & Care	1996-2000	16.54 M RMB ($ 2 million)
	YCDC	Yunnan Women's Federation's Training on HIV/AIDS Control and Care	1999-2000	534,000 RMB
ADB /UNDP	YAPCO	Yunnan AIDS Prevention, Control & Care	1997-1998	827,000 RMB ($100,000)
Amity Foundation	YAPCO	Yunnan AIDS Prevention, Control & Care	1998-2000	3.23 M RMB (DM 860,000)
WHO	YAPCO	Yunnan Pilot Sides for China's Medium and Long-term Plan for AIDS Prevention and Control	1994-1996	2,646,400 RMB ($320,000)
UN-ESCAP	YIDA	Community-based Drug Abuse and HIV/AIDS Prevention	1991-1998	661,600 RMB ($80,000)
Save the Children (UK)	Department of Ed of Yunnan	School-based AIDS Prevention	1996-2000	1,550,625 RMB (125,000 BPS)
		Education & Puberty HlthEd		210,000 RMB
		Developing Training Programs on CSWs and IDUs in Ruili	1999-2000	160,000 RMB
		Development Center for Women and Children Education		240,000 RMB
Ford Foundation	Yunnan Reproductive Health Research Association	"Healthy Lives" Project for Middle School Students	1998-1999	20,000 RMB
		Gender and AIDS	1999-2000	50,000 RMB
		Survey of Women in Fumin County on AIDS KAP	2000	3,000 RMB
		Peer Education on AIDS Prevention among Students in Kunming Medical School	2000	9,000 RMB
Oxfam (HK)	YIDA	Peer Education on Harm Reduction among IDUs	1999-2000	93,000 RMB
The Salvation Army (HK)	YCDC	HIV/AIDS Prevention Education Training for Women Carders in 16 Prefectures	2000	23,000 RMB
MSF Holland	YAPCO	HIV/AIDS Awareness Campaign in Yunnan Province	2000	80,000 RMB
Australian Red Cross	Yunnan Red Cross	Youth Peer Education on HIV/AIDS Prevention	1996-2000	6 million RMB
GRAND TOTAL *				33.4 million RMB

YAPCO = Yunnan AIDS Prevention and Control Office
YCDC = Yunnan Child Development Center
YIDA = Yunnan Institute for Drug Abuse
Excludes DFID funds of 21 million USD, of which 7 million are for Yunnan.

5. Impact on child wellbeing

5.1. The macro (aggregate) impact on children in Yunnan

The existing macro level data presented in the following table shows no stress on children in a period in which AIDS starts appearing. They clearly indicate that today the impact at the macro level is minimal and not capturable by provincial aggregate data. Although accounting for a disproportionately larger burden of China's HIV and poverty burden, and despite the fact that HIV prevalence in Yunnan has been increasing precipitously over the years, at present, there are no significant differences between Yunnan's aggregate data on child wellbeing and that of China as a whole.

Table 17: Summary Data of Child wellbeing in China and in Yunnan Province

		90	**95**	**99**	**00**
Infant mortality rate	China	50.2 (91)	36.4	33.3	32.2
	Yunnan	66.4	53.1	37.1	33.1
Under 5 mortality rate	China	61.0 (91)	44.5	41.4	39.7
	Yunnan	87.3	66.9	46.6	42.1
% of infants with low birth weight (less than 2,500 grams)	China			5.9 (98)	
	Yunnan	—		3.5	3.5
% children under 5 suffering from moderate-severe wasting (China)	China	8	5	3 (98)	
*% children under 5 suffering from moderate-severe malnutrition (Yunnan)	Yunnan	29.0	17.7		15.9
DPT3 immunisation coverage	China	97	92	97	
	Yunnan	93.1	85.0	95.4	97.6
Measles immunisation coverage	China	98	93	98	
	Yunnan	95.0	85.0	95.3	97.8
Proportion of women 15-49 who attended at least once during pregnancy by skilled health personnel (Yunnan)	Yunnan	12.7	55.5	81.4	82.9
Proportion of births attended by skilled health personnel (Yunnan)	Yunnan	29.6	59.6	82.3	84.2
*Primary school female net enrolment ratios	China	96.3	98.2	99.0	99.1
	Yunnan	91.3	96.5	98.8	98.9
*Primary school male net enrolment ratios	China	99.2	98.9	99.1	99.1
	Yunnan	97.6	98.2	99.2	99.1
Pupil-teacher ratio	China	21.9	23.3	23.1	22.2
	Yunnan	25.7	25.5	23.9	22.4

However, the impact at the micro level, i.e. for the thousand – not millions – of children that have become infected, orphans, malnourished, uneducated, and so on will be presented in the following sub-chapter.

The prevalence rate is rising as the epidemics are moving from the subpopulations of infected people (IDUs and increasingly via sexual transmission) to the general population via the bridge constituted by commercial sex workers. If the prevalence rate goes up in the mid term future (2005-2010) we can expect a bigger impact on children also at the aggregate level.

One aggregate aspect for Yunnan that is treated in the following sub-chapter refers to loss of GDP, however, this is virtually congruent with World Bank calculations of 0.5% loss of GDP in countries experiencing serious HIV problems.

5.2. The micro impact on children in Yunnan

(i) Family/community assets

Adults' Time: Over the course of 8.5 years of survival after diagnosis of infection, PLWHA in Yunnan lost an average of 87 working days due to illness, and family members took and average of 30 working day to care for them, resulting in a reduction in the time adults take for the care, socialisation and education of children which raises the risk of malnutrition, injury, disease, school drop out, and so on.

In China there is virtually no mention, either in statements by officials or in news reports, of what provisions are available for counselling those who test positive for HIV, or about treatment of people who develop full-blown AIDS. Anecdotal evidence suggests that such individuals face discrimination, sometimes quarantine, and that little treatment is available, with time being spent avoiding persecution.

Level Of Education Of Parents: Although current aggregate data indicates that almost 99% of girls are enrolled in primary school, AIDS may induce a drop in female school enrolment and therefore literacy among women in the reproductive age that will affect the survival, nutrition and good health of new-borns. This would, however be a very long-term impact. At present, the majority of transmission is in IDUs, and approximately one fifth of them are illiterate and approximately two thirds are farmers.

Erosion Of The Social Capital Of The Community: People infected with HIV and AIDS patients are discriminated against both in the city and in the countryside. However, discrimination is much more serious in the city. For example, some general hospitals, and even AIDS hospitals in Beijing, refuse to take in or do surgery for AIDS patients. It is very hard for people infected with HIV and AIDS patients to gain understanding and support in the workplace or in the community. As a result, they don't want to make it known that they are infected, creating numerous difficulties for the implementation of HIV/AIDS prevention and care projects. Discrimination existing in the countryside is usually intertwined with poverty and drug abuse history of the infected person: for example, some schools refuse to enrol school-aged children on the excuse that their families can't pay for their " books and incidentals."

(ii) Family incomes

The economic development in Yunnan Province, has legged behind, staying below the average level of the whole country. The low levels of economic income, education and availability and accessibility of medical care make it hard for people in Yunnan to shoulder the overwhelming burden created by the spread of AIDS epidemic. For example, in the rural part of Ruili City, an average AIDS patient spends 800 RMB for medical treatment, and their families 2,500 RMB for funeral costs. But Yunnan's per capita income in rural areas was only 1,478 RMB in 2000, whereas average urban per capital income in Yunnan is 6,325 RMB.

Currently, those with AIDS predominantly consult private, out patient health care services, an average 4.28 clinical visits in the year preceding their death, as they are the least expensive (an average consultation costs 40 RMB or approx. 5 USD). If public health centres are used, preference is given to cheaper village facilities (10-20 RMB or 1.21-2.42 USD), to township health centres (average cost of 100 RMB or little over 12 USD). Total medical costs for those who received outpatient medical treatment before death was 800 RMB (almost 100 USD), predominantly for the treatment of opportunistic infections and pain.

The minority able to afford hospitalisation (average 0.36 hospital visits for 77 PLWHA who sought and were able to pay for medical treatment in their last year of life) stayed an average of 3 days. Hospitalisation costs for AIDS patients are reported to range between 1,000-4,000 RMB (121 – 484 USD), with 100 RMB per day representing hospital accommodation fees. MTCT experiments with retroviral drugs are still in the trial stage.

In the three villages with the highest concentration of AIDS patients in Ruili, the percentage of accumulated deaths of AIDS among the population total is 2.3% (16/700), 4.2% (26/623) and 7.9% (10/126).

Most families of people infected with HIV suffer from economic hardships as they have to pay for treatment expenses and give up work opportunities outside to stay at home and take care of the sick. Some families have started to sell their land illegally or lease it at a reduced rent in order to sustain themselves. Children in many families can't go to school (see also chapter 11 of this compilation of studies).

(iii) Availability and use of social services

In Yunnan due to poverty and lack of economic access to health care and education, social structures (clinics, schools, kindergartens, water systems, training institutions) are under-utilised.

For many families of HIV infected persons who are also drug users, the economic conditions have long been adversely affected. As a result, in most cases, the family is not

able to pay the medical expenses when medical treatment is needed because the infected person has become AIDS patients. In the survey of Ruili City, the rate of clinic visits and the rate of hospitalisation are both low and medical expenses are lower than funeral expenses. Low as they are, these expenses have put many families into heavy debt, an indication that poverty is the main reason for inaccessibility of medical help to people infected with AIDS and AIDS patients. In addition, medical service inaccessibility is also the result of the psychological fear existing among medical workers in general even today.

Available data from Yunnan suggests that nine tenths of IDUs are peasants and the unemployed, and only 10% are workers, cadres, and self-employed. The dramatic doubling number of "unknown" cases, which includes blood-related transmission poses a risk for HIV to rapidly spread to the general population. But concerning STDs, non-peasant and non-jobless make up 58% of STD cases. And as heterosexual transmission is gaining in the spread of HIV, it is through this means that HIV can impact skilled government and social service workers, but as indicated in the chapter on prostitution, these professions are currently at higher risk in eastern provinces rather than Yunnan.

AIDS pressure on public budgets might push governments to raise school/health fees, the price of essential drugs and other items to cover costs - right when these price barriers should be removed. A decline in service use may follow. China has privatised health care, instituting cost recovery via user fees. Hence economic barriers already exist against accessing medical services. With further decentralization and devolution of other social services, including education, the risk of economic barriers to education become real.

Qualitative interviews with family members of 31 HIV positive persons in Ruili City

During 1989-1999, Ruili City reported a total number of 794 AIDS infection cases among which 411 death cases (51.76%) already occurred. In the townships worst affected by infection such as Jiexiang, Jiele and Nongdao, there were AIDS patients and people infected with AIDS in almost every natural village; there were people who were dying of AIDS too [42]. Li Jianhua, Zhang Jiapeng and his group conducted qualitative interviews in 2001 with 31 households of HIV infected persons identified from records in the local anti-epidemic prevention station. The interviewees included HIV-positive persons, their family members and relatives. The main findings are as the follows:

- Health conditions of the AIDS-infected persons interviewed deteriorated; most of them were becoming AIDS patients (19/31) (defined as diarrhoea, fever, lose weight, cough and skin ulcer), 8 persons were under the attack (had one of above mentioned symptoms but were not in bed),and the illness of 2 persons reached an advanced stage (had one of above mentioned symptoms but were not in bed).
- Most families felt that their economic conditions were not as good as families with no HIV infected persons. Their family income decreased because they had to stay at home to take care of the patients 4-8 days per month. For some families (in particular families with both husbands and wives infected), it was even worse: for example, they had to sell their land illegally or rent it out at a reduced price. Fourteen children from seven households dropped out of school. All were peasants, and were able to sell their

[42] Zhang Jiapeng, Cheng Hehe, Jia Manhong, "1989-1998 Study of AIDS Prevalence and Control in Yunnan," *Chinese Journal of Epidemiology*, 1999.20 (6): pp 377- 380.

agricultural products.

- The HIV infected persons could maintain a good relationship with their families; family members in general cared about them and hoped that they could return to good in the future. There were no feelings against them in the community, but some neighbors were very precautious: they wouldn't venture to drink water in the homes of HIV-positive persons for fear of infection. Generally speaking, there was no obvious discrimination against HIV-positive persons, so they felt their neighbors were " good-tempered" and treated them as ordinary people. There should be no denying of the existence of social discrimination, however, when children were "driven out" of school because their HIV infected parents couldn't pay tuition for them.
- Among the 21 infected couples, 14 lived together, 2 wives returned to live with their parents, 5 spouses died of AIDS. Among the 14 couples who lived together, 6 used condoms under the instructions given by epidemic prevention centers, 6 didn't use condoms, one husband used condoms only when he had sex with prostitutes for fear of infection and he didn't use condoms at home. The 14th person had no sex.
- Some continued using drugs, but most used opium to change from heroin, and a few continued injecting heroin and sharing needles with other drug users.
- Among 16 wives, 4 took the HIV blood test and 3 were tested HIV positive and one was tested negative. Ten wouldn't mind taking the test, and the other two wouldn't want to take the test.
- For lack of nursing skills and knowledge, the family members felt powerless when the illness reached an advanced stage.
- At the present, family members and relatives are the only source of help for families with HIV infected persons. Other social resources and care are still insufficient. Many families become stuck with economic hardships inflicted on them by drug abuse and HIV infection. Despite their efforts, they can't get out of it, for they have no place to go to borrow money.
- What they fear most at the present is the activation of the disease, for they are too poor to pay for medical treatment. They are afraid life of their family members will be badly affected once the latent infection becomes activated. They worry about the settlement for their parents, wives and children after their death. They are afraid their children will suffer from discrimination, drop out of school and end up as drug abusers and HIV infected persons just like them.
- There are city hospitals, hospitals for ethnic minorities and farm hospitals at the municipal level; there are health centers and clinics plus some private clinics in the villages and townships. In Nongdao township, the health center is over ten kilometers away from the farthest natural village. 10% (3/31) HIV-positive persons are able to use village health centers and clinics, but 90% use private village clinics for treatment because it is more convenient and cheaper (10-20 yuan for each clinical visit). Three who are in more serious conditions go to township health centers and pay approximately 100 RMB for each visit. Hospitalization cost is 100 RMB per day, including tests and medicine. For most serious episodes of illness, hospitalization costs approximately 1000-4000 RMB for a 7 day period.
- Medical workers in general are psychologically fearful of people infected with AIDS and AIDS patients, in particular those working in city hospitals. This psychological fear reduces the accessibility of medical services and affects service quality. Medical workers at the township and village levels, however, have better adjusted themselves to the environment through years of interface with numerous HIV-positive persons and AIDS patients; they have appropriate attitudes towards people infected with HIV and AIDS patients and can provide necessary medical services even if they know clearly the conditions of those being served.

A 36 year old woman's husband was an intravenous drug user infected with HIV because of sharing needles. She became infected with the virus through her husband. The death of the husband three years ago has adversely affected the economy at home: three school-aged children can't go to school because she can't pay for their books; the 13-year old son helps the family herd cattle and work in the fields. Now she has become an AIDS patient suffering from fever, exhaustion, diarrhea and other symptoms of AIDS. She has no economic income as she has lost the ability to work in the fields. She got a loan of 2,000

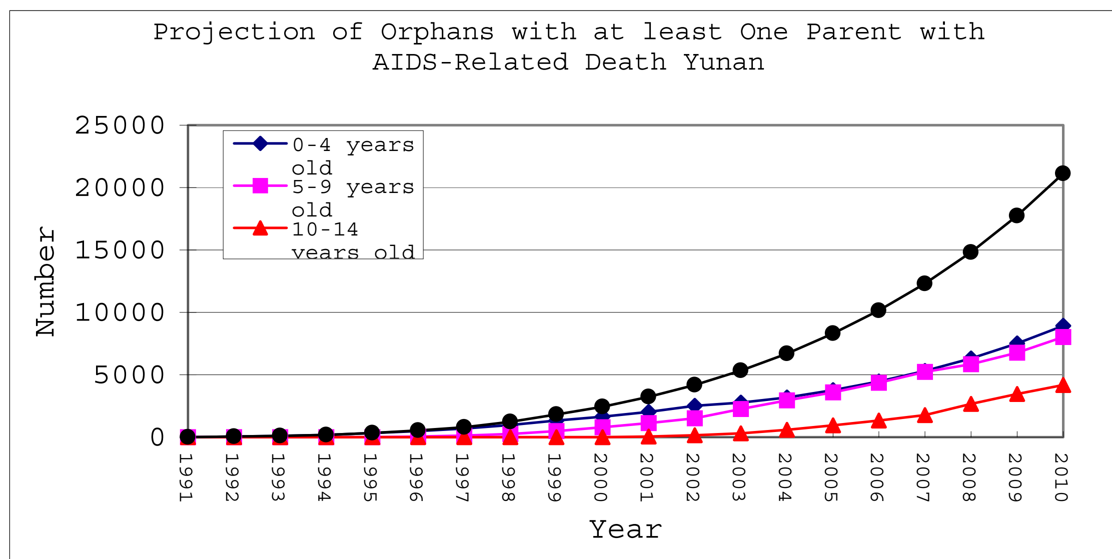
RMB last year to grow watermelons, but she was not able to pay back any money because of unfavorable weather conditions and fallen prices. The rice yield was also affected by poor weather conditions, dropping to only a little more than 500 kilos last year. Rice-planting season has just started this year, but there is only enough grain in the house to sustain the family for two months. She has one older brother and one younger sister: her brother lives in Myanmar and her sister lives in the same village. Her father went to Myanmar long time ago; her mother is still alive. Her father-in-law already died and her mother-in-law lives in another village.

5.3. The expected impact on children by the year 2010

(i) Mother To Child Transmission and Orphans

By 2010 the estimated cumulative number of infections contracted by children from their mothers will reach 16,000. There will also be a growing number of AIDS patients from year to year with time as well and by 2010, there will be over 21,000 orphans under the age of 15, having one or two parents dead from AIDS related diseases.

Chart 8: Projection of Orphans in Yunnan with at least One Parent having died due to HIV/AIDS



We estimated that 57,000 children would be born to HIV positive families between 1991-2010. Many of these children would become orphans with either their mothers or fathers having died of AIDS. We know these are under estimated numbers, as there would be more children whose mothers or fathers would become infected after their birth, and dye before they grew up. The increasing number of children who are not infected by HIV, but have lost one or two parent to HIV/AIDS, will reach an estimated 21,000 by 2010 -- a much smaller number of people affected than infected (estimated at 627,000 by 2010) in Yunnan. As mentioned previously, the magnitude of the orphan

problem will not be as great as in other countries where fertility rates are higher. However, for China, such a large number of children without one or both parents is unprecedented, and will create its own internal difficulties, where institutions do not exist or are not prepared, or where policies and financial protection mechanisms do not exist (for the orphans general issue see chapter 15).

Table 18: Projection of children in Yunnan with at least one parent dead from AIDS

Projection of children with at least one parent dead from AIDS				
Year	0-4 years old	5-9 years old	10-14 years old	Total
1991	11	0	0	11
1992	43	0	0	43
1993	96	0	0	96
1994	190	0	0	190
1995	339	0	0	339
1996	498	40	0	537
1997	682	121	0	802
1998	984	255	0	1,239
1999	1,335	483	0	1,818
2000	1,637	799	0	2,437
2001	2,038	1,129	51	3,219
2002	2,525	1,513	152	4,190
2003	2,777	2,248	314	5,339
2004	3,169	2,944	585	6,699
2005	3,766	3,588	954	8,307
2006	4,474	4,354	1,332	10,160
2007	5,317	5,226	1,774	12,317
2008	6,317	5,854	2,661	14,832
2009	7,506	6,764	3,466	17,736
2010	8,918	8,037	4,184	21,140

(ii) Medical Costs Related to HIV/AIDS

Based upon current medical costs, assuming 75% of AIDS individuals in rural seek medical treatment and 90% of AIDS individuals in urban areas seek medical treatment costing 5000 RMB, using our estimated number of people living with AIDS in 2000, in Yunnan (1,982 cases), all the costs (medical + funeral) for AIDS patients would be 6.7 million RMB in 2000 and reach 181 million RMB in 2010.

(iii) Loss of GDP and Rising Poverty Related to AIDS

From a macroeconomic perspective, medical and funeral costs contribute to GDP. However, the loss of income from premature (death related to AIDS) or temporary exclusion (taking care of sick relative, on average 30 days) from the labour market leads

to a loss in GDP. Based upon these aforementioned considerations, the income loss in Yunnan, will be 15.5 million RMB in 2000 reaching 828 million RMB in 2010. Combining the gain to GDP from inputs to the medical and funeral sector, with the loss to GDP from permanent/temporary non-participation in the labour market, the net loss in Yunnan's GDP in 2000 will be 0.01%, but will rise to 0.43% in 2010 (assuming continued economic growth of 4% per year till 2010). This coincides with results from a World Bank study saying that developing countries with serious HIV/AIDS problems may experience a 0.5% decline in GDP [43].

For 100,000 families who will have one person living with AIDS by 2010, their quality of life including economic, physical, mental and spiritual will be affected, and at least 300,000 will be put into poverty (or a 15% increase in those already living in poverty) as the HIV positive cases convert to AIDS.

6. Medium term measures

In order to mitigate the significant effects on children in families affected by HIV in Yunnan, and to reduce the further expansion of HIV in Yunnan and in the country as a whole, a significant increase in the quality and volume of work is required as well as the supports to this work in terms of policy, government commitment and funding. The following areas are suggested as key issues. These recommendations are organised by three areas - mitigation of the effects of HIV infection (including care), prevention of further infections. Recommendations are consistent with suggestions published by the UN Theme Group on HIV/AIDS in China.

A. Mitigation of the effects of HIV infection

Mitigation of the effects of HIV on the health sector

As mentioned in the facilitating factors section, the health care system in China, and in Yunnan have been virtually dismantled through decentralization and privatization. The rural health system in China, in many places is non-existent or inaccessible through cost. The majority of people with HIV simply have no resources to access health care. In such a situation, HIV does not threaten to overwhelm health services, as much as overcome the capacity of communities to cope with care needs, whilst those services that do exist will remain underutilised. Currently it is difficult to assess which agencies will provide care for communities affected by HIV in China.

Solutions will require linkage to attempts to improve PHC through health care reforms, although these are unlikely to deliver all services required in the medium term. Care

[43] Ainsworth M and Over M. (1999) *Confronting AIDS: Public Priorities in a Global Epidemic*. World Bank Policy Research Report, New York , pp: 34.

projects provided through non-governmental agencies in the worst affected areas of Yunnan will also be required in the short and medium term.

Access To Care

Currently very few people with HIV in China have access to any formal care programmes, much less antiretroviral therapies. Needs assessment data from Yunnan indicates that medical staff have low levels of knowledge about the clinical manifestations or treatments for HIV/AIDS and opportunistic infections.

An expansion of ability in the provision of medical care for opportunistic infections either through home care or institutional programmes would significantly impact on the health of people with HIV and the care burden faced by them and their family members.

With regard to the provision of antiretroviral medications even fewer people living with HIV currently have access in China. The Chinese Ministry of Health has recently begun to hold discussions with pharmaceutical companies to explore the possibility of reductions in costs. However, it is likely that even if takes place a significant majority of people currently infected with HIV would still not have access to medications.

Chinese production of generics would be feasible and more likely to ensure access, but this is not currently an explicit objective of AIDS agencies, including the Ministry of Health.

Mitigation Of Poverty Impact On Aids Infected/Affected Families.

China's success in reducing poverty is exemplary and hundreds of millions of families have been lifted out of poverty in the last decades. Safety nets do exist for families in poverty to provide a minimum subsistence but these are often not accessed by those who might be eligible. Currently China and Yunnan offer no specific anti-poverty mechanisms for people with HIV. A needs assessment in Ruili county of Yunnan province as part of the China-UK HIV/AIDS Project found that the costs of care for HIV, exacerbated by those of lost labour were creating significant poverty for families of those infected. In that study none of the respondents were accessing poverty funds provided by government.

It will be essential in future to link together in the provision of HIV care work with the Bureaus of Labour and Social Security and of civil affairs - but these links have not been made hitherto. Possible initiatives might include micro-credit and child allowances, as well as occupational training might be an interesting route to try.

Mitigation Of The Impact Of Aids On The Demand And Supply Of Education.

Chinese law stipulates that schooling is compulsory and should be free. However, schools charge user fees for books, school related activities, etc. On average, in rural areas, fees are approximately 300 RMB per child per year. As indicated previously, rural

income in Yunnan is under 1,600 RMB per year, and in some villages as low as 1,000 RMB. In these conditions school fees alone represent 20 to 30% of rural income. Given that many rural residents have two children, school fees would represent approximately half of a family's annual income. For families with HIV, where incomes are insufficient to provide for care, the likelihood of families being able to send children to attend school is reduced significantly.

At present there is no documented impact on the effect of HIV on the supply of education through illness of teaching or other staff. Such an impact would not be expected in the medium term.

Orphan Policy

Orphans are provided for by personal networks (family and neighbors). The Ministry of Civil Affairs gives them a small amount of support, based upon criteria for people living in difficulty (but not under the poverty alleviation effort). Although there are orphanages in China, and in Yunnan (including for the purpose of overseas adoptions), they are limited in number and scope. China as a whole, and Yunnan have not developed policies for children orphaned by HIV/AIDS. The provision of schooling and care for orphans will be an important instrument in the medium term given the estimated number of children who will have lost parents to HIV.

Stigmatisation of People Living with HIV/AIDS

Information from studies conducted in Yunnan indicates that stigmatisation of people living with HIV impacts on the quality of lives of people with HIV and their families by adding social ostracisation, lack of entitlements and incomes to the problems already created by illness. It undermines care programmes by impacting on families' ability to access care either through unwillingness to be identified as having HIV, through inability to pay or through discriminatory attitudes on the part of medical staff. Prevention programmes are also weakened where stigmatisation is great.

Broad community education and encouragement of PLWH to be part of the response in order to provide more personalised messages to communities represent the principal means of reducing the heavy stigma that exists in China.

B. Prevention

The active support of provincial government to promote and expand prevention work is required. Over the last 11 years, the Yunnan Provincial People's Government has allocated nearly 40 million RMB for HIV/AIDS control and care projects. International and national organizations have also been very active in helping with HIV/AIDS prevention in Yunnan, providing an accumulated total of 33 million RMB for related projects in Yunnan. The DFID project alone will inject into Yunnan not only technical input, but 5 million US between 2001-2005.

However, both the overall levels of funding and the allocation of those funds needs to be increased if a significant impact on HIV is to be made. Doubtless, a great deal of work has been done in the areas of HIV/AIDS surveillance and public awareness campaign in Yunnan, but funding and policy support from Yunnan Provincial Government still fall short of the actual amount required to control the rapid spread of AIDS in Yunnan. Key to ameliorating the avoidance of the longer term macro effects on child health and wellbeing in Yunnan and China will be the expansion of, and improvement in the quality of prevention work to avoid further infections.

Programmes to prevent HIV work in Yunnan and in China as a whole have hitherto worked mainly from an information dissemination model whereby an assumption is made that increases in knowledge will result in changes in behaviour. This belief is currently evolving to recognise that a greater concentration on attitudes and skills for behaviour change and on services for groups with high risk behaviours is required, and in Yunnan the provincial AIDS office is responsible for replicating some of the small scale behaviour change pilots that have been implemented. However, the marginalised position of some of the key risk groups for HIV infection (such as drugs users and sex workers) has hindered the expansion of this work.

The role of media is not fully used in public awareness campaigns. Effective intervention actives among high-risk groups have not been launched out: for example project of the promotion of 100% condom use among commercial sex workers and men having sex with men, methadone maintenance treatment programme and needles exchange project. HIV/AIDS care and large-scale mother-baby transmission disruption project are some of the projects needed to be set up or developed

<u>Prevention of Mother To Child Transmission</u>

Although infection from mother to child is an established route in China and in Yunnan most mothers are not aware of their status, and hence no prevention activities have been conducted (see Annex 21). Major constraints to limiting the transmission of HIV from mothers to children are:

1. The various levels of administration within the province (provincial, prefecture, county, township and village) are not well coordinated – the current level of decentralization appears to provide little room for oversight and supervision. Leadership is weak, and the health system is poorly regulated. This has implications for all six PMTCT interventions: (1) Strengthening the antenatal care (ANC) system, (2) Voluntary counseling and testing (VCT), (3) Optimizing infant feeding practices, (4) Obstetric care, (5) Family planning (FP) counseling and services, (6) Anti-retroviral therapy (ARV). Due to this lack of coordination, international organizations operating in China and in Yunnan are finding it very difficult to manage projects, making it hard to mainstream approaches rather than doing small-scale projects.

2. Lack of VCT – the vast majority of people do not have access to confidential testing services. Tests are being performed, and if positive, persons are not informed of their status.
3. The MCH, FP and EPS systems all have critical and interrelated roles in the successful implementation of PMTCT, however they are uncoordinated at best, and antagonistic toward each other at worst.
4. There is little, if any, MCH data collected or analyzed at the county level (especially with regard to antenatal services, the cornerstone of PMTCT). The situation is unlikely to be better at township or village levels.
5. HIV/AIDS treatment and care are poor at all levels, due to the lack of treatment guidelines, lack of expertise of providers, and lack of access to effective treatment drugs.
6. Social support services are virtually nonexistent for persons living with HIV/AIDS.
7. Government is expecting financial and technical support from UNICEF, but awaits a detailed plan of assistance. No care guidelines exist - therefore no plans have been put into place, apart from some unsubstantiated and impossible targets in the five year action plan.

Need for life skills education among vulnerable groups, especially youth

One specific area needing intensive support concerns the education of young people in the acquisition of safe and healthy life skills especially in the areas of sex and drug education. In fact, international experience has taught that well presented sex education in schools can become a powerful factor for convincing young people to engage in safer sex behavior and to postpone the start of their active sex life.

In China, traditional approaches to "education" involve older people and people in position of authority lecturing young people about morality. Strategies that have elsewhere been proven effective in HIV/AIDS education, such as participatory education, youth to youth education, and developing decision-making skills have been practiced very little. Numerous successful small-scale peer-education projects have repeatedly shown that HIV prevention through peer-education is a very appropriate teaching method in the Chinese context. There is need to scaling up these participatory prevention methods to reach young people already in middle school. It is also urgently needed to find forums for reaching out to out-of-school youth and to the special needs of migrants' teenage children and young migrants themselves.

Furthermore, there is a great need to target minority populations with culturally appropriate IEC strategies, such as easy-to-read material in native languages and non-written messages through e.g. pictures, theater, participatory drama, singing and dancing. Most important however, is to enhance minorities' participation in the process of designing, implementing and evaluating HIV/AIDS prevention.

Need for the urgent control of STI

Since international evidence indicates that the co-factor effect of STI for promoting HIV spread is highest at the beginning of a sexual HIV epidemic, there is a great urgency now to bring STI under control. Regulations are needed for bringing order to the current state of complete chaos in STI management. Modern and comprehensive public health systems need to be designed for treating STI, including services provided by STI clinics, general clinics, private practitioners, Family Planning clinics and pharmacies, among others, in both cities and the rural areas. STI prevention needs priority attention inclusive of countrywide promotion of condom promotion.

C. Policy and institutional measures

Despite (and sometimes because of) legislative measures, awareness concerning the importance of STI/HIV prevention and care has made little progress in China. This problem is particularly evident at provincial and local levels.

- Institutional structures and practices make it hard for the central government to enforce laws and regulations, to monitor local governments and to develop a clear understanding of the HIV/AIDS situation locally.
- Many local governments do not want to know or others to know about HIV/AIDS in their area for fear that it will reflect poorly on the locality and its officials. Local governments sometimes suppress information and sometimes even actively oppose research on HIV/AIDS in their localities.
- The slow and often poor flow of information between village, county, province and national levels makes timely responses to the epidemic harder.
- Local government often fear that an open assessment of their locality might lead to local government officials being accused of ineffectiveness when it comes to securing a safe blood supply and controlling risky practices such as commercial sex and illicit drug use. In this context, harm reduction programs for IDUs and other vulnerable populations are extremely difficult to carry out.
- The drug control policy is focused on supply and demand reduction through strict criminal punishment. Harm reduction, which is the focus for HIV prevention, is not a priority. Drug users typically fear to be caught and send off to rehabilitation centers and therefore they hide their addiction and drug use activities are forced underground–making them a hard to reach population with little incentive to participate in HIV prevention.
- Several provincial and local laws and regulation are contradictory to the national guidelines on treatment and care of HIV/AIDS patients issued by MOH. One of the Ministry's guiding principles is "maintenance of confidentiality and the guarantee of individual legal rights." The document further stresses the right of the HIV positive person to work, to attend school, to obtain medical treatment, and to participate in social activities, and says only that PLWHA should delay marriage and "seek a medical opinion" before getting married. In November 2000, MOH issued another document stressing that HIV testing before marriage should be voluntary.

To summarize, there is a worrisome tendency towards restrictive and punitive law making, targeting those who are HIV positive or vulnerable to HIV infection, despite the fact that international experience has shown that restrictive laws have little effect on curbing the epidemic, while in actual fact they can have clear-cut negative impact on the dual aspects of HIV prevention and care. Measures necessary include the analysis of the effects of current policy as well as better monitoring of the implementation of national policy.