



## Sex Work and HIV/AIDS in Asia

People who buy and sell sex pose one of the high-risk behaviours for HIV exposure in Asia. It is therefore essential for HIV prevention interventions to take into account the nature of the Asian sex industry.

The purpose of this booklet is twofold:

1. to summarize what researchers have learned about the epidemiology of HIV/AIDS within Asian commercial sex networks; and,
2. to discuss the programmatic implications of those findings.

The central epidemiological issues were presented in detail in *AIDS in Asia: Face the Facts*, a report issued by the Monitoring the AIDS Pandemic (MAP) Network in 2004. This publication follows up by highlighting the points that relate specifically to the spread of HIV through commercial sex. It also describes how those points should inform HIV prevention strategies.

This is one of a series of three programming-themed booklets based on *AIDS in Asia: Face the Facts*. The

other two are *MAP Report 2005: Male-Male Sex and HIV/AIDS in Asia* and *MAP Report 2005: Drug Injection and HIV/AIDS in Asia*. Taken together, they provide insight into how to respond to the behaviours driving the spread of HIV in Asia's most at-risk populations.

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## Acknowledgments

The members of the Monitoring the AIDS Pandemic Network (The MAP Network), the grouping responsible for this report, are listed in Appendix 1. The MAP Network would like to thank several people who are not currently network members but who have contributed actively to this report. These people include: Jeanine Bardon, Elizabeth Pisani, Sara Hersey, Ganrawi Winitdhama, Guy Morineau, Laxmi Bilas Acharya, Parvez Sazzad Mallick, Kelly Safreed Harmon, and Nigoon Jitthai. The MAP Network would also like to thank the governments of Asia and their development partners for generously sharing national HIV and behavioural surveillance data for this report.

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### Notes about sources

Because this document refers to data with great frequency, the sourcing of each individual data point cited would be impractical. The sources for surveillance data are consolidated in a list in Appendix 2. Any data point that is not individually sourced, or that is sourced to "national surveillance records" or "behavioural surveillance," comes from the sources on that list.

Data from stand-alone studies rather than from repeated surveillance efforts are individually referenced in endnotes that appear in Appendix 2.

Sources for all figures are provided in Appendix 2.

## Sex work and HIV/AIDS in Asia: a summary

Commercial sex between men and women is one of the major drivers of the HIV epidemic in many countries of Asia. People who buy or sell sex are more likely to be exposed to HIV and other sexual infections than those who do not. Men who have unprotected sex with sex workers are at risk, not just of contracting HIV and sexually transmitted infections (STIs) but, of passing these infections on to their wives and girlfriends.

The basic building blocks of effective HIV prevention—knowledge of how HIV transmission can be avoided, together with the means and ability to act on that knowledge—are still not in place for many high-risk populations. The first obstacle to condom use appears to be a lack of information about HIV/AIDS and about condoms. Another issue is access to condoms, in spite of progress in some countries, particularly Thailand. But knowledge and access are not enough because a change in attitude and behaviour still needs to be effected. There are still some sex workers and many clients of sex workers who refuse to use condoms. Also, some sex workers appear to not be asking clients to use condoms, perhaps because they expect them to refuse. STIs are another major factor affecting HIV transmission rates in the Asian sex industry, since infection with an STI increases the chance that HIV will be transmitted during unprotected sex between an HIV-infected and an HIV-uninfected partner. Drug injection is also a factor, since this behaviour has the potential to greatly increase HIV transmission in the Asian sex industry. Many countries avoided HIV epidemics for many years despite large sex industries and persistently low levels of condom use. Some of those countries have recently seen steep rises in HIV infection rates among sex workers. The increase in HIV infections appears to be attributable to the recent spread of HIV among injecting drug users (IDUs) who share unclean injecting equipment.

### ***The right prevention services for the right people will change the course of HIV epidemics in Asia.***

The diversity of experiences in Asia demonstrates that the spread of HIV is not inevitable. Countries and regions that have chosen to provide prevention services on a large scale to those most in need of them have turned their epidemics around. Important programmatic principles should include each of the following.

- Sex workers and clients need to know how to protect themselves from HIV.
- Clients need easy access to condoms and should always be asked to use them.
- Sex workers need regular access to high quality STI services.
- Both IDU programmes and sex worker programmes need to recognize the dual risks of drug injection and commercial sex, and to integrate HIV prevention components into their services, as well as making referrals to other services.
- The social, political and security environment must support the provision of appropriate HIV prevention services to those most at risk.

Closing our eyes to the sex industry in Asia will not make it go away. Providing good prevention and care programming on a large scale will make it safer. The people and structures that govern this multi-million dollar industry can help to achieve the goal of making sex work safer for providers and consumers alike.

## 1. Introduction

Commercial sex between men and women is without doubt one of the major drivers of the HIV epidemic in many countries of Asia—simply because a larger proportion of the population buys or sells sex than engages in the other behaviours that carry an elevated risk of HIV infection (drug injection and anal sex with multiple partners).

Female sex workers (FSWs) do not infect one another with HIV (unless they are sex workers who inject drugs and share needles). It is the clients or partners of FSWs that infect them with HIV. Once infected, they are likely to pass the infection on to other clients who do not use condoms or who use them incorrectly.

People who buy or sell sex are undoubtedly more likely to be exposed to HIV and other STIs than those who do not. In a study of truck drivers attending an STI clinic in southern India, for example, HIV prevalence was 3 percent among those who had not had commercial sex, while among those who reported a history of having sex with sex workers, prevalence was over seven times higher at 22 percent.<sup>i</sup> In China, men who reported recent unprotected sex with a sex worker were more than eight times more likely to be infected with chlamydia than those who did not.

### **Is HIV a Bigger Problem in the Sex Industry or in Drug-Using Populations?**

The groups with the highest HIV infection rates in Asia are injecting drug users (IDUs). So why did we emphasize earlier that commercial sex is one of the major drivers of HIV epidemics in Asia? Because of the significance of the absolute numbers of people engaging in both types of behaviours. In general, IDUs are more likely to be infected with HIV than sex workers or their clients. But because the overall numbers of people buying and selling sex are much larger than the numbers of people injecting drugs in most settings, more HIV infections overall will be transmitted sexually than through drug injection.

If HIV prevention programmes that aim to reduce risk in commercial sex are to become more effective, they need to do a better job of reaching clients, who are major decision-makers in commercial sex. But our understanding of who buys sex is still sketchy in many countries.

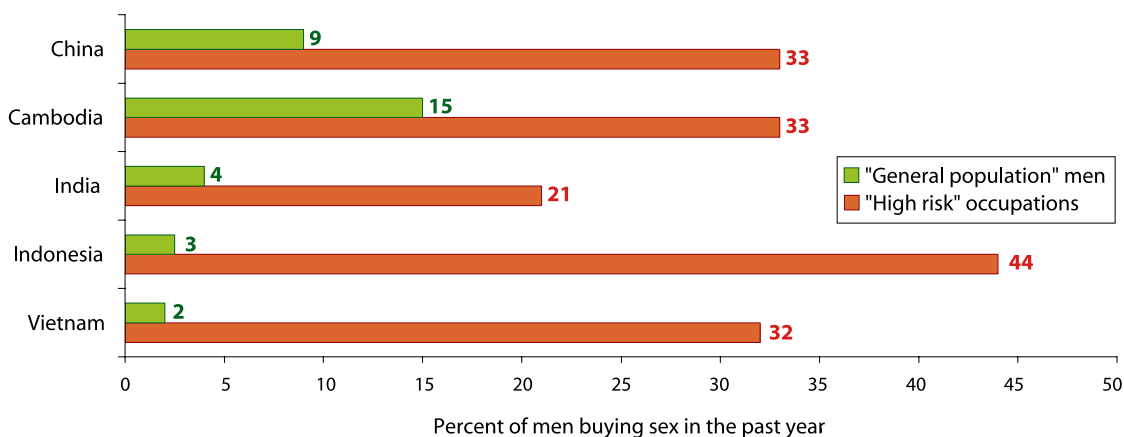
### **A. Sex workers' clients**

Reports similar to this often present graphs showing that very high proportions of men buy sex and have non-marital partners—rates of between 40 percent and 70 percent are not uncommon. But these groups of men are usually chosen for behavioural surveillance precisely because they are more likely than other men to report high-risk behaviour. Usually, they have jobs that provide them with disposable cash and cause them to spend nights away from home in social environments where it is acceptable to frequent bars and so-called “red-light districts”. Truck drivers, sailors, soldiers and migrant workers are often included in the surveillance that shapes our ideas of sexual norms in Asia.

The few surveys available among men sampled in households or other general population surveys make one thing clear: surveillance groups do not represent all men. Indeed, buying sex from sex workers is very far from being a behavioural norm among men in Asia. In a survey of over 1,200 men in health facilities in the Philippines, just 6 percent of adult men said they had bought sex in the past six months,<sup>ii</sup> while in Myanmar 7 percent of over 3,500 men said they had paid for sex in the preceding year. In central Thailand the proportion reached 16 percent.

Data from a number of countries suggest that younger men are more likely to buy sex than older men in most settings, in large part because men are less likely to buy sex after they get married. In settings where women are strongly encouraged to maintain their virginity until marriage, younger men who want to be sexually active may believe that sex is more readily available through commercial channels. On the other hand, the behaviour of older men is also of concern, especially since older men in some situations are the ones who are more likely to have the financial means to afford multiple partners.

## Most men in Asia are not clients of sex workers, even among mobile men with money



**Figure 1 Percentage of men buying sex in the previous 12 months among groups representing the general population and those chosen to reflect higher risk, various countries**

Note: "High-risk" groups here refer to truck drivers (Indonesia, Vietnam and Tamil Nadu in India), police (Cambodia) and sailors (Indonesia). General population groups are from household surveys, except for India (Tamil Nadu) where male factory workers were surveyed.

**Figure 1** makes it very clear that the men included as "high-risk" groups in surveillance systems are more likely to buy sex than men in the general population. Can we then conclude that the majority of clients of sex workers fall into these groups? It appears not. In India, exit interviews with clients established that nearly one-third were transport workers, but over one-quarter also worked as businessmen or in the service industry. In a study of close to 500 men in the Vietnamese capital Hanoi, businessmen were nearly twice as likely to buy sex, compared with factory workers. More educated men were more than twice as likely to buy sex than high school dropouts, perhaps because a better education led to jobs with more disposable income. But education led to more condom use as 84 percent of high school graduates reported using condoms the last time they bought sex, compared to 63 percent of school dropouts.<sup>iii</sup>

One way to better understand who clients are is to ask sex workers. In southern Vietnam, sex workers reported that at least 37 percent of their clients were businessmen or white-collar workers, while over half in five northern provinces were said to be government officials. Women selling sex in Indonesia, Lao PDR and Pakistan also said that civil servants and businessmen were among their most frequent clients.<sup>iv,v</sup>

These groups are very rarely included in surveillance systems. The likely consequence is that surveillance systems are failing to capture the clients of "higher-class" sex workers, who may be more likely to use condoms (as in the Vietnamese example cited above) but who are also more likely to be older and married.

### Male Sex Workers and their Clients

When sex workers are discussed in Asia, people usually think of women who sell sex to men. But Asian men also buy sex from male and transgender sex workers.

Almost everywhere it has been measured, condom use in commercial sex between men and women is consistently higher than condom use in commercial sex between men, even though sex between men carries a far higher risk of HIV transmission. This is probably in part because HIV prevention programmes throughout Asia have focused attention on the dangers of unprotected sex between men and women, while maintaining a deathly silence on the subject of sex between men. The subject is discussed at length in another booklet in this series, MAP Report 2005: Male-Male Sex and AIDS in Asia.



In most countries for which data are available, single men are more likely to report going to sex workers than married men. But because more adult men are married than unmarried, the overall proportion of men buying sex who are married is high. In India, when clients of sex workers were surveyed directly, over half of them said they were married and, in some northern states (such as Punjab, Jammu and Kashmir), seven out of 10 clients had wives.

Men who have unprotected sex with sex workers are at risk not just of contracting HIV and STIs, but of passing the infections on to their wives and girlfriends. In a study in the southern Chinese city of Guangzhou, some 72 percent of women with STIs said they had only had sex with their husband or regular partner in the previous six months. This is a clear sign that they were put at risk by their partners' behaviour rather than their own.

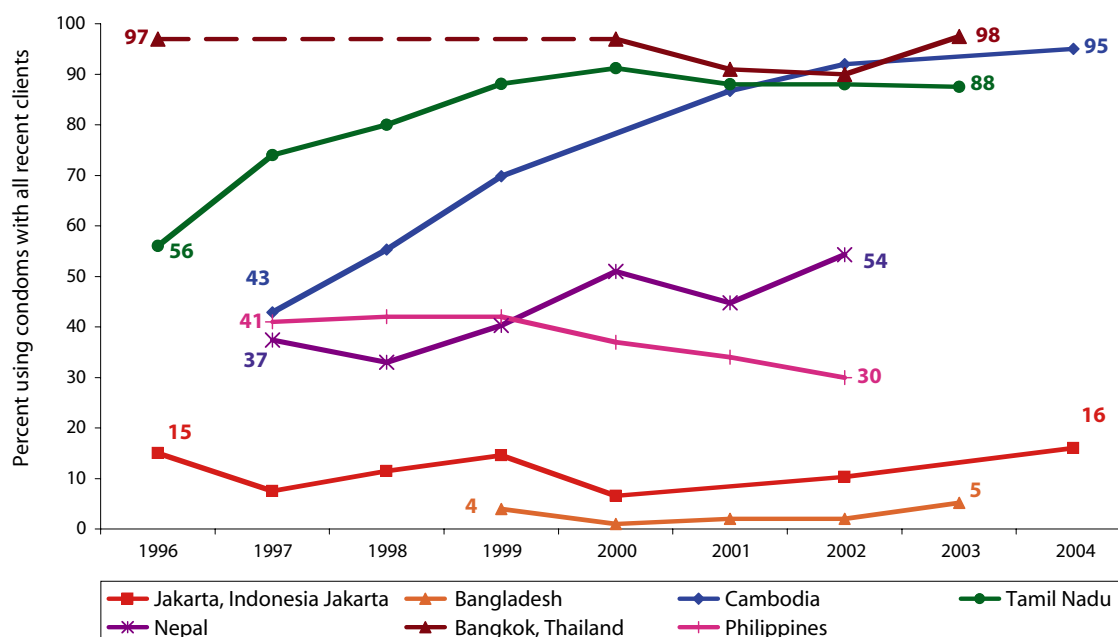
### B. Sex workers' regular partners

Of course, it is not just clients who have regular sex partners. Sex workers do, too. And, partly to distinguish their private from their professional lives, sex workers are usually less likely to use condoms with their regular partners than with their clients, even if they know those partners are having sex with other people. In China, over 60

percent of sex workers have non-paying partners, and they are half as likely to use condoms with them as with clients. In Luang Prabang Province of Lao PDR almost half of the indirect sex workers have a non-paying partner, and among them more than 40 percent were infected with chlamydia or gonorrhoea.<sup>vi</sup> (This publication uses the term "indirect sex workers" to refer to people who do not operate openly as sex workers in a brothel. They may, for example, provide sex in exchange for money or goods while they are working in settings such as hair salons, massage parlours, tea shops, restaurants, lounges and bars.)

Men, as well as women, distinguish partner types and thus condom use on the basis of emotional ties rather than an assessment of the risk to which they might be exposed. Half of the men in eight provinces in Indonesia who reported having a "girlfriend" said they paid their girlfriend cash for sex. In Vietnam, most sexually-active migrant workers in seven cities reported sex with "lovers"; and, although consistent condom use with sex workers was between 55 percent and 75 percent in most sites, condom use with "lovers" was below 10 percent in all but one city. Condom promotion campaigns aimed at men who are likely to have sex outside their marriages therefore need to adopt a broader approach and encompass casual partners as well as sex workers.

### While some countries are managing to increase and sustain high levels of condom use in commercial sex, others are not



**Figure 2 Percentage of brothel-based sex workers reporting consistent condom use with recent clients, various countries, 1996—2002**

Note: Time reference periods for consistent condom use vary between countries. Tamil Nadu data refer to condom use with most recent client. Bangkok data refer to condom use with all clients on the most recent working day.



### C. Focusing and sustaining HIV prevention efforts

Over the course of the last several years, some places in Asia have been more successful than others at encouraging high levels of condom use in commercial sex establishments, as **Figure 2** shows. Thailand, Cambodia and Tamil Nadu are widely recognized for their efforts to promote condom use among sex workers and their clients. While direct causality may be difficult to document, it is not surprising to see that they have fared so well in reducing HIV prevention in the commercial sex industry.

Condom use is only one of a complex set of factors influencing the course of Asian AIDS epidemics. The larger point here is that when the appropriate parties set evidence-based goals and systematically pursue those goals on a long-term basis, it is possible to influence the behaviours that put people at risk for HIV infection. The rest of this publication explores in greater detail some of the key risk behaviours and appropriate programmatic responses.

## 2. Factors affecting HIV transmission patterns in the Asian sex industry

While there are a number of factors contributing to the spread of HIV in the Asian sex industry, three in particular will be highlighted.

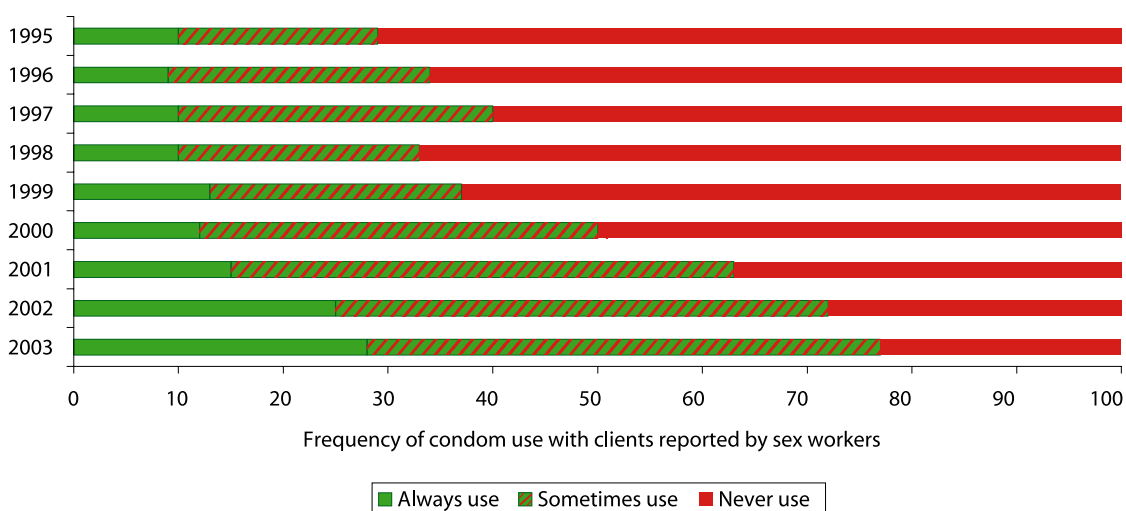
- Levels of condom use.
- Sexually transmitted infections.
- Drug injection.

### A. Different levels of condom use

Female sex workers have probably been exposed to more HIV prevention efforts than any other population in Asia. One might therefore assume that the basic building blocks of effective prevention—knowledge of how HIV can be prevented, together with the means and ability to act on that knowledge—would be present almost everywhere. However, this is not the case and remains an indictment of our collective prevention efforts.

In the Indonesian capital Jakarta, condom use in commercial sex barely changed over the seven years it was measured from 1996 to 2002. It began to rise however, only in the last year or two. But by 2004, over half of sex workers in massage parlours and discotheques still reported not using a condom with their most recent client, and three quarters did not use them with any of their clients in the last week. Further, among sex workers in brothel areas (a group that ought to be much

### Making progress: More sex workers use condoms more of the time in China



**Figure 3** Frequency of condom use with recent clients reported by female sex workers in Guangxi, China, 1995-2003

easier to reach with interventions), fully 85 percent of sex workers said they did not use condoms with any clients in the previous week, despite nearly a decade of prevention programmes. This situation was the inverse of that found in the Philippines in 2003. In Angeles City, over one-half of registered sex workers said they used condoms with all clients last week, but just 6 percent of “guest relations officers” (hostesses in karaoke bars and night clubs) consistently used condoms.

Happily, these extremely low levels of condom use in commercial sex are no longer the norm in Asia. From China to Vietnam, from Nepal to Lao PDR, condom use in commercial sex has risen to very high levels in recent years.

**Figure 3** shows changes in condom use reported by sex workers in Guangxi, China, during 1995-2003. Consistent condom use with all clients is still very far from the standard, but in 2003, for the first time, the number of sex workers who reported always using condoms outstripped the number who said they never used them. The data shown here are mirrored by data from other parts of China. In Sichuan, 81 percent of sex workers participating in surveillance reported using a condom with their last client in 2002, although only around half that proportion used condoms with all their clients in the previous month.

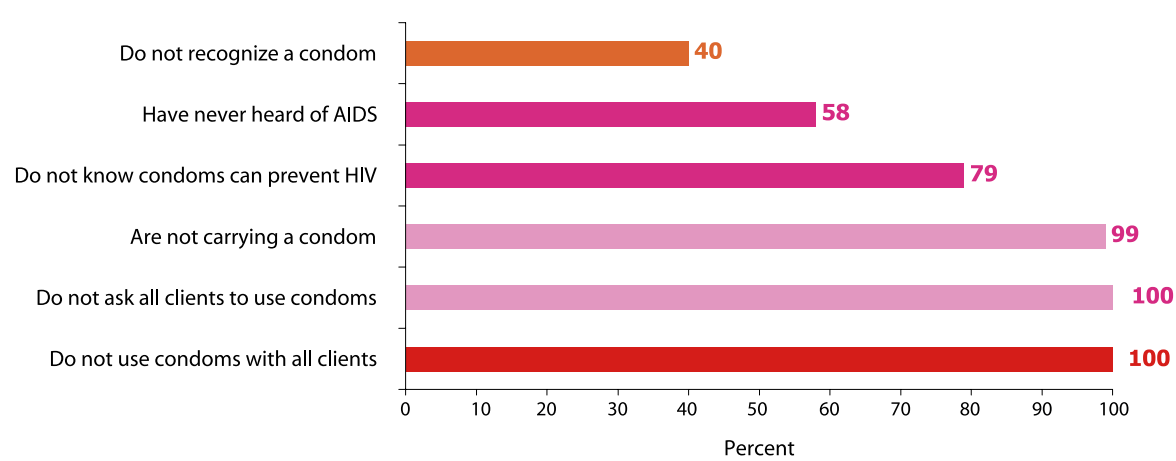
### Incomplete knowledge about condoms and HIV

Unfortunately, the first obstacle to condom use appears to be a lack of information. Overall in India, 85 percent of brothel-based sex workers in

2001 knew that condoms prevent HIV. But among sex workers who were not based in brothels, the figure was lower, at around 70 percent. In some states, such as Haryana, fewer than half of all sex workers knew that condoms prevent HIV. Just as worrying, high proportions of Indian sex workers thought they could tell someone had HIV on the basis of the person’s physical appearance. Nationally, 42 percent believed they could visually screen clients to choose the safe ones. Similarly, in Yunnan, China, two-thirds of sex workers thought that they could tell someone’s HIV status from his or her physical appearance in early surveillance surveys. The good news is that recent data suggest a dramatic increase in knowledge among this population, with close to three-quarters now aware that they cannot tell, simply by looking at people, who is infected.<sup>vii</sup>

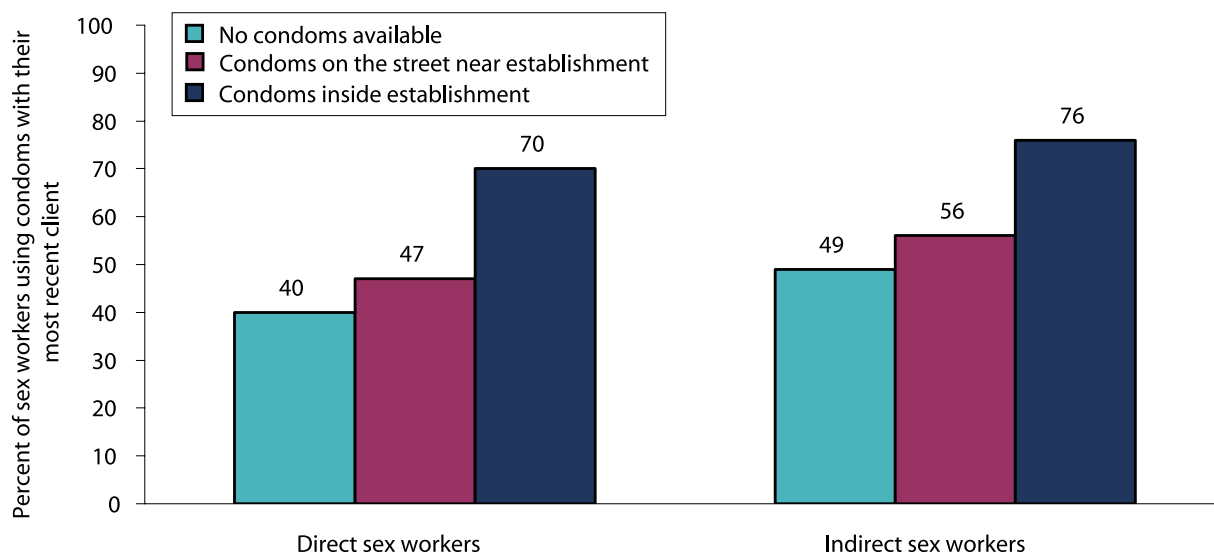
In a few places where virtually no HIV prevention services have been made available, even to those at high risk, basic knowledge is dismal. In East Timor, for example, it is distressing to note that nearly six out of 10 sex workers have never heard of AIDS, and that four out of 10 do not even recognize a condom when shown one. But given these basic statistics, it is no surprise to find that zero out of 10 always use condoms with their clients. The situation is not much better in the far more populous city of Karachi, Pakistan’s main trading city. There, one in five sex workers can’t recognise a condom, and three-quarters don’t know that condoms prevent HIV (in fact, a third had never even heard of AIDS). A predictable result ensues: only 2 percent of female sex workers said they used condoms with all their clients in the last week.

### After 20 years, even the basics are still missing in some places



**Figure 4 Knowledge and behaviours related to HIV and condoms among female sex workers in Dili, East Timor, 2003**

## The easier condoms are to get, the more likely people are to use them



**Figure 5 Percentage of sex workers reporting condom use with their most recent client, by availability of condoms at their workplace, Indonesia, 8 provinces, 2004**

### The need for greater access to condoms

Another issue is access. Obviously, people cannot use condoms if they can't get them when they need them. In a few places, sex workers and clients say they don't use condoms because they are simply not available or affordable.

A number of countries have done very well at increasing access to condoms, but access is still highly uneven. In India, for example, 40 percent of street-based sex workers who didn't use condoms said it was because condoms were not available, compared with 9 percent of sex workers in brothels. In Indonesia, where surveillance staff independently verified the availability of condoms at the place where they interviewed sex workers and clients, there was a clear relationship between the easy availability of condoms and the likelihood that they would be used. Interestingly, it is not enough just to have condoms available around the red light district or on the streets near bars and massage parlours, let alone in pharmacies. As **Figure 5** shows, it is crucially important that condoms are available inside the sex establishments. This perhaps reflects men's unwillingness to buy condoms on the streets, but their greater willingness to use them when accessed more privately.

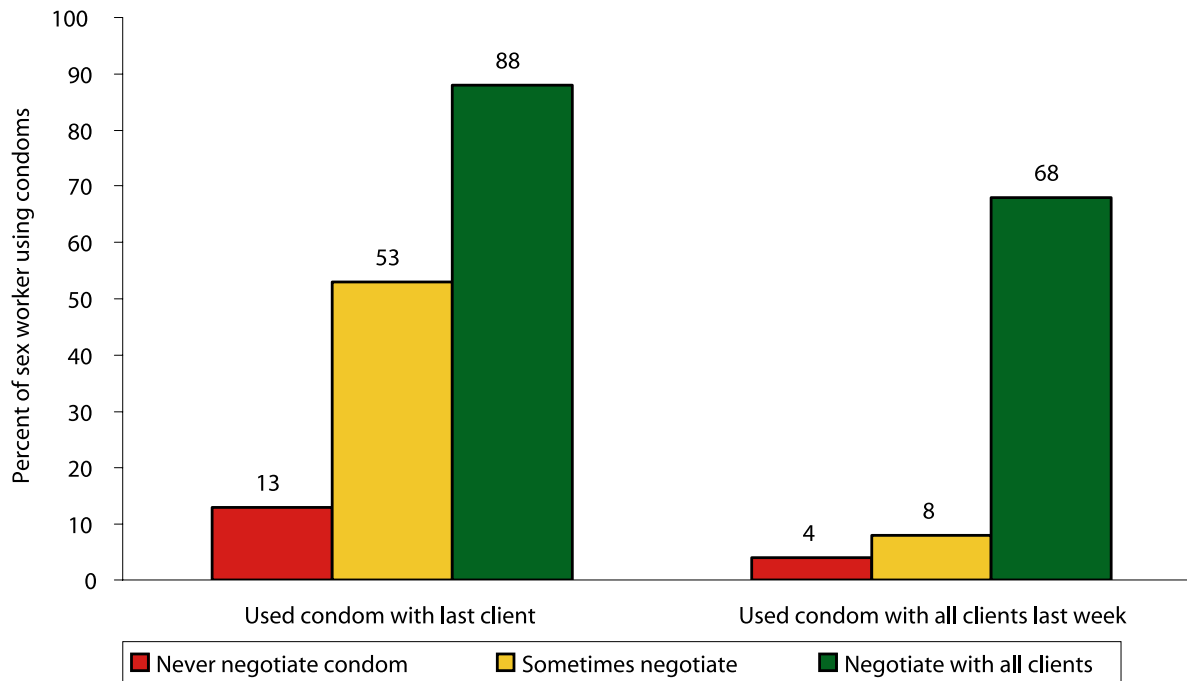
### Clients who refuse to use condoms

What about the sex workers who do not use condoms that are easily available inside their workplace? Why are they not using them? The answers are predictable, and indeed are echoed all around the region: the client didn't want to. This is the reason given by both sex workers and clients for not using condoms in most places where they are available. In Sichuan, China, 62 percent of sex workers and 71 percent of their clients gave that reason. The rate was even higher in India's brothels (87 percent).

However we should not necessarily take such responses at face value. They may be based as much on perception as on the actual experience of refusal. In Indonesia in 2004, the two-thirds of female sex workers who did not use condoms with any of their partners in the last week, amounting to over 3,000 individuals, were asked why not. As anticipated, over seven in 10 said because their clients didn't want to. But a closer look at these women reveals that in fact, only a quarter of them had actually asked all of their clients to use condoms, and more than one in five had not offered condoms to any of their clients.

Taking this questioning further, programme planners in Indonesia found that sex workers who did ask all of their clients to use condoms were far more likely to achieve consistent condom use than

## Once men are ready to buy sex, they will often accept condoms if offered



**Figure 6 Percentage of sex workers reporting last time and consistent condom use with clients, according to the frequency with which they offered condoms to clients. Indonesia, 8 provinces, 2004**

those who didn't, as shown in **Figure 6**. This rather undermines the assumption that women have no negotiating power at all, and has led to a change in programme emphasis that encourages brothel owners and pimps as well as sex workers to ensure that every client is offered a condom.

### B. The role of STIs

Infection with STIs such as syphilis, gonorrhoea, chlamydia, trichomoniasis and herpes increases the chance that HIV will be transmitted during unprotected sex from an infected to an uninfected partner.<sup>viii</sup> So preventing and curing other STIs also reduces the risk of HIV transmission. This is especially true for those populations most likely to have a high turnover of sex partners, such as male, transgender and female sex workers, as well as the men who regularly buy sex from them.

STIs provide an early warning of the potential for HIV to spread, because HIV follows more easily once lesions caused by STIs have opened a pathway into the body. Surveillance systems for STIs tend to be poor compared with HIV surveillance, but high levels or rapid rises in reported STIs in a number of countries are a cause for alarm. In China, fewer than 25,000 STI cases were reported in 1986. By 2000, that number had rocketed to 860,000. Some of the rise may be due

to a greater willingness to seek treatment and better reporting, but these factors cannot entirely account for a 36-fold increase.

Sexual infections which can result in ulcers or open sores in the genital area (such as syphilis and herpes) increase the likelihood of HIV transmission more than non-ulcerative STIs because they create an easy passage for HIV in and out of the body. A survey among STI patients in the Indian capital, New Delhi, has illustrated this: 4.5 percent of clients with ulcerative STIs were infected with HIV, compared with 1.7 percent who had non-ulcerative STIs.<sup>ix</sup>

A separate study in India has stressed the importance of genital herpes as a co-factor for HIV transmission. Infection with sexually transmitted genital herpes (known by the acronym HSV2, for Herpes Simplex Virus Type 2) increased the likelihood of acquiring HIV by two-fold. If the HSV2 infection was newly acquired, the effect was greater. People with recent HSV2 infection were six times more likely to become infected with HIV than people without HSV2. Some 37 percent of male clients at the STI clinics where the study was conducted were infected with HSV2, while among sex workers at the clinics, an astonishing 89 percent tested positive for HSV2.<sup>x</sup>

HSV2, which is incurable, is transmitted rather

easily, and can thus reach high levels even in populations with relatively low partner turnover. In Dili, East Timor, where other STIs are relatively rare, 29 percent of taxi drivers and men who have sex with men were infected with HSV2, while among female sex workers the rate was 60 percent, according to a 2003 survey.<sup>xi</sup>

### C. Drug injection: a spark plug for Asian epidemics

Many countries saw no HIV epidemics for many years despite large sex industries and persistently low levels of condom use. (Examples include Indonesia, Bangladesh, Pakistan and the Philippines.) Some of those countries have recently seen steep rises in HIV infection rates among sex workers. Condom use has been low all along, so why is HIV only spreading rapidly now? The answer lies in a classic combination: sex and drugs.

In general, those countries where IDU epidemics exploded in the late 1980s or early 1990s are the same countries where the epidemic among sex workers and clients grew earlier and more rapidly. In countries where IDU epidemics only took off in the mid or late 1990s, the sex worker epidemics seem to be growing more gradually.

(For a more detailed discussion of IDUs and HIV/AIDS, see MAP Report 2005: Drug Injection and HIV/AIDS in Asia.)

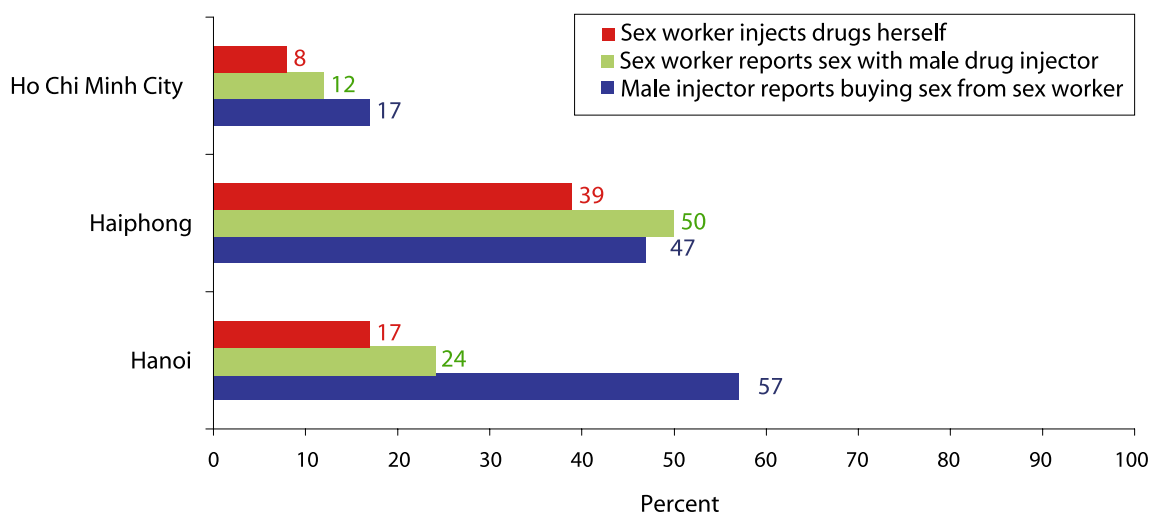
### Sex workers who inject

HIV is transmitted more easily through shared needles than through sex, so drug injection is an effective way to create a “critical mass” of infection within sexual networks. This explains why in Ho Chi Minh City, Vietnam, 49 percent of injecting sex workers are infected with HIV, compared with 19 percent of those who use drugs without injecting them, and 8 percent of those who don’t use drugs at all. It is deeply troubling, then, to find that 38 percent of almost 1,000 sex workers included in the survey that yielded those results were drug injectors. (Other studies in Vietnam report lower rates of injection among Ho Chi Minh City sex workers.)

Drug-using sex workers were about half as likely to use condoms as those who didn’t use drugs, according to one large study,<sup>xiii</sup> while behavioural surveillance found that street-based sex workers who did not inject drugs were six times more likely to use condoms than those who injected drugs and shared their injecting equipment with other users. In other words, the sex workers most likely to be exposed to HIV were the ones least likely to use condoms. Between 64 percent and 73 percent of drug-injecting, street-based sex workers said they shared injecting equipment, which amounts to three to five times more than the sharing reported by male IDUs in the same cities.

As **Figure 7** indicates, injection among sex workers seems to be particularly well established in Vietnam. The fact that one sex worker in six was

### Sex workers inject drugs, and they also have sex with other injectors



**Figure 7** Percentage of street-based sex workers who inject drugs and have sex with injectors, and percentage of male injectors who report buying sex, three cities, Vietnam, 2000

an injector in the capital Hanoi probably explains a large part of the steep rise in HIV prevalence among sex workers in the city shown in **Figure 7**. In the northern port city of Haiphong, nearly 40 percent of all street-based sex workers reported in behavioural surveillance that they injected drugs.

Of the places that have measured drug injection among sex workers in Asia, only Manipur has recorded levels similar to those in Vietnam. In this northern state of India, which has a well-established IDU-driven HIV epidemic, 20 percent of female sex workers said they injected drugs, according to behavioural surveillance conducted in 2001. In other north-eastern Indian states, about half as many sex workers have reported injecting drugs.

In other parts of India and Asia, far fewer sex workers report injecting drugs, but the level is high enough to be a cause for concern. In Sichuan province in China, 2.5 percent of sex workers said they injected drugs, but among street-based sex workers the proportion injecting was twice as high, at one in 20. Women selling sex on the streets reported the highest turnover of clients of any subset of sex worker, as well as the lowest levels of condom use.

Almost everywhere, the population of female sex workers is much larger than the population of female drug injectors. But whenever female IDUs are questioned, there is one constant finding:

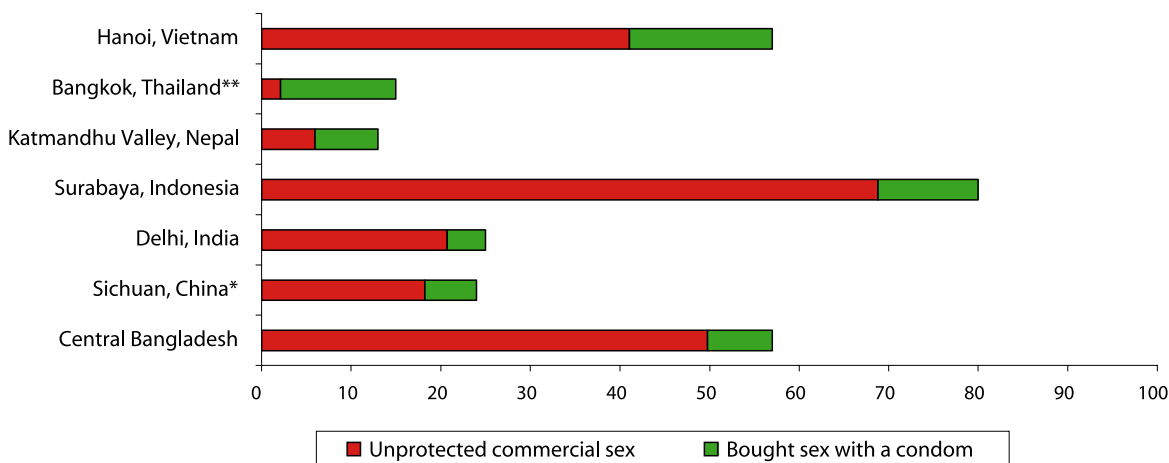
even when the overall proportion of sex workers injecting drugs is low, the overall proportion of female drug users who sell sex is usually very high.

In various sites in China's Sichuan Province, between 40 percent and 47 percent of females included in behavioural surveillance for IDUs said they had sold sex for money or drugs in the previous month. While some 77 percent of non-injecting sex workers used condoms with their last client, only 50 percent of injecting sex workers did. More worrying still, the female injectors who sold sex without condoms were the most likely to be sharing needles. Indeed, nearly half of sex workers with unprotected transactions reported recent needle sharing compared with one in five of female IDUs who did not sell sex. In other words, those at highest risk of having contracted HIV through injecting also have the highest likelihood of passing it on sexually—a fatal combination for the Chinese HIV epidemic.<sup>xiv</sup>

### Drug injectors who buy sex

The fastest way to ignite a heterosexual epidemic in countries where commercial sex is common is to rapidly boost HIV prevalence among sex workers. This can happen when sex workers inject drugs. The next fastest way is to rapidly boost HIV prevalence among clients. If a drug-injecting client passes an HIV infection on to a sex worker,

### Throughout Asia drug injectors buy sex. Except for Thailand, most of it is unprotected

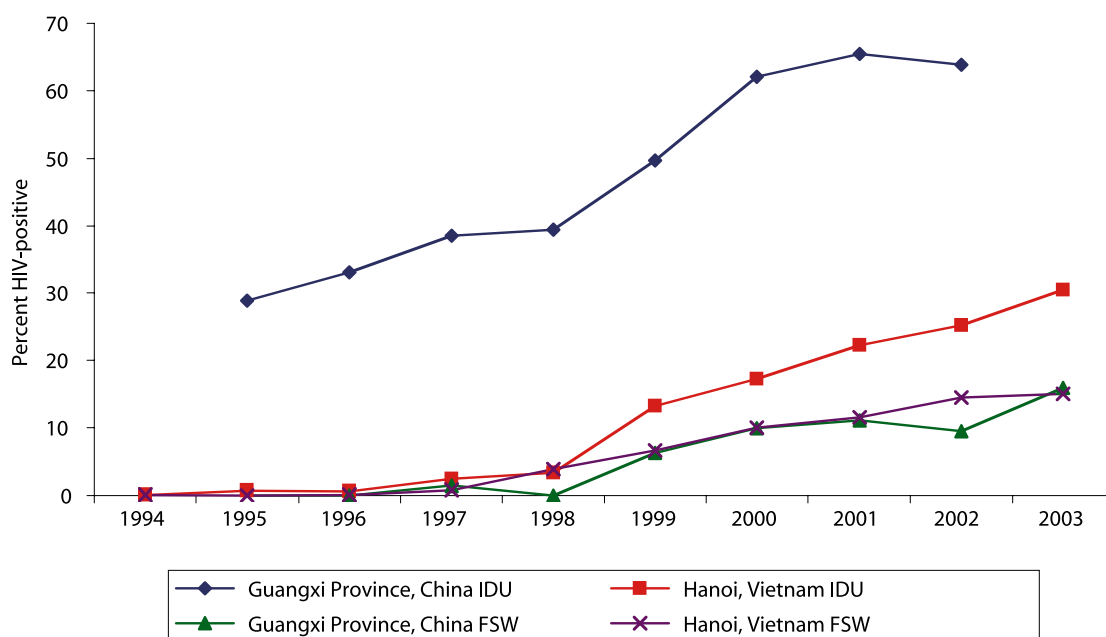


**Figure 8 Percentage of male IDU buying sex in various cities, by consistent condom use in commercial sex**

\*Sichuan: condom use at last commercial sex. \*\* Bangkok: includes non-injecting drug users



## HIV has significantly increased among drug injectors and female sex workers in some populations in Asia



**Figure 9 HIV prevalence among IDU and FSW at selected sentinel sites in China and Vietnam, 1994-2003**

she or he may then pass it on to a substantial number of other clients. Therefore, if a substantial proportion of injectors buy sex, HIV prevalence will inevitably increase in the client population.

The variation in consumption of commercial sex among male IDUs is captured in **Figure 8**. The similarity between all but two of the sites is the dominant colour, red, representing unprotected sex. Only in Thailand is condom use reported to be a norm among drug injectors when they buy sex, while in Nepal roughly half of injecting clients use condoms.

It is clear that infections which have spread among drug users through the sharing of unclean injecting equipment have then been passed on sexually to non-injectors and have played a significant role in “kick-starting” rapidly-growing HIV epidemics. In the two countries shown in Figure 9, the rise in HIV among sex workers is slower, but no less prominent than that of IDUs.

### 3. Facing the facts: translating the evidence into strategies for reducing HIV transmission in the Asian sex industry

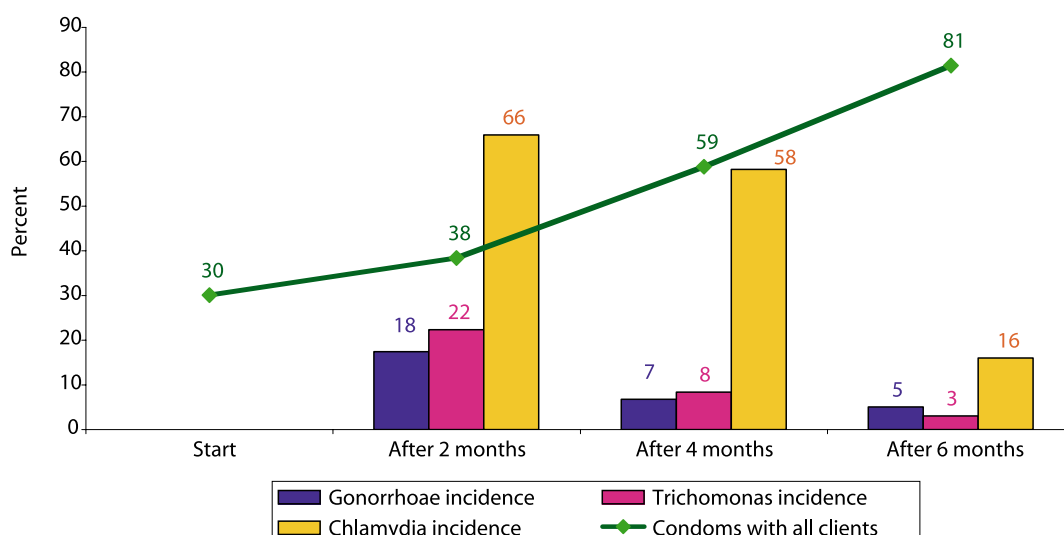
Much has been learned over more than a decade of active prevention programmes aiming to reduce the risk of HIV transmission in commercial sex in Asia. The programmes that have succeeded are those that are based on social realities rather than social ideals. They take into account the financial incentives and political structures that govern a country’s commercial sex industry as well as the self-interest that governs most human behaviour.

#### A. Promoting greater condom use

Increasing use of condoms does have a measurable impact on STIs in sex work populations that are relatively stable. **Figure 10** shows data from a study in which the same sex workers were seen every two months over an eight-month period. Even in this fairly short time, the prevention services provided helped women to increase consistent condom use dramatically, and the fall in new infections with curable STIs was very steep.



## As condom use rises among sex workers, new sexual infections tend to fall dramatically



**Figure 10 Percentage using condoms with all clients, and new STIs per 100 person years of exposure among sex workers in Guangzhou, China, 1998-1999**

It should be noted that this study measured changes in the behaviour of those who returned for repeat visits (84 percent of nearly 1,000 women came back for the first visit but just over half returned for the second visit). Herein lies the challenge for prevention programmes. Services that rely on intensive, repeated contact with the same individuals will probably make a difference for those individuals. But such services are usually very resource-intensive, and they don't work well where the turnover among sex workers is very high, because many women would have moved on before receiving the full benefit of the services.

Furthermore, the realities of anatomy dictate that the ultimate decision-makers about condom use are usually the men who must wear them. Countries that have focused most of their prevention efforts strictly on female sex workers (rather than including clients and the broader context in which sex takes place) are among the least successful in reducing unprotected commercial sex.

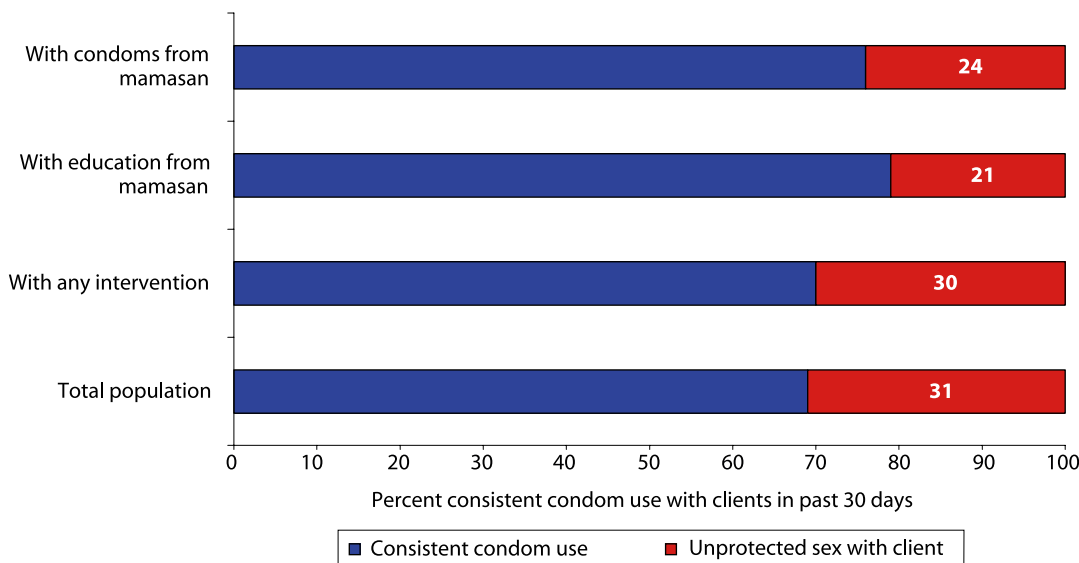
Countries and regions that have taken a wider approach (including designing incentives for brothel-owners to protect the health of their staff and to encourage clients to use condoms) are among those that have done better. Thailand, Cambodia and the Indian state of West Bengal are examples. Most other countries have been slow to replicate similar structural interventions, which require sensitive negotiations between public health and law enforcement authorities.

### Working within the Sex Workers' World

There is a rapid turnover of women into and out of the sex industry in Lao PDR. Despite the short duration of sex work, many of the women find themselves infected with an STI within weeks of the first time they sell sex. An intervention that reaches a sex-selling establishment only every few months will find that over half of the sex workers' faces are new each time they go, making it difficult to provide the women with the ongoing services that are needed in a manner that is also cost efficient and sustainable.

Mamasans in small drink shops are frequently the first point of contact for women beginning to sell sex in Lao PDR, and they may also be the most influential. (Mamasans are women who control business arrangements for sex workers.) **Figure 11** shows no difference in condom use among all "service women" (indirect sex workers) and those service women who had been reached by any form of intervention in the southern province of Savannakhet, Lao PDR. But service women who had received their HIV education and condoms through their mamasan were up to 10 percent less likely to have unprotected sex with a client.

**Indirect sex workers in Lao PDR were more likely to use condoms when mamasans were actively involved in their health**

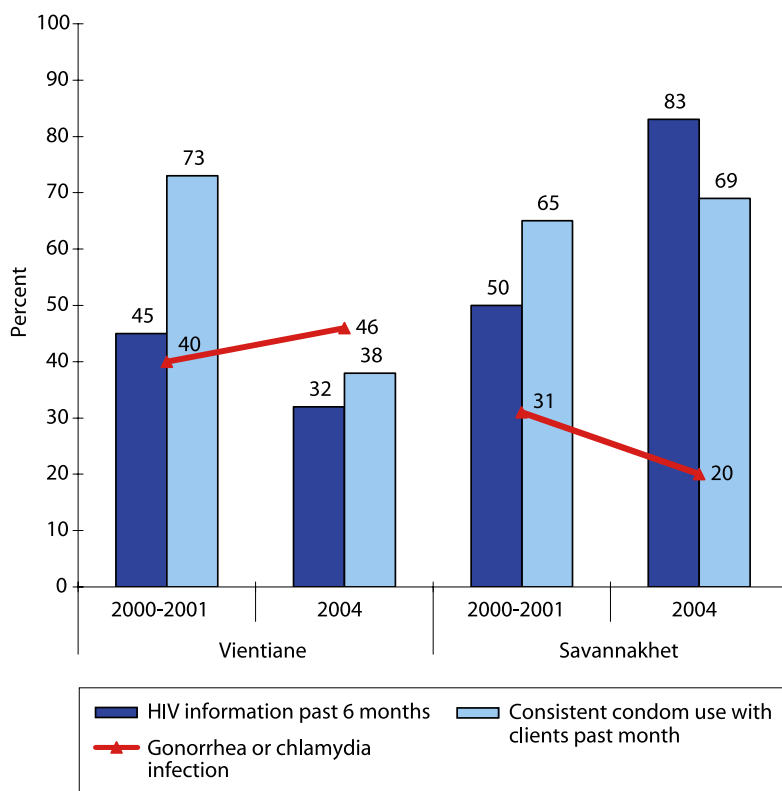


**Figure 11 Percentage of indirect sex workers consistently using condoms with all one-time clients in past 30 days, Savannakhet, Lao PDR, 2004**

Structural interventions often require changes to laws or regulations, but even individual-level responses rely on a supportive policy and legislative environment. In some countries in Asia, such as Indonesia and Myanmar, police are still known to arrest women for being in possession

of a condom, which they regard as proof of prostitution. Furthermore, female sex workers and transgenders often report sexual violence by police and other men. The more supportive the environment is for safe behaviour, the less likely it is that people will be pushed or forced toward

**Sustaining intervention efforts is crucial, as data from Lao PDR indicate**



**Figure 12 After a loss in momentum in Vientiane Capital, condom used slid and STIs surged. Other provinces scaled up programs, maintained high levels of condom use and decreased STIs.**

behaviours that carry the risk of contracting or passing on a potentially fatal disease.

One of the most important advantages of structural interventions is that they avoid having to work at the level of the individual. With millions of sex workers and tens of millions of clients across Asia, individualised services based on outreach are simply not practical. Both experience and modelling have shown that service coverage is essential to achieving changes big enough to make a difference to the course of the HIV epidemic. Structural interventions that change the number and frequency of men's use of sex workers can have a broad effect on the dynamics of the epidemic.

Prevention campaigns may lose some of their effectiveness over time. Thailand, for example, is widely hailed as an HIV prevention success

story, and rightly so. There are early indications, however, that efforts may be slipping. Just 55 percent of men in northern Thailand who, in a 2001 household survey, said they bought sex reported using condoms with all sex workers.<sup>xv</sup> In a youth survey in the same region, the rates were even lower, with fewer than one-third of young men who paid for sex saying they always used condoms. Some 61 percent of male factory workers in Bangkok who bought sex in 2003 reported consistent condom use when doing so. In the same year, HIV prevalence among direct sex workers in the city more than doubled to 7.5 percent (up from 3.2 percent in 2002).

Data from Lao PDR provide evidence of another potential pitfall. **Figure 12** shows what can happen when HIV preventions are not sustained over time.

### **The Economic Dimensions of the Commercial Sex Industry: Implications for HIV Prevention Programmes**

Understanding how the commercial sex industry functions in business terms can help us understand how to promote HIV prevention efforts targeting sex workers and clients.

Recent estimates in Indonesia indicate the size of this industry. By combining the estimated number of direct and indirect sex workers with surveillance data on client turnover and price at last sex, public health authorities have estimated that sex work generated around US\$ 850 million in 2003. That tallies just the cost of sex, and does not include income generated in the large entertainment and accommodation industries that support the sex industry. It outstrips total spending on HIV prevention by at least 20-fold.

It is often assumed that all sex workers join the industry under duress, because they lack other employment opportunities. This is doubtless the case in many areas, and is especially likely to be true for very young women from rural areas. But the data suggest that many women in the booming economies of East and South-East Asia choose sex work because it can pay comparatively well.

In qualitative research accompanying behavioural surveillance among sex workers in China, for example, researchers reported that young and ill-educated women from rural areas took up sex work because they could not find

another job. However, many others were said to have chosen the profession because they "wanted a luxurious life but were unwilling to work hard at low-paying jobs."

In general, women can earn more selling sex than in many other unskilled or semi-skilled jobs. In Vietnam, for example, sex workers reported earning up to seven times the average income of the general population in the areas where they worked.<sup>xvi</sup> In Nepal, sex workers reported a weekly income of more than six times the average annual income nationwide.<sup>xvii</sup> In Indonesia, a woman can earn about four times as much selling sex as she can in a factory job, while putting in only around one-tenth of the hours.

In other words, many people sell sex for the same reasons as people perform other forms of work—to earn a living. This has implications for HIV prevention programmes. For example, because men will pay more for sex without a condom, women who want to maximize their income might find it especially difficult to negotiate condom use. In India, one-quarter of street-based sex workers said that if a client refused to use a condom they simply charged more money and went ahead with sex.

The bottom line is that a large number of women choose to sell sex because they can earn relatively large sums for relatively little work. Prevention programmes that encourage women to leave sex work by teaching them other skills may not be appropriate for all of these women.

## B. STIs are preventable and treatable!

Improved screening and treatment of STIs in populations at high risk is, in comparison with many other interventions needed to reduce exposure to HIV, technically relatively easy to achieve. And it is an intervention that also brings benefits in its own right, independent of its effect on HIV transmission. Many of the people most affected are acutely aware of this. In behavioural surveillance in China, 62 percent of female sex workers said STIs were their major health concern, whereas HIV trailed far behind at 21 percent.

If appropriate services are provided for these women, they will be used. In East Timor, most sex workers in a recent survey had never had any kind of sexual health check-up, but when given the chance to go to a private clinic for confidential screening and treatment by a female doctor, over one-third sought out the services in a matter of weeks. In Tamil Nadu, India, where there has been an active programme to provide services for sex workers for some time, over 80 percent of sex workers reporting symptoms of STIs said they sought treatment from qualified doctors.

The Tamil Nadu experience is a rarity, however. In most places, people are still not receiving quality STI screening and treatment services, even if they know they are in need of them, as **Figure 13** shows. Routine screening services to catch asymptomatic infections are even rarer.

These screenings are important because many people do not recognize that they are STI-infected

at all. The reason might be that the infection has no symptoms (which is most commonly the case with STIs in women, as well as with rectal STIs in both sexes) or that people experience the symptoms so frequently that they do not think of them as abnormal.

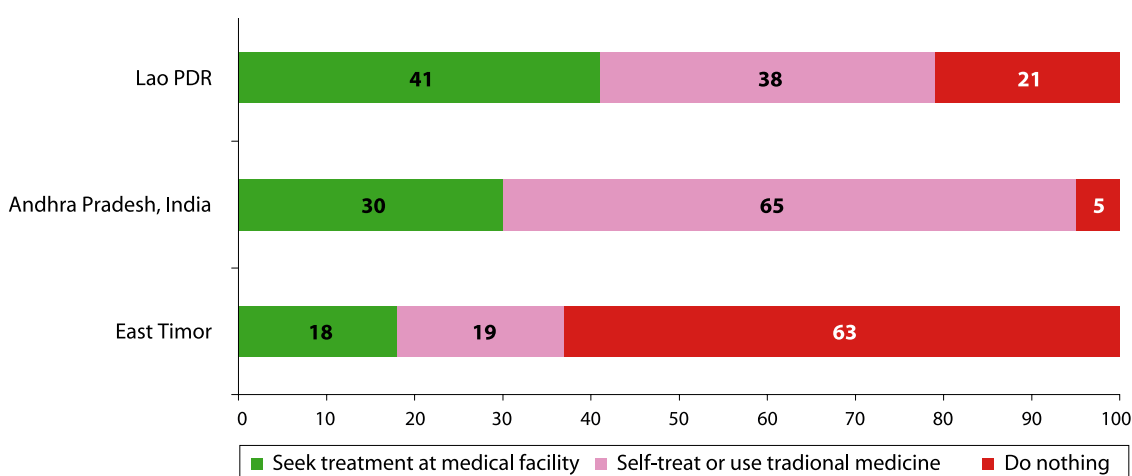
### Promoting regular check-ups

Because many STIs are asymptomatic in women, an ideal of many HIV prevention programmes is to provide regular, universal screening for STIs for the populations most likely to be infected, that is, female sex workers. In clinics providing services to large numbers of sex workers, investment in simple laboratory tests has improved diagnosis, reduced incorrect and unnecessary treatment and ultimately contributed to a reduction in STIs.<sup>xviii</sup> It is likely that widespread routine STI screening and associated HIV prevention services for sex workers in the Philippines has contributed significantly to the slow growth of the HIV epidemic in that country.

Regular check-ups also help to undermine a common culture of self-medication among sex workers and clients, both when experiencing STI symptoms and simply as a general prevention technique. Incorrect and incomplete self-medication has allowed several bacterial STIs to develop resistance to the medicines commonly used to treat them in Asia, eroding the impact of STI and HIV prevention services.

However, for all their benefits, universal, regular

### In many countries, the majority of sex workers who report symptoms of STIs are not seeking proper medical treatment



**Figure 13** Percentage of female sex workers reporting STI symptoms in the last year, by treatment-seeking behaviour

check-ups remain a rarity in many countries. In China, for example, 40 percent of sex workers in surveillance in two provinces said they had not had any health check-up in the previous year. In Pakistan, only 30 percent of sex workers went to medical services for treatment even when they had symptoms, so routine screenings can be assumed to be far lower. One factor in increasing screening is active encouragement from pimps or brothels, which is sometimes in turn reinforced by licensing regulations. Programme data from the Indonesian island of Bali suggest that the role of pimps and brothel bosses can be key. In the one Bali red-light district where brothel organizers provided transport for clinic visits and actively encouraged those visits, chlamydia prevalence was 24 percent, compared with between 42 percent and 52 percent among sex workers from five other areas. (Dewa Wirawan, personal communication)

### **HIV prevention at STI services: the missing link**

STI clinics are an obvious entry point for prevention services, both for STIs and for HIV. Many clinics have protocols that stipulate that clients should be given counselling on how to avoid becoming re-infected with STIs and on how to approach their partners for care. However, few actually provide these services, and fewer still provide HIV counselling and testing.

Indeed even the most basic prevention services are often missing. In STI clinics in four out of five districts surveyed in Vietnam, for example, between one-third and one-half did not have condoms available for clients.<sup>xix</sup> In Bangladesh, over one-third of truck drivers seeking care for STIs received no information about how to avoid spreading infection or how to avoid re-infecting themselves, while four out of five received no information on partner referral.<sup>xx</sup>

Although several Asian countries include STI patients in their anonymous HIV surveillance systems and some are starting to record rather high rates of infection in those populations, very few data are available in any Asian country to indicate the extent to which staff providing STI services are referring their clients for HIV counselling and testing.

Most Asian countries need to do more to build up friendly service-provision for female, male and transgender sex workers. These services increase the quality of care and the likelihood that STIs will be detected, correctly treated and cured. They also provide an important entry point for other HIV prevention and care services. Close cooperation with the power-brokers in the sex industry can help introduce high proportions of sex workers to legitimate screening services. Sex workers will continue to return if a quality service that meets their needs is provided.

### **C. Responding to IDUs**

Many HIV prevention programmes are rather segmented. Services for drug users focus strongly on reducing injecting risk, while services for sex workers focus on condom promotion and STI service provision. But as we have seen, people's lives do not fit tidily into boxes. Most Asians are not at high risk for HIV transmission, but those who are may have more than one risk behaviour. And those who have more than one risk behaviour are most likely of all to be at the intersection between HIV-positive and HIV-negative groups, and to be focal points for the further spread of the virus.

There is an urgent need for more integration between prevention programme components, and a specific need to focus more strongly on the dual risks of drug injection and commercial sex. Sex worker programmes should systematically include verbal screening for drug use and drug injection, and should provide prevention services or refer clients to other services as needed. IDU programmes should be alert to the likelihood that their clients are selling sex, and should provide or refer to services to reduce the likelihood of sexual transmission of HIV.

### Asia's Success Stories

Significant reductions in unprotected commercial sex have been measured in Asian countries with high-profile HIV prevention campaigns. The campaigns generally have focused on increasing condom use and providing other essential prevention services to those who need them most.

Tamil Nadu was one of the earliest Indian states to be affected by the HIV epidemic. The state government joined with community groups and other development partners to confront the problem, running high-profile public campaigns to discourage risky sexual behaviour and making condoms and STI screening and treatment services readily available for those who needed them. The result has been a significant drop in risky sex.

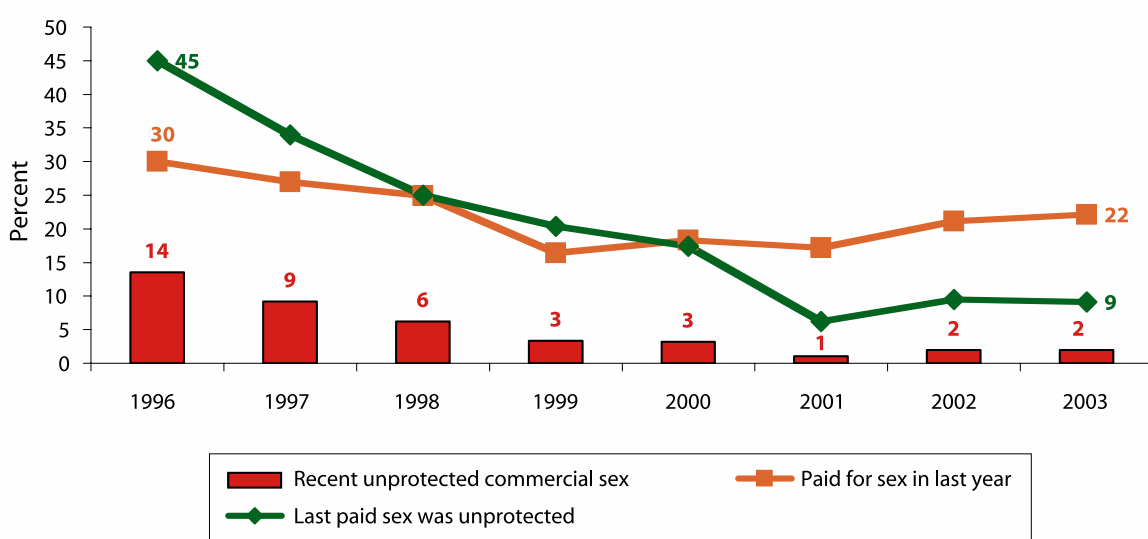
**Figure 14** shows data from behavioural surveillance among truck drivers and their helpers in Tamil Nadu. In 1996, before the prevention campaigns began, 30 percent of these men reported sex with a female sex worker in the preceding 12 months, and just over half had used a condom the last time they bought sex. That means that a total of 14 percent of truck drivers reported recent unprotected sex with a sex worker. By 2002, that had fallen

to just 2 percent, partly because fewer men were buying sex and partly because condom use rose from 55 percent to over 90 percent during six years of prevention programming.

In Nepal, the proportion of transport workers along the main national highway who reported buying sex in the previous year dropped by 25 percent between 1998 and 2002. More importantly, by 2002, those who reported that they continued to buy sex were more than twice as likely to use condoms. One in three transport workers reported having had unprotected commercial sex in the preceding year when surveillance began in 1998. After four years of prevention efforts among these men, just one in 13 of them reported unprotected commercial sex—a significant drop in a population that had been reached with a large-scale intervention.

Both Thailand (which has a population of 64 million, similar to Tamil Nadu's) and its much less populous neighbour Cambodia have been rewarded for their efforts with significant falls in HIV prevalence among clients of sex workers, greatly reducing the chance that sex workers themselves, their clients, and their clients' wives, other girlfriends and children would become infected with HIV.

#### High-profile prevention efforts have reduced unprotected commercial sex in Tamil Nadu, India



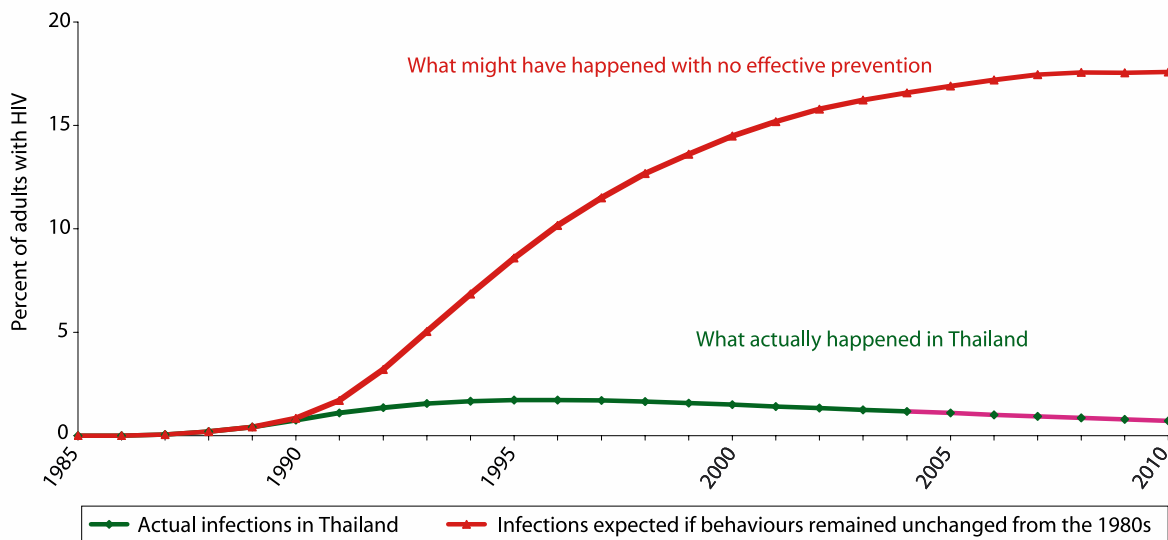
**Figure 14** Percentage of truck drivers and helpers in Tamil Nadu who reported buying sex in the preceding 12 months, and condom use at last commercial sex, 1996-2003



**Figure 15** shows that if behaviours in Thailand had remained as they were in the early 1990s (with one-fifth of men visiting sex workers and condoms being used in only one-third of commercial sex contacts), a severe epidemic

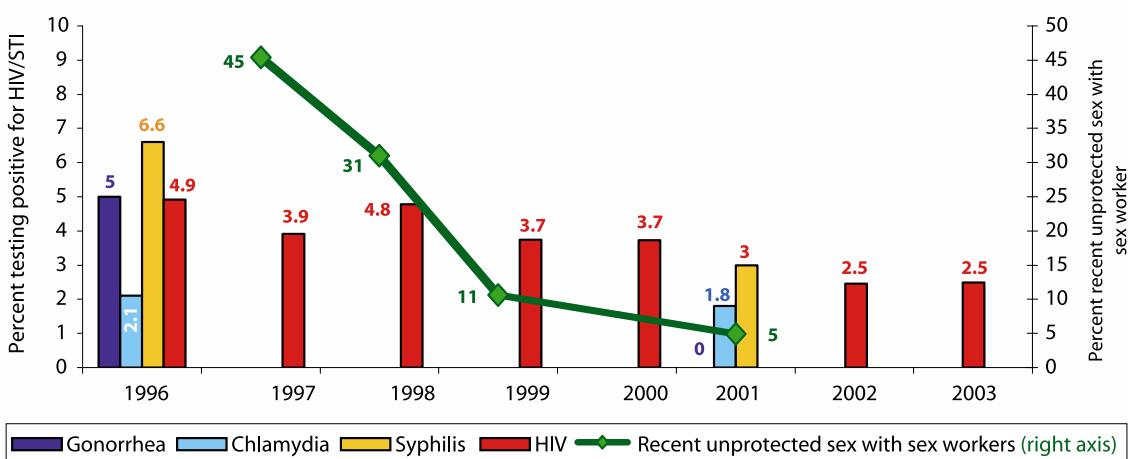
would have developed very quickly, with approximately 15 percent of the adult population living with HIV. Why did this not happen? Because condom use in commercial sex quickly shot up to around 90 percent

### What might have been in Thailand: the epidemic in the absence of effective prevention programmes



**Figure 15** How the epidemic could have grown without behavioural change, expressed in terms of the percentage of HIV-infected adults, in a country where roughly 20 percent of men visited sex workers, sex workers had two clients per night and condoms were used in one-third of sex work contacts

### Lower risk translates directly into fewer STIs, and later into lower HIV levels



**Figure 16** Percentage of police reporting recent unprotected commercial sex (right scale), and percent infected with HIV\* and other STIs (all left scale) in Cambodia, 1996-2002.

\* HIV prevalence corrected for quality control results and weighted for population size



following vigorous nationwide prevention efforts. On top of that, the proportion of men visiting sex workers plummeted to half its former level. So, instead of fitting the frighteningly high red curve shown in Figure 14, Thailand's epidemic has followed the green curve.

**Figure 16** shows data from the national surveillance system in Cambodia, where policemen, many of whom are frequent clients of sex workers, have for several years been included as a proxy for people with high-risk behaviour. Widespread prevention efforts, including rigorous behaviour change condom promotion, have led to a fall in the proportion of men visiting sex workers in the preceding year, as well as a dramatic rise in condom use in all commercial sex over the preceding three months. The combined effect of these two safer behaviours is shown by the green line in **Figure 16**—nearly half of policemen who visited sex workers reported recent unprotected commercial sex in 1996, but by 2001 that proportion had fallen to just 5 percent. (This combined indicator multiplies the proportion of men who bought sex in the last year by the proportion of clients who did not always use condoms in the past three months. Because of the different time reference periods, this indicator may not reflect absolute levels of unprotected sex with perfect precision, but it is useful for showing trends over time.)

The safer behaviours are confirmed by a steep decline in rates of syphilis and gonorrhoea. Only chlamydia rates, which can be sustained in populations with relatively low levels of sexual risk, showed little change.

## 4. Looking to the future

The diversity of experiences in Asia demonstrate that there is nothing inevitable about the spread of HIV. Countries and regions that have chosen to provide prevention services on a large scale to those most in need of them have turned their epidemics around, and some may have significantly delayed the onset of any future epidemic.

On the other hand, risks that have been ignored or that have been addressed only through small, demonstration projects (that have not been replicated on any significant scale) continue to generate new HIV infections. Prevention efforts that have ignored the social, political and cultural contexts which push people into risk behaviour and which make it difficult for them to adopt safe behaviour have fared less well than efforts that have tackled the structures that support risky behaviour and increase the pool of people vulnerable to HIV.

***The right prevention services for the right people will change the course of HIV epidemics in Asia. Asia's HIV prevention successes have the following three features in common.***

- 1) **They address the specific behaviours that are causing most infections and provide specific services to reduce the risks associated with those behaviours.** Programmes to encourage men to practice risk avoidance, including abstinence, mutual fidelity and partner reduction, or to use easily available condoms in commercial sex are the most common of these, while there are also examples of success in increasing access to, and use of, systematic STI screening and treatment services for female, male and transgender sex workers.
- 2) **They provide access to information and to services on a scale large enough to make an impact on HIV transmission.** Asia is a continent on the move, which greatly increases the interaction of people who are taking risks in regard to sexual or injecting practices. Small demonstration projects in one district may protect the few people who live in that district and do not interact with anyone from an area with no prevention programme, but they will not make a difference to a national or regional epidemic. Prevention efforts are successful

if they change behaviour on a national or regional scale. This often means working through social and economic structures rather than simply trying to contact at-risk individuals alone.

- 3) **They ensure that the social, political and security environment supports the provision of appropriate HIV prevention services to those most at risk, allowing them to adopt safer behaviours.** People will not use prevention services if using those services puts them at risk in other ways, for example, being arrested or being stigmatised in ways that threaten their livelihoods. Successful prevention programmes have worked with law enforcement, social services, sex industry power-brokers and others to ensure that those in need of services are supported in protecting themselves and others from HIV.

Closing our eyes to the sex industry in Asia will not make it go away. Providing good prevention and care programming on a large scale will make it safer. Reducing the utilization of sex workers on a population basis will reduce the transmission of HIV because of fewer high-risk sex acts. Clients need easy access to condoms and should always be asked to use them. Sex workers need regular access to high quality STI screening and treatment services that also reinforce other prevention services. The people and structures that govern this multi-million dollar industry can help to achieve the goal of making sex work safer for providers and consumers alike.

## Appendix 1: Members of the Monitoring the AIDS Pandemic Network

The members of the MAP Network are listed below. Special thanks to those who appear in bold for their active participation in the preparation of this report.

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## Appendix 2: Sources used in this report

### Surveillance Data

The majority of the data in this publication is taken from national surveillance systems. This publication is based on the best available data. Its authors have, as far as possible, ascertained that the data used were collected following reliable protocols and standard procedures. The MAP Network wishes fully to acknowledge the sources for all of the data used. However because the report refers to data with very great frequency, the sourcing of each individual data point cited would be impractical. For that reason, the sources for surveillance data are consolidated in this list.

Any data point that is not individually sourced, or that is sourced to “national surveillance records” or “behavioural surveillance”, comes from the sources on this list. Unless otherwise stated, a cited data point refers to the most recent year for which data are available, as stated on this list. Note that this list refers to the year of data collection, not the year of publication. Data from stand-alone studies rather than from repeated surveillance efforts are individually referenced using endnotes. (See the next section of this Appendix.)

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Surveillance Survey of 7 Target Groups in Bangkok (2000-2003)

## **Vietnam**

National AIDS Committee, HIV sentinel surveillance (1994-2003)

National AIDS Standing Bureau and National Institute of Hygiene and Epidemiology, HIV/AIDS Behavioural Surveillance Vietnam (2000)

## **Endnotes**

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## Sources for figures

**Figure 1:** National behavioural surveillance data. (See "Surveillance data" earlier in this appendix.)

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**Figure 2:** Behavioural surveillance survey reports. (See "Surveillance data" earlier in this appendix.)

**Figure 3:** China Center for Disease Control, Guangxi CDC.

**Figure 4:** Pisani, E. and Dili STI survey team (2004a). HIV, STIs and risk behaviour in East Timor: an historic opportunity for effective action. Dili, East Timor, Family Health International.

**Figure 5:** Indonesia Ministry of Health and Central Bureau of Statistics. Behavioural Surveillance 2002-2005. Jakarta.

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**Figure 8:** Behavioural surveillance data. (See "Surveillance data" earlier in this appendix.)

**Figure 9:** National surveillance reports from China and Vietnam. (See "Surveillance data" earlier in this appendix.)

**Figure 10:** Ma, S., N. H. Dukers, et al. (2002). "Decreasing STD incidence and increasing condom use among Chinese sex workers following a short term intervention: a prospective cohort study." *Sex Transm Infect* 78(2): 110-4.

**Figure 11:** National surveillance data. (See "Surveillance data" earlier in this appendix.)

**Figure 12:** National surveillance data. (See "Surveillance data" earlier in this appendix.)

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**Figure 14:** Surveillance data. (See "Surveillance data" earlier in this appendix.)

**Figure 15:** Wiwat Peerapatanapokin and Tim Brown, using Asian Epidemic Model

**Figure 16:** Cambodia National Center for HIV/AIDS Dermatology and STDs (2003). 2001 Cambodia STI Prevalence Survey. Phnom Penh, Ministry of Health.

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