

Lao People's Democratic Republic

Ministry of Health
Center for HIV/AIDS/STI

Second Generation
Surveillance 2nd Round
on HIV, STI and Behavior

2004



Ministry of Health



Investing in our future
The Global Fund
To Fight AIDS, Tuberculosis and Malaria



USAID
FROM THE AMERICAN PEOPLE

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***A**BBREVIATIONS*



AIDS	Acquired immune deficiency syndrome
BSS	Behavioral surveillance survey
CHAS	Center for HIV/AIDS/STI
HIV	Human immuno-deficiency virus
HSS	HIV surveillance survey
PCCAs	Provincial Committee for the Control of AIDS
STI	Sexually transmitted infections
SW	Service women
UNAIDS	Joint United Nations Programme on HIV/AIDS

ACKNOWLEDGEMENTS

The two rounds of the national surveillance of HIV and sexually transmitted infections (STIs) in Lao PDR in 2001 and 2004 are the result of extensive collaboration between Lao government agencies, multiple donors, and a range of international NGOs. No single agency could have provided all the material and technical resources to achieve the quality results of this effort.

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- Asia Development Bank
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- Population Services International
- United Nations Office on Drugs and Crime (UNODC)
- Lao PDR HIV/AIDS Trust

PREFACE

This report is a summary of the first two rounds of national surveillance of behavioral and biological data among the populations believed to be at elevated risk of contracting and spreading HIV and STIs in Lao PDR. The first round was conducted in 2000/2001, and the second round in late 2004.

Surveillance data are best collected over multiple rounds among the same or similar populations. In this way, trends and changes in group behavior can be analyzed and projected. In addition, new pathogens may enter or emerge in sub-groups of the population at unpredictable times. Thus, it is important for the national health system to remain vigilant so that it can respond in a timely way to the threat of an epidemic.

The data in this document describe the trends in knowledge and self-reported risk behavior related to HIV and STI. In addition, biological specimens were collected (with informed, voluntary consent) to measure levels and trends of common STIs and HIV. Together, these two rounds of data present the most accurate picture to-date of the risk profile of Lao PDR for HIV/AIDS. The data are also suggestive of the impact of prevention activities during the four-year interval between rounds.

It is hoped that these data are used to inform HIV/STI prevention program planning for the years ahead. In addition these data should be viewed as the initial part of an expanding time series of measurements to track program progress and, ultimately, provide evidence for the success of the Lao national HIV/STI prevention and control program.

BACKGROUND

The first round of surveillance in 2000/2001 provided the first ever prevalence measurements of HIV, chlamydia, gonorrhea, syphilis, and behavioral risk in Lao PDR. The participating populations for the behavioral surveillance (BSS) included service women (SW) from entertainment establishments, truck drivers, seasonal migrants (female and male) and factory workers. Sampling was limited to five provinces: Luang Prabang, Vientiane Capital, Khammuane, Savannakhet and Champasak. The participants for the HIV and STI surveillance component included SWs, truck drivers, and female garment factory workers in four of the above five provinces (Khammuane was excluded). Key findings of this 1st round were that HIV remained lower in Lao PDR than in a number of other countries of the Mekong subregion, but also revealed disturbingly high levels of curable STIs.

The 2nd round of data collection took place in late 2004. In this round the geographic coverage was expanded to include two provinces in the northwest of the country (Bokeo and Luang Namtha) while Khammuane Province was dropped. The sample populations of factory workers and seasonal migrants, although included in Round 1, were dropped from Round 2 because of plans to collect data separately for these groups.

SAMPLING METHODOLOGY

The selection of respondents to include in the surveys used a variety of methods. In some cases, all persons in a category were selected if the sampling universe was small. In other cases, if the populations of eligible respondents was large, a sample was taken in proportion to the total number in the group (e.g., service women in some provinces). In cases of highly mobile groups (e.g. truck drivers) a sample was taken of persons who were available at a certain location during a fixed time period. The sample sizes were large enough to allow comparison between provinces.

The following table provides a summary of the sample size and distribution:



Table 1: Surveillance population sample sizes by province, round and by behavioral (BSS) or biological (Bio) data collection.

Prv	Luang Prabang		Vientiane		Khammuane		Champasak		Savannakhet		Bokeo		Luang Namtha	
	BSS	Bio	BSS	Bio	BSS	Bio	BSS	Bio	BSS	Bio	BSS	Bio	BSS	Bio
Male														
Trucker														
Round 1	0	0	280	150	0	0	201	150	0	0	0	0	0	0
Round 2	0	0	149	149	0	0	145	145	0	0	0	0	83	83
Military														
Round 1	16	0	48	0	11	0	80	0	89	0	0	0	0	0
Round 2	300	300	300	300	0	0	300	300	300	300	140	140	160	160
Police														
Round 1	25	0	142	0	21	0	23	0	31	0	0	0	0	0
Round 2	150	0	150	0	0	0	150	0	150	0	70	0	80	0
Season. migrant														
Round 1	0	0	0	0	78	0	191	0	123	0	0	0	0	0
Round 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electric worker														
Round 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Round 2	96	96	300	300	0	0	231	231	249	249	0	0	0	0
Water worker														
Round 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Round 2	0	0	150	0	0	0	0	0	0	0	0	0	0	0
Female														
Service women														
Round 1	70	210	360	301	70	0	109	0	155	300	0	0	0	0
Round 2	0	0	264	264	0	0	283	283	271	271	128	128	152	152
Factory worker														
Round 1	0	0	1041	300	0	0	0	0	0	0	0	0	0	0
Round 2	0	0			0	0	0	0	0	0	0	0	0	0
Season. migrant														
Round 1	0	0	0	0	114	0	179	0	143	0	0	0	0	0
Round 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In Round 1, the behavioral component was conducted in late 2000 and the biological component was conducted in early 2001.
In Round 2, both the behavioral and biological components were conducted in late 2004.

The sample populations for the surveillance survey represent groups with the highest risk for contracting sexually-transmitted HIV and/or STDs in Lao PDR and include the following:

1. Service Woman.

A service woman is defined as a woman between the ages of 15 and 49 who works in small drink shops, beer gardens, karaoke bars, or other entertainment establishments at which men may seek to access women for the purposes of commercial sex.

2. Long Distance Transport Workers.

This population is defined as men age 19 to 49 who drive vehicles for long distances, either domestically or across international borders within the sub-region, and includes the drivers' helpers and assistants.

These are mobile populations whose work requires them to spend extended periods of time away from family and home community, and who have the opportunity to spend the night in a variety of towns and cities in provinces in Lao PDR and neighboring countries.

3. Military Men

This includes men in the military age 19 to 49 who are at risk of HIV and other STDs by virtue of the fact that they are assigned to military camps in various places around the country for limited duration of time, and have above average opportunity to be a commercial sex customer of a service woman.

4. Policemen

This group includes men in the police force, age 19 to 49 who may be at heightened risk of HIV and other STDs by virtue of their being assigned to various towns and cities around the country for limited durations of time, and have greater than average opportunity to purchase sex from a service woman.

5. State Enterprise Workers

Workers in this category include men age 19 to 49 who work for either the state waterworks authority and electricity authority, have above average income, and may have a greater opportunity to purchase commercial sex than the average worker.

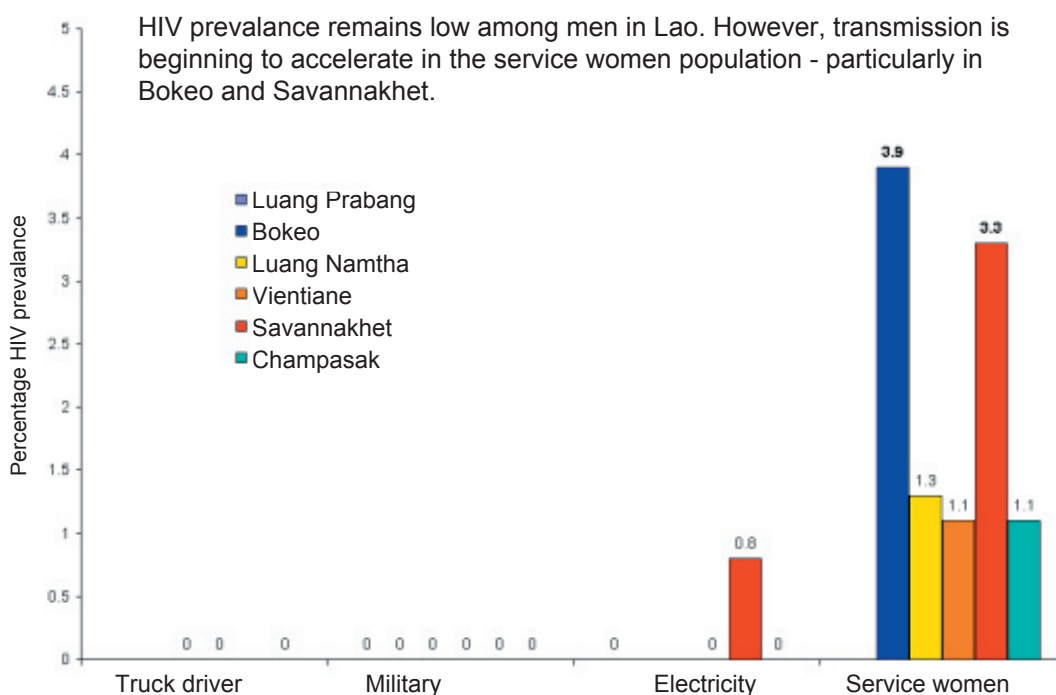
Additional definitions of sex partner:

1. "regular partner" denotes husband or sex partner who lives in the same dwelling with a service woman.
2. "non-regular partner" refers to a male sex partner who does not pay for sex with the service woman and is not a husband or regular co-habiting partner of the service woman.
3. "commercial sex partner" refers to a man who compensates the service woman for sex either with cash or in-kind payment.

RESULTS

As of the end of 2004, HIV prevalence remains low in Lao PDR (Table 2). However, it is noteworthy that HIV is now approaching 4% in the population of service women in Bokeo. International data on HIV spread suggest that 5% HIV prevalence among service women may be a threshold level. That is, HIV prevalence may accelerate quickly once it reaches this level, if conditions are right for rapid spread. HIV is nearly zero in the majority of men tested in 2004. But these findings raise the important question: how are the service women getting infected in the first place?

Figure 1: HIV prevalence for selected populations. 2004



Evaluation of the 100% condom program in Thailand has found that condom use among service women with the average client can reach very high levels. However condom use with a regular client or boyfriend is less likely. Lao service women are no different. Figure 2 shows that condom use decreases the closer the relationship between the service woman and the partner. Similarly, the men were also having sex with casual, non-commercial partners (Figure 3). This mixing of sex partner types by both populations of service women and clients is constructing a transmission bridge to potentially large segments of the Lao population.

Table 2: HIV, syphilis and chlamydia and/or gonorrhea prevalence among select populations. (Data refer to late 2004 unless otherwise indicated).

Risk Population	Chlamydia or gonorrhea %	Syphilis %	HIV %
<i>Bokeo</i>			
Service women	43.6	0.0	3.9
Military	2.9	0.0	0.0
<i>Luang Namtha</i>			
Service women	36.2	0.0	1.3
Truckers	17.3	0.0	0.0
Military	6.9	0.0	0.0
<i>Luang Prabang</i>			
Service women	56.0*	0.0*	0.0*
Military	10.0	0.0	0.0
State enterprise	n.a	0.0	0.0
<i>Vientiane</i>			
Service women	46.0	0.0	1.1
Truckers	6.0	0.0	0.0
Military	5.3	0.0	0.0
State enterprise	n.a.	0.0	0.0
<i>Savannakhet</i>			
Service women	19.9	0.0	3.3
Military	2.0	0.0	0.0
State enterprise	n.a.	0.8	0.8
<i>Champasak</i>			
Service women	27.9	0.0	1.1
Truckers	5.5	0.0	0.0
Military	3.7	0.0	0.0
State enterprise	n.a.	0.0	0.0

Note: "State Enterprise" refers to male employees of the Lao electricity or water works authority.

"n.a." denotes data not available

* 2003 sero-survey



Figure 2: Prevalence of consistent (“always”) condom use among service women in selected provinces by relationship with partner: 2004

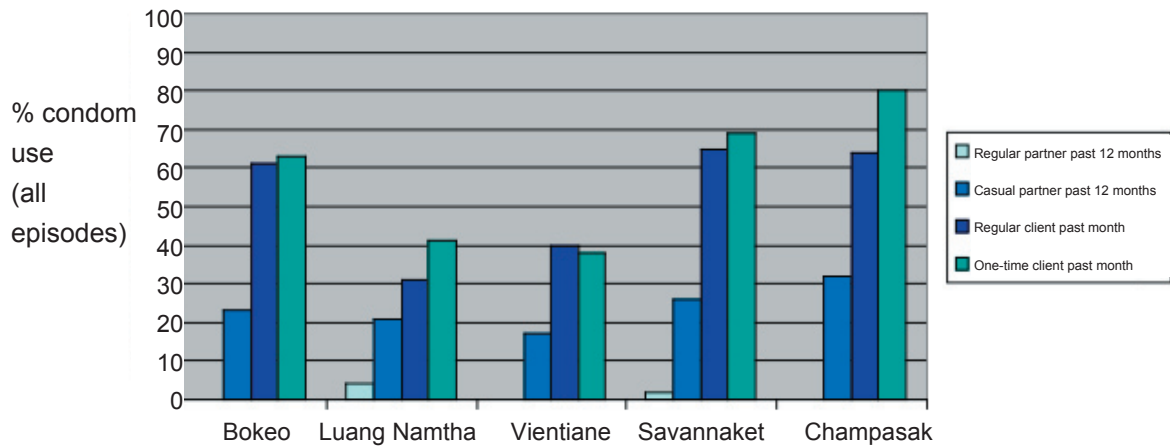
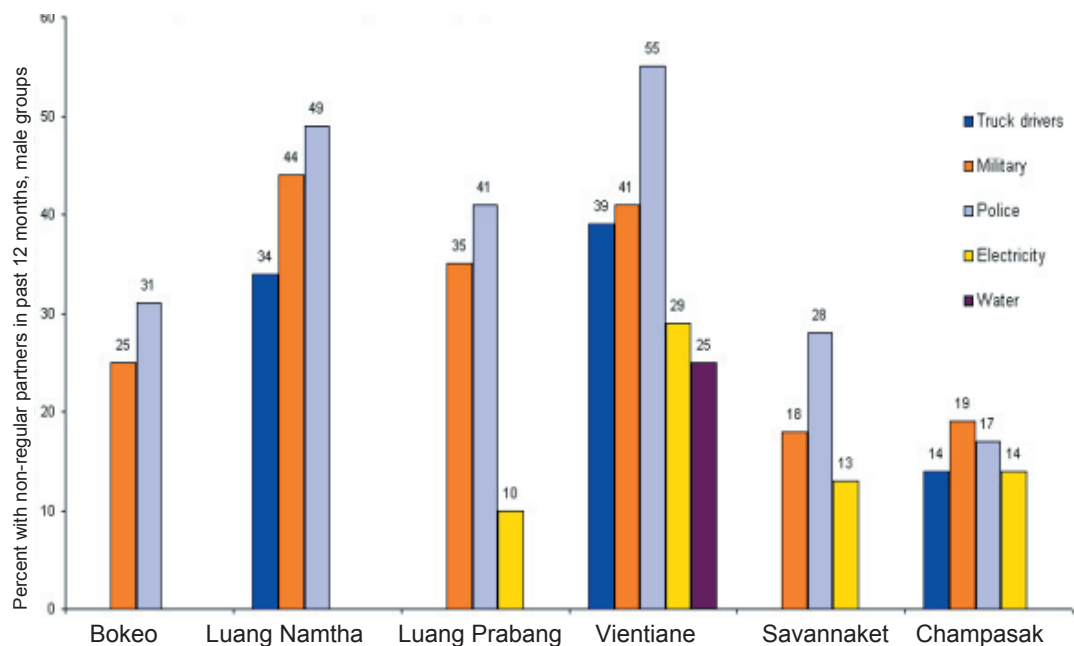


Figure 3: Percent of men having sex with non-regular partners in the past year by province and occupational category. 2004

Men are not just buying sex, they also have casual sex partners. High proportions of police, military and truck drivers - especially those in the central and northern provinces reported sex with someone who was not their spouse and whom they did not pay.



Having an active, ulcerative STI (e.g., chancroid, genital herpes, or syphilis) can greatly increase risk for acquiring or transmitting HIV. However, syphilis prevalence has remained low and relatively stable between the two rounds of surveys in key provinces (Fig. 4). Other STIs also increase the potential for HIV transmission, and these are at high levels in the northwest of the country and Vientiane (Fig. 5). Of the sampled provinces, only Savannakhet shows declines in STIs for men and women (Fig. 6).

Figure 4: Trends in syphilis and HIV prevalence among service women in selected provinces.

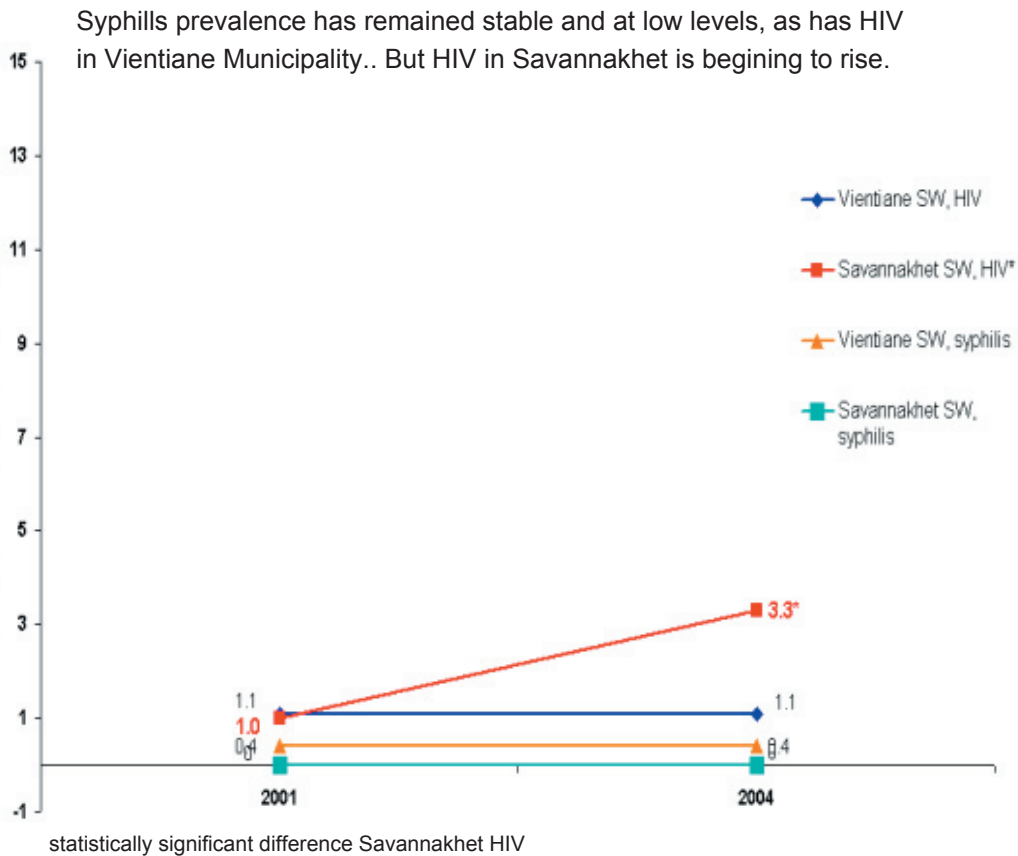




Figure 5: Prevalence of chlamydia and/or gonorrhea among service women in selected provinces: 2004.

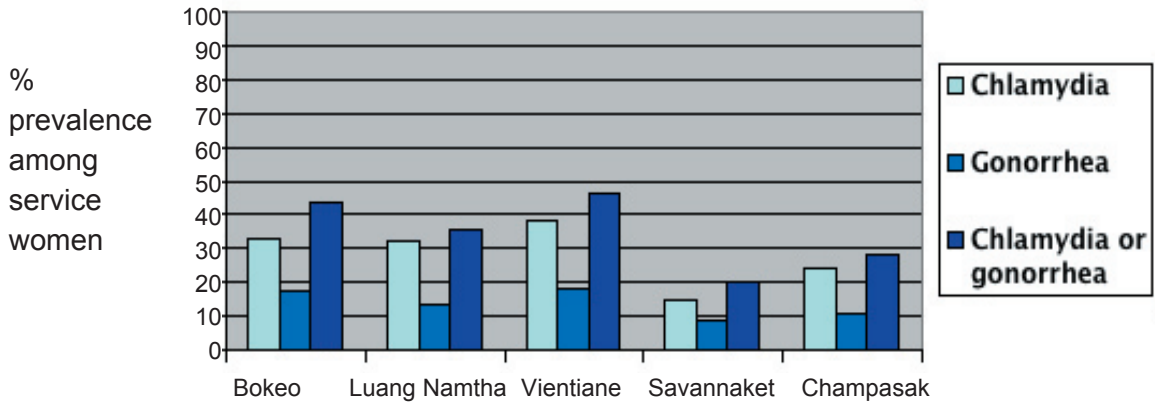
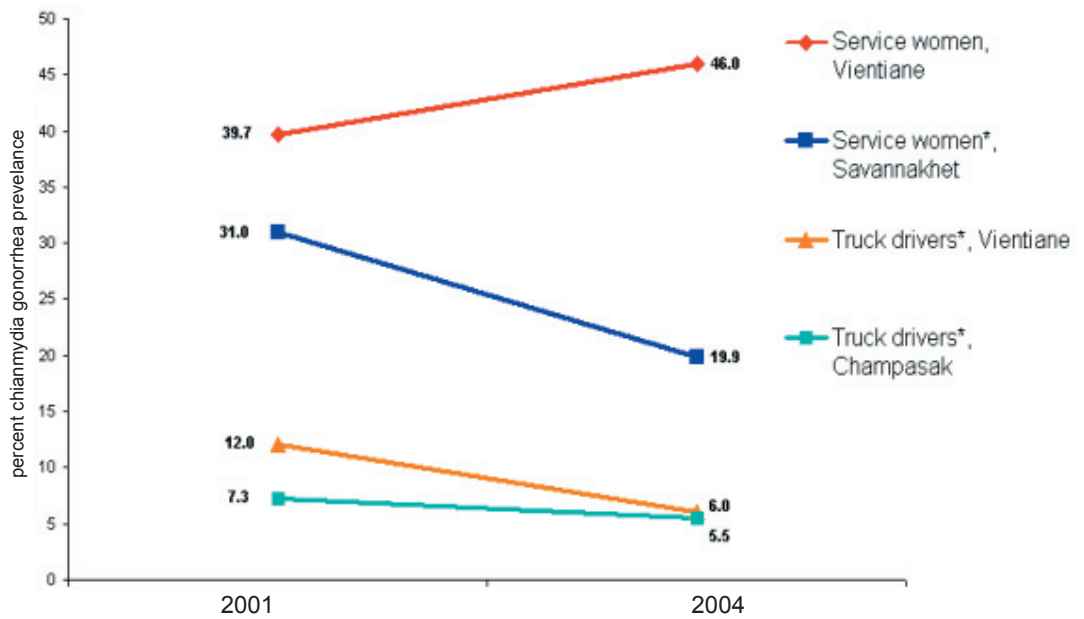


Figure 6: Trends in prevalence of chlamydia and/or gonorrhea among service women and truckers.

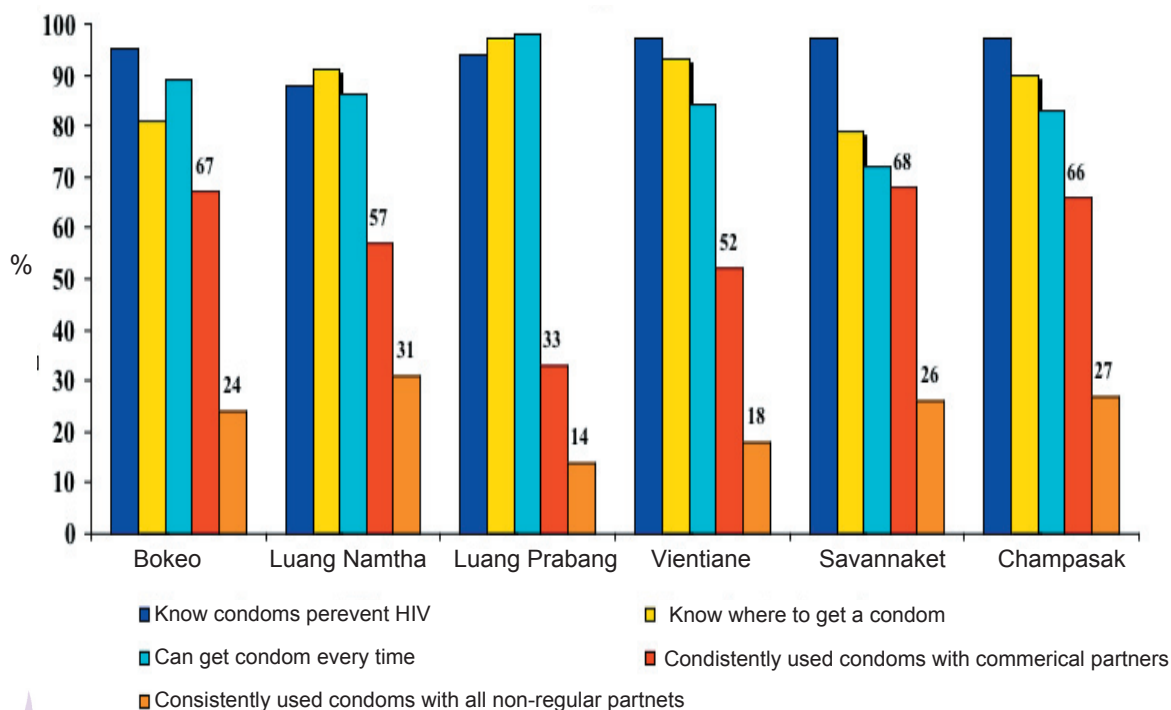
While significant decreases in chlamydial or gonococcal infection were seen among truck drivers and service women in Savannakhet, no impact has been made on STIs among the service women in Vientiane Municipality as of 2004.



statistically significant difference

Laos' national HIV prevention program has been spreading the message of safer sex for many years. But, as many HIV programs around the world have discovered, knowledge is not enough. Among sampled men, the 2004 round of the surveillance found that there is nearly 100% awareness that condoms are protective for HIV (Figure 7). Yet the percent using condoms for all commercial sex episodes is significantly below 70%, suggesting there is a significant gap between knowledge and practice. Consistent (i.e., "always") condom use with non-regular partners is even lower still, and this opens the pathway to broader exchange of STI and HIV pathogens beyond the traditional core transmitter groups. Finally it is noteworthy that the most mobile of the male sample populations (truckers) have the highest levels of self-reported symptoms of STIs in the previous year (nearly 1 in 5). Around the world, occupations which involve frequent travel away from family and home community are consistently associated with higher rates of STI and HIV than are other trades. The data from the Lao national surveillance are consistent with this phenomenon.

Figure 7: Knowledge and access to condoms among male respondents by province. 2004

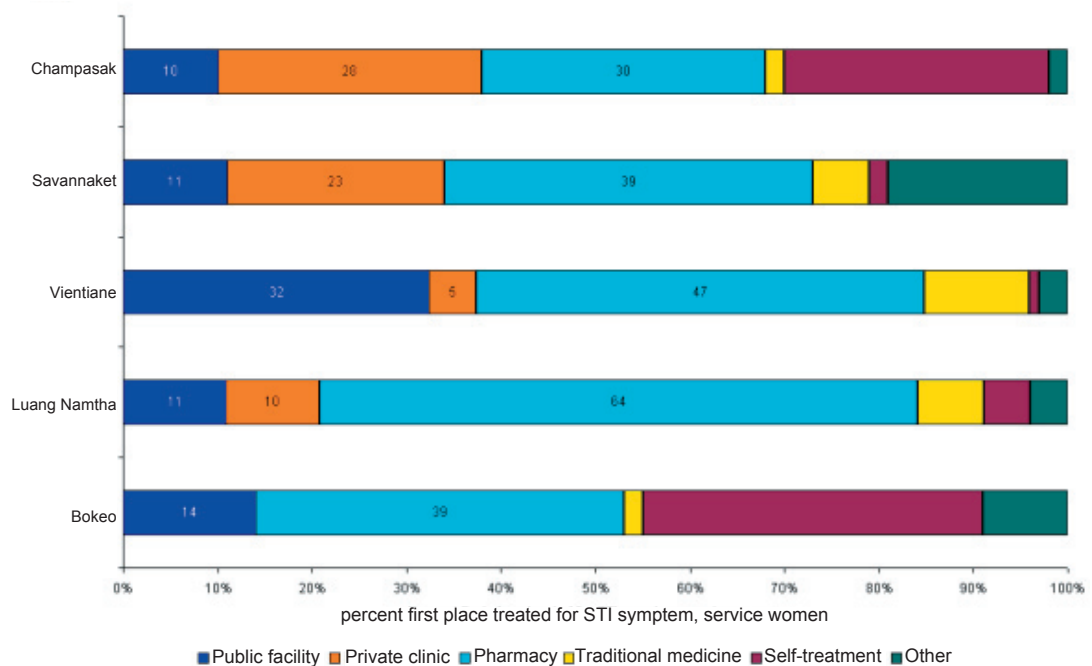




With the inadequate levels of condom use among populations with multiple partners, it is not surprising that STDs are prevalent and increasing (as shown in figures presented earlier). CHAS and the national prevention program are working to increase STI screening and treatment at convenient and user-friendly locations in priority provinces. However, private pharmacists remain the practitioner of choice for STI case management by SWs at the end of 2004 (Fig. 8). Of the five provinces with data, only Bokeo service women visit a public or private clinic more than those who self-treat. In all other sites, self-treatment for STI symptoms is the norm.

Figure 8: Health-seeking behavior by service women for management of STIs by sources of treatment in selected provinces. 2004.

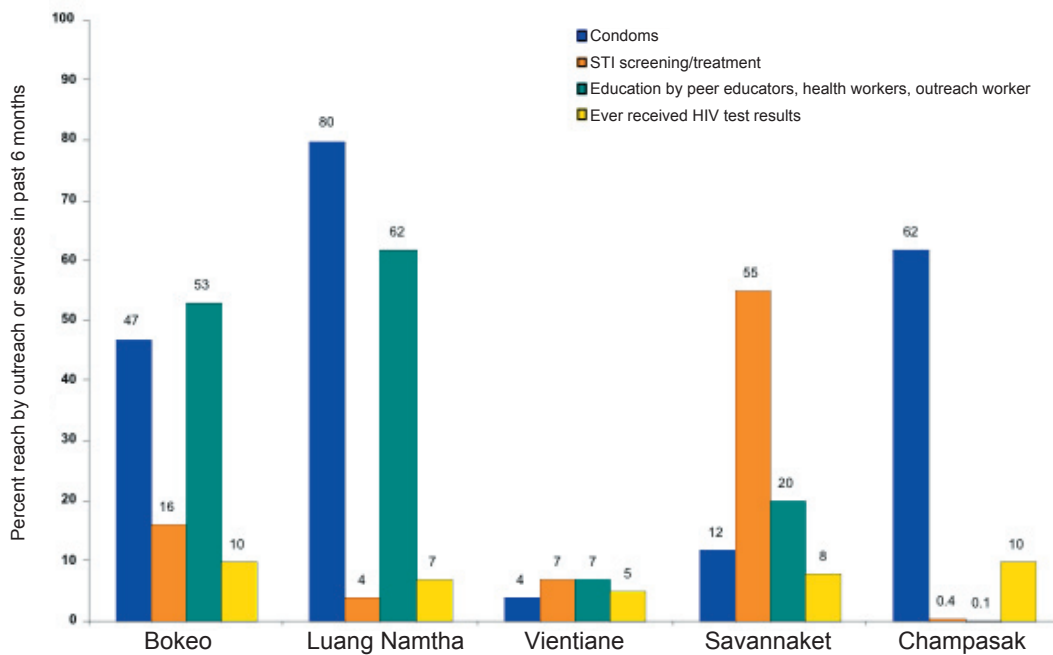
Pharmacies remained the first stop for service women in most provinces to treat their STI symptoms. However, one third of the women in the central and southern provinces utilized a public or private health facility.



CHAS and the national prevention program partners are already applying the findings of the two rounds of surveillance to improve coverage. In late 2004, none of five sampled provinces had achieved a full package of services, defined as condoms + STI screening/treatment + outreach education (Fig. 9).

Figure 9: Percent of service women who reported being reached by selected STI /HIV prevention services in the past 6 months by province. 2004.

No province achieved a full package of HIV services for service women: Condoms + STI screen/treatment + outreach education. And few women knew their HIV status.



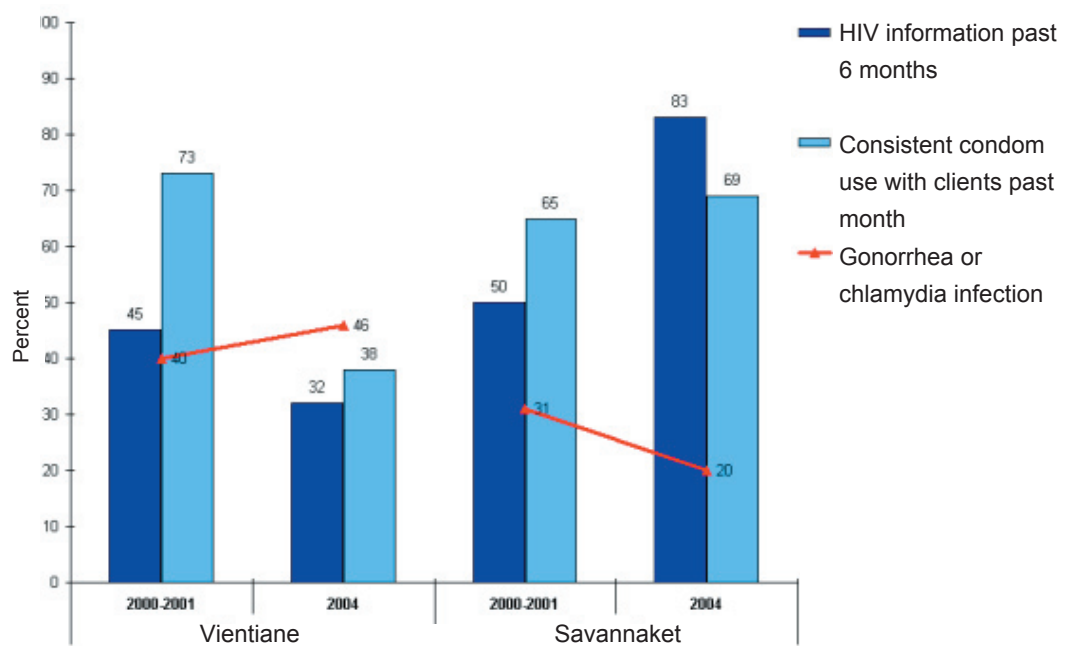
However, by mid-2005, programs have been launched in three of the five provinces (shown in Figure 9) to address these gaps. Yet these programs must be sustained to be effective. Figure 10 suggests that there is a cause-effect relationship between increased frequency of outreach, increased condom use, and reduced STI prevalence – although only a prospective, cohort trial could establish this conclusively.





Figure 10: Trends in percent of service women receiving information about HIV prevention, using condoms with all clients in the past month, and prevalence of gonorrhea or chlamydia infection.

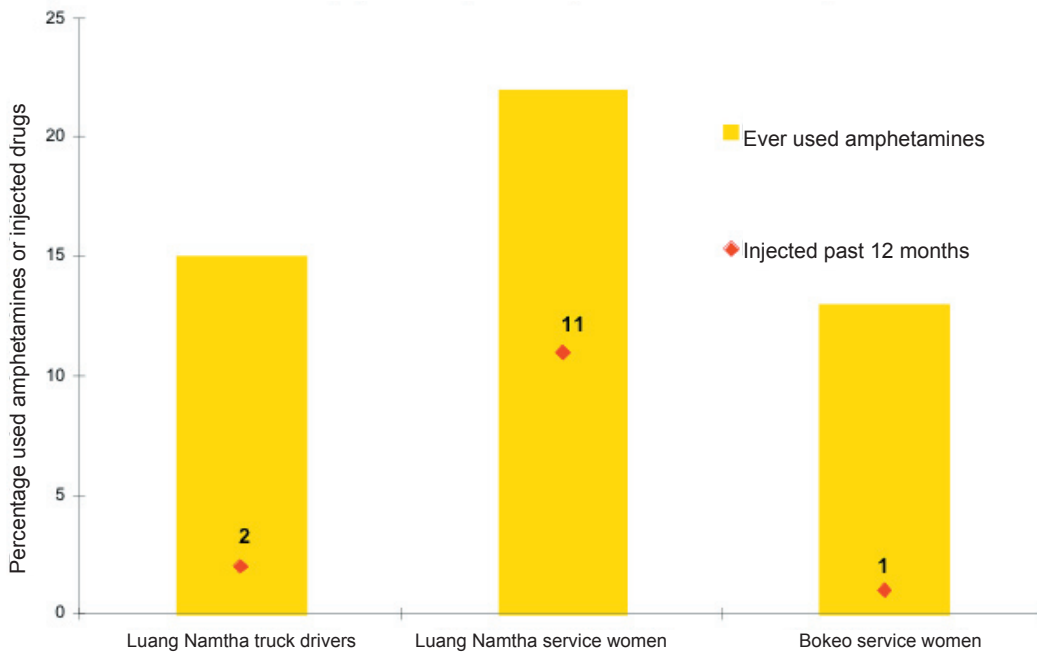
Sustaining intervention efforts is crucial. After a loss in momentum in Vientiane Capital, condom use slid and STIs rose. But Savannakhet scaled up programs, maintained high levels of condom use and decreased STIs.



Finally, Figure 11 presents results of questions on ever-use of amphetamines among some of the sampled populations, and history of injecting heroin, opium or amphetamines in the past year. In particular, injection of illicit drugs is of concern because of the potential transmission of HIV (and other pathogens) via use of contaminated syringes, and the need to inject often. The findings show that recent use of injected illicit drugs is present in both service women and client populations, and has reached 11% among service women in Luang Namtha. As other studies in Indochina have revealed, the overlap between commercial sex and injection drug use is increasing in the sub-region. This phenomenon creates ominous new opportunities for accelerated spread of HIV in Asia, and new challenges for prevention programs as well.

Figure 11: Prevalence of injection drug use in selected populations. 2004

Not a single person surveyed reported injecting drugs in 2001. But in 2004 injection was present in some of the risk populations, particularly service women in Luang Namtha.



Unlike some of its neighbors, Lao PDR still has time and the resources to keep HIV at sub-epidemic levels. However, the ever-changing risk environment, as evidenced by the two rounds of surveillance reported here, warn that prevention efforts in Lao PDR. must continue to expand in a comprehensive way for universal access in the months and years ahead.



CONCLUSIONS

Currently the prevalence of HIV in Lao PDR is still relatively low (0.08%) as estimated by UNAIDS and CHAS as of 2005. In 2000/2001 CHAS and its partners implemented the first ever behavioral and biological surveillance in five provinces of Lao PDR. The survey was conducted in Luang Prabang, Vientiane Capital, Khammuane, Savannakhet and Champasak among persons at presumed elevated risk for STI and HIV. These populations included service women, long distance truckers, military and policemen, factory workers and seasonal migrants. The survey found that HIV had reached the level of 0.9% among service women in 2001 while infection with common STIs among SWs ranged from 14% (gonorrhea) to 32% (chlamydia). The 2nd round of surveillance, was conducted in 2004 in Luang Prabang, Vientiane Capital, Savannakhet, Champasak, Bokeo and Luang Namtha among the risk populations of service women, long distance truckers, military and policemen, and workers from state enterprise agencies for electricity and water supply. In this second round, HIV among service women had increased to 2.0% and was distributed widely around the country: 3.9% in Bokeo, 3.3% in Savannakhet, 1.3% in Luang Namtha, 1.1% in both Vientiane and Champasak. Similarly, STIs in this population increased to 18.3% (gonorrhea) and 38.0% (Chlamydia). Among sampled provinces, only Savannakhet recorded a decline in STIs (from 31.0% to 19.9% for either gonorrhea or chlamydia).

HIV prevalence was scant among men in the 2nd round of surveillance: only 0.8% of a single sample sub-group (electricity workers) was infected. By contrast, STIs were detected in all groups of men, but these were mostly the non-ulcerative STIs (gonorrhea and/or chlamydia). Syphilis prevalence was nearly zero for both men and women.

The majority of respondents had a high degree of awareness of HIV/AIDS as over 90% knew a source for condoms and knew that condoms prevent both HIV and STIs. Nevertheless, condom use was inconsistent with the high levels of knowledge: only 57.2% of men reported always using a condom with at-risk partners. In the population of service women (data not shown) condom use with all clients in the prior month was as low as 29% in Luang Namtha and only 41% in Vientiane.

In 2004 the preferred source of treatment for STIs among service women was the local pharmacy: only one-third of the SWs sought STI services from a medical provider at a hospital or private clinic as the point of first contact.

The 2nd round of surveillance also sought information about recreational drug use. In the 12 months prior to the survey, as high as 11% of service women reported injecting drugs in Luang Namtha, and 1% of SWs in Bokeo reported doing so. Also, 2% of truck drivers whose residence was in Luang Namtha said they had injected drugs in the past year.

RECOMMENDATIONS

This second round of biological and behavioral surveillance is a warning signal that the risk of an epidemic is still present in Lao PDR, and that this risk is worsening. Even though Savannakhet is one province that has a complete array of prevention services, and has recorded declines in STIs among the highest risk groups, it also has an increasing level of HIV. Thus, it is clear that implementing a complete program in one portion of the country is inadequate to stop HIV in Lao PDR as a whole. The risk environment in Lao PDR is also evolving rapidly. Therefore, it is important to increase the frequency of future rounds of the surveillance from three years to a shorter interval. It is also imperative that current drug control efforts be continued and strengthened, in particular, to prevent HIV from spreading further into the population of recreational drug users who use needles to inject.

The network of qualified STI diagnosis and treatment outlets, and use of these by high risk groups, must be expanded in view of the facilitating effect that STIs have on the spread of HIV.

Finally, the coverage of HIV prevention communication needs to be improved and targeted more precisely to the individuals that need it most, in order to promote the adoption of safe and healthy behaviors in the years to come.



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