

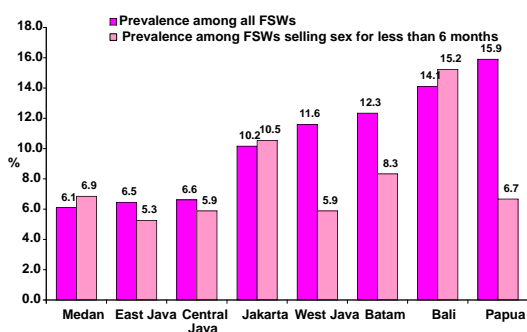
Unprotected sex between female sex workers (FSW) and their clients is the second most common route of HIV transmission in Indonesia after sharing of contaminated drug injecting equipment. This summary presents key findings of the 2007 IBBS from eight provinces for two groups of FSW: Direct FSWs (DFSW), who consist of brothel- and street-based sex workers, and Indirect FSWs (IFSW) – women working in karaoke bars, massage parlors, etc. Official estimates are that there were 95,000 - 157,000 Direct FSWs and 85,000 - 107,000 Indirect FSWs in Indonesia in 2006.

Key Finding 1: Depending upon the province, 6-16% of Direct FSWs and 2-9% of Indirect FSWs were infected with HIV. The proportion of FSWs infected in their first six months of selling sex is alarmingly high.

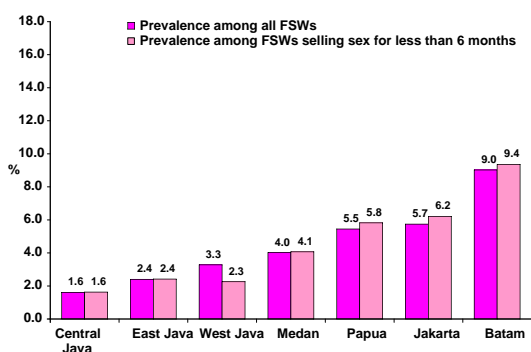
Among Direct FSWs, the highest prevalence of HIV was recorded in Tanah Papua and Bali, whereas the highest prevalence among Indirect FSWs was recorded in Batam and Jakarta. Among both Direct and Indirect FSWs, the prevalence of HIV among those new to sex work was almost as high as the prevalence among FSWs with longer experience of sex work, indicating that FSWs get infected very quickly after initiating selling sex. Every six months, one-third to one-half of Direct FSWs and 25% of Indirect FSWs are newcomers to the sex business (see data table on page three).

Figure 1: HIV Prevalence among Direct and Indirect FSWs, by Duration of Selling Sex

Direct FSWs



Indirect FSWs



Key Finding 2: The prevalence of sexually transmitted infections (STIs) was very high among Direct FSWs and moderately high among Indirect FSWs. There is little evidence of declining STI prevalence among FSW.

FSWs infected with STIs have elevated risk of both transmitting and acquiring HIV. Between 36% of Direct FSWs (in East Java) and 60% (in Jakarta) were infected with at least one of these three STIs, while between 29% of Indirect FSWs (in East Java) and 39% (in Jakarta) were so infected. Chlamydia is the most common STI among both groups of FSWs. The prevalence of Chlamydia and gonorrhea are among the highest recorded in Asian countries, and the prevalence of **active syphilis** among Direct FSWs in cities such as Medan and Jakarta is dangerously high.

Overall, about 50% of FSWs reported using medical services (public or private) when symptoms of STI occur (see data table). The provinces with lowest prevalence of Chlamydia or gonorrhea were the provinces with the highest proportions of Direct FSW

Key Findings:

- ★ Between 6-16% of Direct FSWs and 2-9% of Indirect FSWs were infected with HIV depending upon province. The proportion of FSW infected in their first six months of selling sex is alarmingly high.
- ★ The prevalence of sexually transmitted infections (STIs) was very high among Direct FSWs and moderately high among Indirect FSWs. There is little evidence of declining STI prevalence among FSW over the past five years.
- ★ FSWs' number of clients weekly is fairly small.
- ★ Consistent condom use in commercial sex in 2007 was low and shows no signs of having increased during the 2002-2007 period. Moreover, the reported frequency of condom breakage is extremely high.
- ★ Too few FSWs know that condoms can protect them against HIV.
- ★ Few FSWs are drug injectors, but use of methamphetamines is reported by sizeable proportions of FSWs in some cities.

The 2007 IBBS among MARG was designed to measure key HIV/AIDS-related biological and behavioral indicators for key population sub-groups in Indonesia.

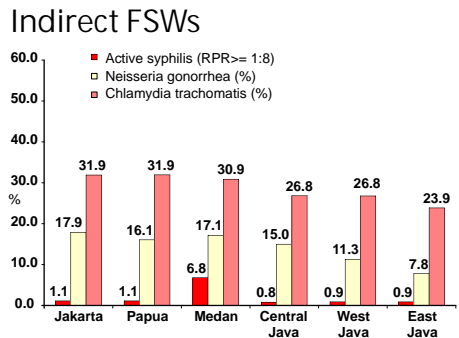
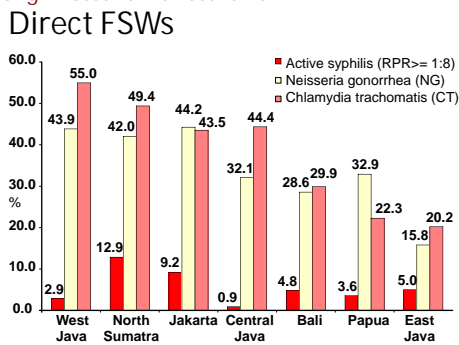
The 2007 IBBS was a collaborative initiative of the following organizations:

- Department of Health (DepKes)
- Statistics Indonesia (BPS)
- US Agency for International Development (USAID)
- National AIDS Commission (KPA)
- Family Health International – Aksi Stop AIDS (ASA) Program

Primary financial support for the 2007 IBBS was provided by the US Agency for International Development and the Indonesian Partnership Fund through Family Health International, which also provided technical support to the effort.

Additional financial support was provided by the World Health Organization (WHO) and The Australian Agency for International Development (AUSAID) through the Indonesian HIV-AIDS Prevention and Care Project (IHPCP).

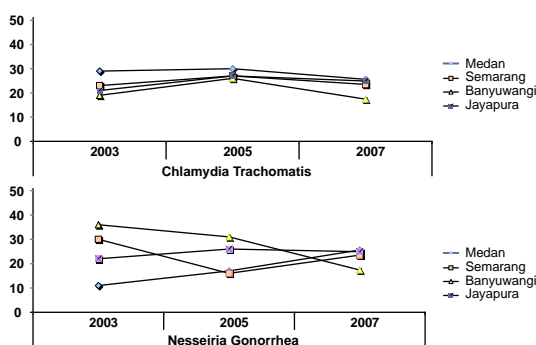
Figure 2: Prevalence of Chlamydia Trachomatis, *Neisseria Gonorrhoea* and Syphilis among Direct and Indirect FSWs



receiving a check-up at an STI clinic in the past month. However, about half of the Direct FSWs in these provinces were still infected, even when more than 70% received monthly STI check-ups. Use of STI services bears no relationship with the prevalence of STI among Indirect FSWs. These findings suggest rapid rates of re-infection, ineffective treatment services, or both.

Surveillance data from four (4) cities for which multiple STI surveillance data points are available (Banuwangi, Jakarta, Medan and Semarang) do not indicate dramatic changes in STI prevalence among FSW between 2002 and 2007 (Figure 3). The prevalence of Chlamydia in the four cities declined slightly between 2005 and 2007, but had risen slightly between 2003 and 2005, and only in Banuwangi is a clear downward trend in Gonorrhoea prevalence apparent. Analysis of data from all cities for which STI prevalence data are available for 2005 and 2007 support the conclusion of slightly declining prevalence of Chlamydia and gonorrhoea during this period (data not shown).

Figure 3: Prevalence of Chlamydia Trachomatis and *Neisseria Gonorrhoea* among Direct FSWs in Selected Cities, 2003-2007



Key Finding 3: FSWs' weekly number of clients is fairly small.

Apart from Bali, where half of the Direct FSWs had at least 14 customers in the past week, the median number of clients in the past week among Direct FSWs ranged from 5 to 8 (see data table). Indirect FSWs tended to have even fewer weekly clients, with medians ranging from 1 to 6. This relatively small number of commercial partners suggests that regular users of FSWs play a critical role in maintaining high prevalence of STI among FSWs.

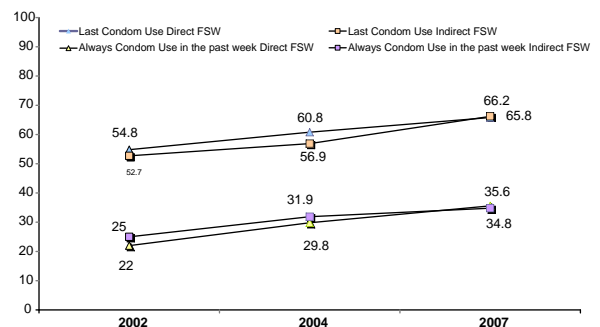
Key Finding 4: Consistent condom use in commercial sex in 2007 was low and shows no signs of having increased during the 2002-2007 period. Moreover, the reported frequency of condom breakage is extremely high, meaning that the reported condom use figures overstate the actual level of protection being provided.



The use of condoms in commercial transactions between FSW and clients in Indonesia appears to be increasing slowly, but steadily, over time (Figure 4). The proportions of FSW using condoms at last sex and consistent use with clients in the past week both trended upward between 2002 and 2007. However, consistent condom use in commercial sex remains insufficient to significantly disrupt HIV transmission between FSW and their clients and vice versa. Furthermore, these data, which are aggregated over 10 cities, mask important variations from city to city (see data table), and in particular falling rates of consistent condom use in some cities – for example, in Jakarta. So while the overall trend is upward, intensified efforts to significantly increase consistent condom use are needed in all cities.

FSWs also reported remarkably high rates of condom breakage during the past month – between 8% and 28% among Direct FSWs in the cities covered in the 2007 IBBS and from 6% to 19% among Indirect FSWs, exposing yet more FSWs and their clients to the risk of HIV transmission (see data in table on page 3). These high reported breakage rates indicate high prevalence of improper condom use, inadequate condom quality, or both.

Figure 4: Proportion of FSWs Reporting Condom Use at Last Sex and Consistent Condom Use with Clients in the Past Week, 2002-2007



Key Finding 5: Too few FSWs know that condoms can protect them against HIV.

Depending on province, between 17% and 54% of Direct FSWs and 21% to 49% of Indirect FSWs did not know that condoms protected them from HIV transmission during vaginal or anal sex (see data table). Furthermore, the decision to use a condom often appears to depend on external factors, as 60% of the Direct FSWs who had used a condom at last sex did so because either the customer or the manager requested it.

Key Finding 6: Few FSWs are drug injectors. Drug abuse only affects a small proportion of FSWs, but use of methamphetamines is reported by sizeable proportions of FSWs in some cities.

Injecting drug use and commercial sex is a particularly dangerous combination, with the potential to rapidly accelerate the progression of HIV/AIDS epidemic in the ranks of FSWs. Fortunately, few FSWs reported injecting drugs (see data table). However, 32% of Indirect FSWs in Batam and 19% in Jakarta reported using methamphetamines in the past 3 months. While less dangerous for HIV transmission than injecting drugs, such high use of methamphetamines is likely to impair FSWs' intent and ability to negotiate condom use with clients, and thus should be monitored closely.

IBBS Key Indicators among Direct FSWs

	North Sumatera	Batam	Jakarta	West Java	Central Java	East Java	Bali	Tanah Papua
HIV Prevalence (%)	6.1	12.3	10.2	11.6	6.6	6.5	14.1	15.9
HIV Prevalence by duration of selling sex (%)								
<=6 months	6.85	8.33	10.53	5.88	5.88	5.26	15.22	6.7
>6 months	6.52	14.65	9.15	13.58	7.61	5.7	12.57	17.8
Chlamydia trachomatis (%)	49.4		43.5	55.0	44.4	20.2	29.9	22.3
Nesseiria gonorrhea (%)	42.0		44.2	43.9	32.1	15.8	28.6	32.9
Active syphilis (RPR>= 1:8)	12.9	16.8	9.2	2.9	0.9	5.0	4.8	3.6
Chlamydia or gonorrhea or syphilis	71.7		74.7	71.1	60.0	38.3	49.0	55.6
Visited STI clinic for check-up past month (%)	48	48	33	27	78	80	75	72
Worked in present establishment for less than 6 months (%)	53	49	36	36	34	41	40	31
Median number of clients past week	5	5	8	6	5	6	14	4
25 - 75 percentiles of number of clients past week	3 - 10	3 - 7	6 - 13	2 - 18	3 - 10	4 - 12	8 - 22	2 - 7
Always used condom with client past week (%)	16	30	2	20	17	32	38	72
% of those using condom who experienced condom breakage past month	17	15	8	17	10	11	24	28
Does not know that condom use protects from sexual transmission of HIV (%)	39	26	53	28	19	24	17	34
Used methamphetamine past 3 months (%)	4.0	0.8	1.4	1.1	0.6	0.0	3.2	1.3
Injected drugs past year (%)	2.6	0.2	0.9	0.1	0.1	0.0	0.8	0.3

IBBS Key Indicators among Indirect FSWs

	North Sumatera	Batam	Jakarta	West Java	Central Java	East Java	Tanah Papua
HIV Prevalence (%)	4.0	9.0	5.7	3.3	1.6	2.4	5.5
HIV Prevalence by duration of selling sex (%)							
<=6 months	8.7	9.88	6.25	7.32	0	4.55	6.25
>6 months	4.07	9.35	6.21	2.26	1.63	2.42	5.82
Chlamydia trachomatis (%)	30.9		31.9	26.8	26.8	23.9	31.9
Neisseria gonorrhea (%)	17.1		17.9	11.3	15.0	7.8	16.1
Active syphilis (RPR>= 1:8)	6.8	7.6	1.1	0.9	0.8	0.9	1.1
Chlamydia or gonorrhea or syphilis (%)	37.9		39.1	31.8	36.2	28.8	38.9
Visited STI clinic for check-up past month (%)	53	34	23	22	69	31	29
Sold sex for the first time in the past 6 months (%)	17	46	17	43	25	23	51
Median number of clients past week	3	4	6	1	6	3	1
25 - 75 percentiles of number of clients past week	1 - 7	2 - 7	3 - 9	1 - 4	4 - 7	1 - 4	0 - 2
Always used condom with client past week (%)	45	38	34	24	44	30	42
% of those using condom who experienced condom breakage past month	17	18	19	13	11	6	8
Does not know that condom use protects from sexual transmission of HIV (%)	38	21	49	28	23	27	46
Used methamphetamine past 3 months (%)	12	32	19	5	2	8	7
Injected drugs past year (%)	0.4	0.4	0.2	0.0	0.4	0.0	0.3

Conclusions and Recommendations

Data from the 2007 IBBS provide insights into the current status of the HIV/AIDS epidemic among female sex workers (FSW), as well as data with which to update trends in HIV-related biological and behavioral indicators over time. These data thus contribute to the growing, but still limited, evidence base for decision making concerning HIV/AIDS in Indonesia. Conclusions and key recommendations concerning FSW include the following:

- ★ With a rising number of FSWs infected with HIV, interventions focused on HIV prevention need to be expanded and intensified. After injecting drug use, commercial sex makes the largest contribution to HIV infections in Indonesia. Taken in the context of earlier HIV sentinel surveillance data from the Ministry of Health, data from the IBBS 2007 among MARG provide little in the way of evidence that the HIV epidemic among FSWs is abating. If anything, it may be accelerating. Given the low prevalence of condom use, FSWs play a critical role in transmitting HIV to the general population. Indeed, it is anticipated based upon epidemiologic modeling that sexual transmission driven by commercial sex will soon or may already have replaced injecting drug use as the primary driving force of the HIV/AIDS epidemic in Indonesia.

The 2007 data suggest that young FSWs new to the commercial sex trade tend to acquire HIV infections quickly. Those newly infected are those most likely to transmit the virus because of a high viral shedding. With high rates of turnover of FSWs observed in most cities, FSWs at the highest risk of transmitting HIV to their male partners are constantly being replenished – a dangerous situation indeed.

Comprehensive efforts that reach critical coverage levels (70%-80% of FSWs) are urgently needed to slow down the progression of the HIV/AIDS epidemic in the ranks of FSWs. Key components should include access to accurate information, behavior change communications/interventions, condom promotion, secure access to condoms, access to effective treatment of STIs, and access to HIV voluntary counseling and testing. Priority attention should be given to providing information to and intensively supporting consistent condom use among those new to the sex business.

- ★ The prevalence of STIs among FSWs in Indonesia is very high, and interventions aimed at controlling STIs among FSWs to date have been ineffective. STIs are considered by epidemiologists to be a biological marker for sexual risk taking. The 2007 IBBS and earlier data indicate widespread sexual risk taking in the commercial sex industry and little evidence that progress is being made in changing the situation. The prevalence of Chlamydia, gonorrhea and active syphilis among FSWs in Indonesia in 2007 are extremely high – among the highest recorded among Asian countries.

A number of factors appear to be responsible for this, including low rates of condom use, inadequate coverage of STI screening and treatment, and ineffective diagnostic and treatment regimes. While moderate levels of coverage of FSWs with routine screening have been achieved in many cities, coverage needs to be higher and more consistent in order to reduce STI prevalence. Beyond screening, the data indicate that only about one-half of FSWs seek professional medical help when faced with signs and symptoms of STIs – the remainder self-medicate, go to other types of service providers, or take no action at all. This, combined with partial resistance to some first-line STI drugs and incomplete compliance with treatment regimes by some FSWs, have led to inadequate treatment. The need for more aggressive and effective treatment of syphilis is urgent.



With regard to diagnosis, it is well established that the syndromic approach has low sensitivity and specificity among women. However, there is little evidence that the enhanced syndromic approach that has been tried in a number of clinics around Indonesia has been cost effective. Given the high STI prevalence rates among FSW more or less across Indonesia, periodic presumptive treatment (PPT) of all FSW with single-dose, directly observed treatment with effective drugs should be considered for rapid expansion.

- ★ Consistent condom use is low and strong condom promotion strategies with comprehensive coverage of FSWs are needed. Neither routine STI screening and treatment nor PPT will be effective unless condom use rates among FSWs can be increased. Unfortunately, the 2007 IBBS data indicate that consistent condom use with clients was quite low and has not increased over the past five years. This is due in part to inadequate levels of knowledge of the protective benefits of condoms by FSWs. However, FSWs also report that condoms are not always available to them, most had not had hands-on practice with condom in the past year (if at all), and the frequent rate of condom breakage suggests widespread improper application of condoms. Because of the power imbalance in FSW-client relationships, FSWs are also often not empowered to insist upon using condoms even when they are available and they know how to use them.

A large-scale, nationwide condom education, destigmatization and promotion program targeted to FSWs, clients and stakeholders in the commercial sex industry is urgently needed. Interventions should put emphasis not only on FSWs' ability to negotiate condom use, but also on skills to use condoms, as well as innovative interventions to clients and stakeholders involved in the sex industry. This effort should be adapted to local context and bought into by local stakeholders in both planning and implementation to ensure commitment of all actors to effective HIV/AIDS prevention. There have been local success stories in containing STIs and HIV among FSWs, and these should be used as models for other communities around Indonesia to stem the HIV epidemic among FSWs.



This IBBS Highlight summarizes key findings from the 2007 Integrated Biological-Behavioral Surveillance (IBBS) among Most-at-Risk-Groups (MARG) in Indonesia. Further data and analyses will be posted to the websites of The Department of Health (DepKes), the National AIDS Commission (KPA), and Family Health International (FHI).

The Department of Health (DepKes) : www.depkes.go.id
The National AIDS Commission (KPA) : www.aidsindonesia.or.id
Family Health International – Aksi Stop AIDS (ASA) Program : www.fhi.org