IBBS 2011

Integrated Biological and Behavioural Survey

Ministry of Health Republic of Indonesia
Directorate General of Disease Control and Environmental Health
2011


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FOREWORD

This Integrated Biological and Behavioural Surveillance (IBBS) is one of the surveillance HIV-AIDS and sexually transmitted infections (STI) activities that have been implemented since 1996, and performed regularly every 2-3 years.

Data collection was carried out from January to March 2011, except in Jayawijaya (Wamena) where it was done in May 2011. Surveys were conducted in 23 regencies/cities in 11 provinces in Indonesia, namely: Medan City, Deli Serdang Regency, Batam City, Bandar Lampung City, South Lampung Regency, West Jakarta, East Jakarta, North Jakarta, South Jakarta, Central Jakarta, Bandung City, Bekasi City, Semarang City, Batang Regency, Surabaya City, Malang City, Banyuwangi Regency, Denpasar City, Kupang City, Ambon City, Jayapura City, Jayapura Regency, and Jayawijaya Regency.

The population survey included direct female sex workers (DFSW), indirect female sex workers (IFSW), injecting drug users (IDU), Waria (transgender or transvestites), men who have sex with men (MSM), prisoners, 'high-risk men' (HRM: seafarers, dock workers, truck drivers, moto-taxi drivers), and adolescents.

We would like take this opportunity to express thanks and high appreciation to all those who took part in this IBBS, especially Dr. I Nyoman Kandun, MPH., Prof. Charles Surjadi, Prof. Hari Kusnanto, Robert J. Magnani, Ph.D., Oscar Barreneche, Tobi J. Saidel, Guy Morineau, Ph.D., the Indonesian MoH Research and Development Agency, the Port Health Office, the Environmental Health Technical Agency, the Central Health Laboratory, Provincial and Regency/City Health Offices, Provincial Health Laboratories, the National and Regional AIDS Commissions, as well as international partners, including the Global Fund, World Bank, and Scaling Up for Most At Risk Population (SUM I) (FHI360) who contributed to the implementation of this 2011 IBBS from preparation, collection, processing, and analysis of data to report writing.

The greatest possible efforts have been made in the implementation of this 2011 IBBS. However as always there may be limitations and shortcomings. We would therefore welcome suggestions to assist in future improvement.

Hopefully the results of the 2011 IBBS will be beneficial in increasing efforts to control HIV-AIDS and STIs in Indonesia.

Jakarta, December 2011

Director General CDC,

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL PENGENDALIAN PENYAKIT DAN PENYEHATAN LINGKUNGAN

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SUMMARY

The 2011 Integrated Biological and Behavioural Surveillance (IBBS) was conducted to obtain a picture of the magnitude of the problems, risk factors, knowledge and program scope, with the aim of understanding the dynamics of the HIV epidemic in Indonesia. The 2011 IBBS was conducted in 23 cities/regencies in 11 provinces, with most of the cities/regencies selected being those also surveyed in the 2007 IBBS.

The 2011 IBBS aimed to determine the prevalence of HIV and STIs (syphilis, gonorrhoea, and chlamydia) in the most at risk (high-risk) population and to determine the level of knowledge about HIV-AIDS, the behaviour risking acquisition or transmission of HIV, and coverage of intervention programs directed to most at risk and vulnerable populations.

The 2011 IBBS was designed using a cross-sectional design with the following IBBS target populations: 1) Most at risk populations consisting of direct and indirect female sex workers (DFSW and IFSW), high-risk men (HRM), men who have assumed a female identity (transgender or transvestite), referred to in Indonesia as Waria, men who have sex with men (MSM), injecting drug users (IDU), and prisoners; and, 2) vulnerable populations, namely youth. HRM include truck drivers, seafarers, dock workers, and moto-taxi drivers.

The sampling method consisted of: 1) Two-stage proportionate probability sampling (PPS) for the FSW, seafarers, dock workers, moto-taxi drivers, Waria, prisoners, and youth; 2) Time location sampling (TLS) for truck drivers; and 3) Respondent driven sampling (RDS) for IDU and MSM. The sample size for the FSW, Waria, MSM, and IDU in each selected location was 250. Sample sizes for HRM was 300-400 (depending on type), while for prisoners the sample size was 400, and for youth it was 1000.

Data collected in 2011 IBBS included behavioural and biological data. Behavioural data was collected from all the populations surveyed. Biological data was collected from populations most at risk, and was divided into two, namely: 1) venous blood samples taken from FSW and Waria, and peripheral blood samples from HRM, prisoners, and MSM, to test for HIV and syphilis, (2) vaginal smears (FSW), and anal smears (Waria and MSM) in several cities, to test for gonorrhoea and chlamydia.

The number of respondents in the 2011 IBBS amounted to 25,150 people, from 23 regencies/cities in 11 provinces in Indonesia. Of these respondents, 8309 members of the most at risk population provided behavioural data and test results for HIV, syphilis, gonorrhoea, and chlamydia. Behavioural data, together with HIV and syphilis test results, were collected from a further 9819 most at risk people, while behavioural data alone were collected from 7022 youth.

Characteristics of Respondents

- Most of the respondents aged 20-29 years were from FSW, MSM and IDU groups. Most of those aged 15-19 years were MSM.
- The median age was 34 years for HRM, 31 for prisoners and Waria, 28 for both DFSW and IFSW, 27 for MSM and 25 for IDU.
- The majority of the FSW, Waria and prisoners were poorly educated, below junior high school, while the HRM, MSM, and IDU were well educated (high school up to tertiary). MSM were most numerous among the higher educated population.
- Marital status should be considered related to the possible interaction between high-risk populations and the general population. Marital status was assessed based on a legal marriage between partners of the opposite sex. The majority of those with unmarried status were Waria, MSM, and IDU. The majority with status ever married were FSW, while the majority of those with status currently married were HRM and prisoners.
- The main source of income for Waria was selling sex and working in a salon. The primary source of income for IDU and MSM was self-employment or working for others. A few of the MSM and IDU claimed that they received pocket money as students.
- Most of the DFSW reported that they lived with other women in *lokalisasi*, while about 4% lived with their husbands. Most IFSW lived with the family, while 11% lived with their husbands.
- The majority of HRM lived with their wives. Many MSM and IDU lived with their family. The majority of Waria (45%) lived alone; this is likely related to the fact the majority of these stated that they were not married.

HIV and STI Prevalence

- The highest HIV prevalence was found among IDU (41%), followed by Waria (22%), DFSW (10%), MSM (8%), prisoners (3%), IFSW (3%), and HRM (0.7%).
- The highest prevalence of syphilis was found among Waria (25%), followed by DFSW (10%), MSM (9%), prisoners (5%), HRM (4%), IFSW (3%), and IDU (2%).
- The highest prevalence of gonorrhoea was among DFSW (38%), followed by Waria (29%), MSM (21%), and IFSW (19%). The highest prevalence of chlamydia was among FSW (41% for both direct and indirect) followed by Waria (28%) and MSM (21%). The prevalence of gonorrhoea and/or chlamydia ranged between 33% (MSM) and 56% (IFSW).

Risk Behaviour

- The highest rate of purchasing sex during the previous year was among Waria (26%), followed by HRM (23%), IDU and MSM (19% each).
- HRM bought sex in the previous year from FSW, while Waria and MSM bought sex from men (not Waria). Of the 24% of IDU who claimed to have bought sex in the previous year, 97% admitted to buying sex from women, 2% from Waria, and 1% from both women and Waria.
- Among Waria, MSM, and IDU, selling sex in the previous year was highest among Waria (81%), selling sex to men. As many as 49% of MSM sold sex to both men and women. Among these, the majority (79%) sold sex to men, 4% to women, and 17% to both men and women. IDU had the lowest rate of selling sex (4%). Of those who did so, 81% sold sex to women and 19% to men.
- In general, FSW, Waria, and MSM were the main populations who sold sex. FSW and Waria sold sex to men, and MSM sold sex to men and women. In addition, Waria and MSM also bought sex.
- Except for IDU, injecting drug use over the previous year among the populations most at risk was still quite low. The percentage of DFSW and IFSW, HRM, Waria, and MSM who had injected drugs during the previous year was below 2%.
- Most injecting by IDU during the previous week (53%) was in a wet setting (communally using drugs already mixed with water), compared with borrowing or lending needles (14%) or using a common needle (9%).
- The mean frequency of injection during the previous week by IDU at six sites surveyed was seven times. The average on the previous day was twice.
- A total of 13% of IDU admitted to sharing needles when last injecting, while 14% of IDU said they had borrowed or lent needles when injecting during the previous week.
- Injecting in a wet setting is more often done by IDU compared with sharing needles or using a common needle. Among IDU who shared this way, 25% of them always shared in a wet setting, 12% frequently, and 16% at times.
- A total of 18% of IDU always bought drugs jointly during the previous week, a further 18% often bought drugs in this way, and 28% sometimes did so.
- A total of 7% of youth admitted to having sex in the previous week. Among these, 51% claimed to have used condoms during their last sex. In addition, 4% of youth said they had tried using drugs, with cannabis the most frequently used. A total of 0.4% of youth admitted injecting drug use.
- A total of 4% of prisoners said they had had sex while in prison/remand centre. Further, 6% of prisoners had ever injected drugs. One in five prisoners

admitted injecting drugs first while in prison. Among prisoners who had injected drugs, one-third continued injecting in prison. Of these, 67% used a needle that had previously been used by someone else with 62% using a common needle.

- A total of 9% of DFSW had become pregnant while working as sex workers, and 53% of these either aborted or had a spontaneous miscarriage. Contraceptives were used by most (76%) DFSW, with 64% of these using injectable contraception and 23% the pill. Among IFSW, 6% had become pregnant, and 73% of these either aborted or had a spontaneous miscarriage. Contraceptives were used by most (69%) IFSW, with 54% of these using injectable contraceptives and 31% the pill.
- A total of 28% of Waria admitted to continuously taking hormones in the previous year without supervision from health workers, and 31% reported injecting silicone in the previous year. The potential side effects of hormone and silicon use were only known by 47% of Waria.

Prevention Behaviour

- The highest rate of condom use at last commercial sex was by Waria, followed by DFSW, MSM, IFSW, IDU, and HRM.
- Related to the success indicators for the HIV-AIDS control program in Indonesia, the 2011 IBBS results showed that the rate of condom use in the previous week among women (in this case DFSW) is 35% and among men (in this case HRM) in the previous year amounted to 14%. Thus, the condom-use performance indicators among high-risk groups in 2011 amounted to 100% among women (target in 2011: 35%) and 70% in men (target in 2011: 20%).
- HRM was the survey population with the highest rate (84%) of condom use at last sex with paid or unpaid casual partners, while MSM was the population with the lowest rate (54%).
- Among HRM surveyed, most said they had had sex during the previous year with a casual sex partner. IDU had the highest rate of abstinence (21%), while the abstinence rate for truck drivers was 5%.
- The number of IDU who were faithful to their steady sex partners in the previous year amounted to 40%. Between 32-56% of HRM remained faithful.
- The majority (87%) of IDU claimed that they did not share needles with others. Half also claimed that they never shared drugs after these had been mixed with water (wet setting). Some 30% of IDU claimed that they always carried a syringe during the previous week. A total of 36% of IDU stated that the last time they disposed of a needle, they gave it to a health worker, an NGO worker or to a health care centre.

Knowledge level and perceptions

- The results of the 2011 IBBS show that respondents' knowledge that HIV-AIDS can be prevented by faithful behaviour and condom use were the two questions most frequently answered correctly by each population in comparison with the three other comprehensive knowledge questions about HIV-AIDS.
- Among high-risk populations, IDU had the highest level of comprehensive knowledge (44%). Prisoners had the lowest level of knowledge at 12%.
- Most of the population groups were already aware about HIV transmission through needles and from mother to child during pregnancy, childbirth and breastfeeding (MTCT). However, knowledge about HIV transmission through needles and MTCT among prisoners was still low when compared with other population groups.
- Knowledge that HIV infection is not prevented by use of antibiotics or by eating nutritious food was low in all population groups.
- Most still had misconceptions about HIV transmission and prevention. These included respondents believing that a person's HIV status can be determined from sight alone, that eating nutritious foods can reduce the risk of HIV transmission, that taking antibiotics can reduce the risk of HIV transmission, or that mosquito bites can transmit HIV. Such mistaken understanding is highest among prisoners (70%), while the lowest is among Waria (24%).
- Most of the survey population except HRM and prisoners admitted that they were at risk of contracting HIV.
- Most of the respondents agreed that they had ever received information about HIV-AIDS. Television was the main source of information mentioned by youth (99%), IFSW (82%), and HRM (65%). Health workers are the main source of information mentioned by the DFSW (78%) and prisoners (92%). Peers are the main source of information mentioned by Waria (79%) and MSM (53%). Field workers were the source of information most often mentioned by IDU (76%).

Program Coverage

- HRM were the least likely to have had an HIV test, while Waria are most likely. Among those who had had an HIV test, some had not received the test results. Waria were most likely to receive HIV test results, while HRM were least likely to get their test results.
- IDU were the group most likely to have met and discussed with field workers during the previous three months compared with other populations surveyed. On the other hand, HRM were least likely to meet and discuss with field workers.

- DFSW were the group that most often visited STI services in the previous three months. Conversely, most Waria, IFSW, and MSM stated that they had not visited STI services in the previous three months.
- A total of 32% of DFSW, 23% of IFSW, 25% of Waria, 31% of MSM, 21% of IDU, 9% of HRM, and 6% of prisoners had experienced at least one of the symptoms of STIs in the previous year. The STI symptom most often experienced by the MSM, IDU, HRM and prisoners was pain when urinating. Symptoms of STIs among Waria varied from genital sores and lumps around the anus, to pain while urinating. The STI symptom most commonly experienced by DFSW and IFSW was an abnormal discharge from the vagina, although this symptom is not always associated with STIs.
- Seeking treatment from the health care service (STI services) among respondents who had STI symptoms was more often done by Waria compared with other population groups. In contrast, only a small percentage of prisoners who had STI symptoms sought treatment.
- More than half of DFSW stated that they had received free condoms in the previous three months, while the majority of Waria, IFSW, MSM and HRM claimed never to have received free condoms in the previous three months. Injecting drug users were not asked about receipt of free condoms.
- From the IDU population surveyed, 50% had utilized the services needle-exchange programs (NEP) in the previous week and 53% had utilized methadone maintenance therapy (MMT) programs in the previous last year. Utilization of detoxification programs by IDUs in the last year was still low (25%).
- Only 20% of IDU accessed NEP at services such as health care clinics, but outside the health centres the rate was higher, with 33% at the drop-in centres and 32% from NGO workers, while 10% accessed services from satellites.
- Youth were the population group that most frequently attended discussions or counselling on HIV-AIDS (82%), followed by IDU (74%). HRM least often attended discussions (14%).

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CIS	Cluster Information Sheet (computer application)
CRS	Chain Referral Sampling
DFSW	Direct Female Sex Worker
FHI	Family Health International
FSW	Female Sex Worker
HIV	Human Immunodeficiency Virus
HRM	High-Risk Men: men potentially at high risk of HIV infection, such as seafarer, dock worker, truck driver and moto-taxi driver
IBSS	Integrated Behavioural Sentinel Surveillance
IDU	Injecting Drug User
IFSW	Indirect Female Sex Worker
LJSS	Needle Exchange Program
Lokalisasi	Red-light areas
MDGs	Millennium Development Goals
MMT	Methadone Maintenance Therapy
MoH	Ministry of Health, Republic of Indonesia
MSM	Men who have Sex with Men
MTCT	Mother to child transmission
NEP	Information, Education and Communication
NG/CT	*Neisseria gonorrhoeae/Chlamydia trachomatis*
NGO	Non-Governmental Organization
PCR	Polymerase Chain Reaction
PLHIV	Person/People Living with HIV
PPS	Proportionate Probability Sampling
Prisoner	Man or women who has already been sentenced and is undergoing sentence in a prison or remand centre
PSU	Primary Sampling Unit
RDS	Respondent Driven Sampling
RPR	Rapid Plasma Reagin
Seed	A small group of respondents chosen especially to identify additional respondents in their population group
STI	Sexually Transmitted Infection

SUM I	Scaling Up for Most at Risk Population I (USAID program implemented by FHI)
Tanah Papua	The Indonesian part of the island of Papua/PNG that includes the provinces of Papua and West Papua
TLS	Time Location Sampling
TPHA	Treponema Pallidum Particle Agglutination
Two Stage PPS	Two stage Proportionate Probability Sampling
Waria	Men who have assumed a female identity (transgender or transvestite)
Wet setting	Sharing drugs that have already been mixed with water
WHO	World Health Organization

CHAPTER I. INTRODUCTION

Background

The Human Immunodeficiency Virus (HIV) epidemic globally remains a serious public health problem. It is estimated that there are 33.3 million (31.3-34.5 million) people who have been infected with HIV in the world. In Asia, HIV prevalence in the general population remains low at <1%, except in Thailand and North India. In Indonesia there are also provinces where HIV prevalence in the general population is 2.4% (MoH, 2006), those in Tanah Papua.

In general, HIV prevalence in Indonesia is still around 0.2%. Among the population with the highest risk, there has been an increase in prevalence since the 1990s, especially among injecting drug users (IDU), female sex workers (FSW), and Waria.

The increase in HIV prevalence among IDU has driven HIV prevalence in other most at risk populations, particularly transmission through commercial sex. An estimated one third of IDU have paid for sex in the previous month and a small percentage of IDU have sold sex (MoH, 2003). In order to better understand the dynamics of the epidemic and the major factors that can alter the pace of HIV transmission, HIV surveillance must implemented.

The earliest HIV surveillance in Indonesia was HIV sero-surveillance implemented in 1988 and behavioural surveillance carried out in 1996. The HIV surveillance system is evolving with the adoption of the second generation HIV surveillance guidelines issued by WHO (2002). In 2007, Indonesia conducted the first survey that collected both behavioural and biological data simultaneously, known as Integrated Biological and Behavioural Surveillance (IBBS). A second IBBS was carried out in 2009, but covering different locations from the 2007 IBBS.

The 2007 IBBS provided a complete picture of the magnitude, risk behaviour, knowledge, and coverage of HIV programs. In order to determine the trend of the HIV epidemic, a further IBBS was carried out in 2011 in the same locations as the 2007 IBBS.

The targets or population groups of the 2011 IBBS were direct FSW (DFSW), indirect FSW (IFSW), HRM (moto-taxi drivers, truck drivers, seafarers, and dock workers), IDU, Waria, men who have sex with men (MSM), and prisoners. An additional target in the 2011 IBBS was youth, representing vulnerable populations.

Scope

The scope of the 2011 IBBS included behavioural and biological measurements. Measurements included demographics, prevention behaviour, risk behaviour,

intervention coverage, and level of knowledge. Biological measurements included testing for HIV, syphilis, gonorrhoea and chlamydia among FSW, Waria, and MSM. Testing for HIV and syphilis was performed on IDU, prisoners and HRM. No biological tests were carried out on youth.

Objective

1. To determine the prevalence of HIV, syphilis, gonorrhoea and chlamydia among populations most at risk in several cities in Indonesia and analyze trends.
2. To determine the level of knowledge and perception about HIV transmission and prevention in populations most at risk and vulnerable populations (youth) and analyze trends.
3. To determine the level of behaviour at risk of acquisition/transmission of HIV among populations most at risk in several cities in Indonesia and analyze trends.
4. To measure the coverage of interventions to control HIV-AIDS and sexually transmitted infections (STI) and their impact on populations most at risk and vulnerable populations.

Outcomes

1. Ability to monitor program impact by looking at trends in HIV, syphilis, gonorrhoea and chlamydia prevalence in the population most at risk in several cities in Indonesia compared with the previous IBBS.
2. Data available to be used in making estimates and projections of HIV-AIDS cases in Indonesia.
3. The results IBBS can be used as a tool for advocacy.
4. A source of data for planning of HIV control programs.

Report Layout

The purpose of this report is to describe the results of the 2011 IBBS. The introduction in Chapter I contains the background, scope, purpose, outcomes and report layout. Chapter II consists of design and timeline, location, population groups, type of data, samples, quality assurance of biological testing, tools and methods for data collection, data management and implementation of the 2011 IBBS, together with analysis and limitations. Chapter III presents results and discussions from the 2011 IBBS.

CHAPTER II. METHODOLOGY

Design

The 2011 IBBS used a cross-sectional design.

Timeline

Data collection began in January 2011, and was completed in March 2011, except for the Jayawijaya (Wamena) survey that was implemented in May 2011.

Locations

Surveys were conducted in 11 provinces in Indonesia covering 33 regencies/cities: North Sumatra (Medan City, Deli Serdang Regency), Riau Archipelago (Batam City), Lampung (Bandar Lampung City, South Lampung Regency), Jakarta (West Jakarta, East Jakarta, North Jakarta, South Jakarta, Central Jakarta), West Java (Bandung City, Bekasi City), Central Java (Semarang City, Batang Regency), East Java (Surabaya City, Malang City, Banyuwangi Regency), Bali (Denpasar City), East Nusa Tenggara (Kupang City), Moluccas (Ambon City), and Papua (Jayapura City, Jayapura Regency, Jayawijaya Regency). The provinces were the same as those in the 2007 IBBS, with the addition of Lampung and the Moluccas.

Population Groups

Population groups surveyed were direct female sex workers (DFSW), indirect female sex workers (IFSW), injecting drug users (IDU), Waria, men who have sex with men (MSM), prisoners, HRM (seafarers, dock workers, truck drivers, moto-taxi drivers), and youth.

The survey population groups were defined as follows:

1. DFSW are woman who operate openly as commercial sex workers, who had commercial sex with at least one customer in the previous month, and were at the location surveyed during the survey team's visit.
2. IFSW are women who operate covertly as commercial sex workers, usually working in places or areas of a particular business (bar, massage parlour, etc.), selling sex in the previous month to at least to one customer, and were at the location surveyed during the survey team's visit.
3. HRM include inter-city truck drivers, moto-taxi drivers, seafarers, and dock workers. Criteria for HRM respondents are being biologically male, and currently working in the selected company or at truck stops (inter-city truck drivers), taxi stand (moto-taxi driver), and seaports (seafarers and dock workers).
4. Waria are people who are biologically male, but behave, act and feel like women, had lived in the survey city for at least one month and are recognized as 'mother' by Waria peers or Waria by NGO workers. This 2011

IBBS did not only include Waria sex workers, but all Waria including those who work in salons.

5. MSM are men who recognize themselves as bisexual/homosexual, are biologically male, had lived in the survey city for at least one month, and had had sex with a man in the previous year.
6. IDU are male or female injecting drug addicts, had lived in the survey city for at least one month, had injected drugs in the previous month, and were not included in another survey site.
7. Prisoners are men and women who have been convicted and were serving sentences in prisons in the survey area.
8. Youth are state or private high school students currently in grade 11 (high school class 2).

Type of Data

Data collected in the IBBS 2011 consisted of behavioural data and biological data. Behavioural data was collected from all respondents, while biological data was only collected from respondents in the high-risk population groups, namely: collection of venous/peripheral blood to test for HIV and syphilis among some FSW, HRM, some MSM, and prisoners; collection of venous/peripheral blood to be tested for HIV and syphilis, and taking vaginal/anal smears for gonorrhoea and chlamydia testing from some FSW, Waria, and some MSM. Types of data according to location and population groups surveyed are shown in Table 1.

Table 1. Data Types by Location and Population

Regency/City	DFSW	IFSW	Truck driver	Moto-taxi driver	Seafarer	Dock worker	Waria	MSM	IDU	Prisoner	Youth
Medan		■			●				●		❖
Deli Serdang	■		●	●							
Batam	■	■			●					♦	❖
North Jakarta	■					●					
West Jakarta		■									
Central Jakarta							■	■	●	♦	❖
South Jakarta											
East Jakarta											
Bandung	■	■					■	■	●		
Bekasi	●	●									
Semarang	■	■			●		■	●	●	♦	❖
Batang	■		●								
Surabaya	■	■			●		■	■	●		❖
Banyuwangi	■										
Malang	■	■					■	●	●	♦	
Denpasar	■	■	●							♦	❖
Kupang	●	●			●						
Jayapura City & Regency	■	■		●							❖
Bandar Lampung	■	■									
South Lampung			●								
Ambon	■	■			●						
Wamena	■										

■ Interview, venous/peripheral blood sampling, and vaginal/anal smear; ● Interview, venous/peripheral blood sampling; ♦ Self completion of questionnaire, venous/peripheral blood sampling; ❖ Self completion of questionnaire

Samples

The sample size in each population groups was designed to depict behaviours. Among most at risk populations, the minimum sample size that is adequate for the interpretation of behaviours is 250 respondents (WHO, 2000). In HRM, with the assumption that not everyone in the population is at risk, then the minimum sample size was set at 300-400 respondents. IBBS 2011 respondents were obtained by random sample of population groups surveyed who live and work in the surveyed location, selected based on their regular work place or places where they assemble (hang out). Sample sizes were designed to be the minimum required to represent the survey population in the selected regency or city.

The design of sampling used in this 2011 IBBS was as follows:

1. Two stage-PPS was used for the DFSW and IFSW, seafarers, dock workers, moto-taxi drivers, Waria, prisoners, and youth. In the two-stage sampling design, the first step is to select a sample at the survey sites by using the Cluster Information Sheet (CIS) application according to the decided sampling framework. The CIS application was used to perform the sample selection at the survey sites using Probability Proportional to Size (PPS), with the 'size' being the size of the population group in each location. The second stage was to select the sample (respondents) that meets the requirements at each selected location. Different methods of sample selection were used for static and mobile population groups. For mobile population groups, sampling was conducted randomly or directly in line with those found, whereas for the static population groups, lottery-random sampling was used.
2. The choice of location for truck drivers was done using Time-Location Sampling (TLS), in which a list of usual truck rest stop (i.e. per two hours) locations was made prior to the selection of sample sites. This time slot became the sample frame as the basis for selection of sample locations. The selection of sample locations for each time slot was determined at random, using a Random Number Table. After the sample-time location was selected, then the sample (respondents) was chosen by selecting the first two truck drivers to participate from all drivers at that location. Additional respondents were selected as trucks came to park at this location, by selecting the last truckers to arrive to participate in the survey. And so on, until the interval time of two hours at the selected time slot expired.
3. Respondent Driven Sampling (RDS) was used for MSM and IDU. This technique is a snowballing sampling technique by recruitment quota and with incentives to motivate both recruiters and recruits. This method was used because MSM and IDU populations are hidden and hard to reach. As a result, methods such as cluster sampling cannot be used, because the sampling framework is not appropriate for this population. The first step was to select a seed who was an MSM or IDU who could encourage and

motivate the population to participate in this activity. This seed was asked to recruit three members of the population, and each of these three people was expected to find three others. And so on until the sample size was achieved or until the sample reached a saturation point where no one else came.

If the number of respondents identified did not reach the minimum sample size, then the entire population was surveyed.

The sampling method used in 2011 had some differences compared with that in 2007. In 2007, for moto-taxi drivers, the method used was TLS while in 2011 the method used is a two stage PPS, since moto-taxi drivers remain in one place for a long time.

In 2011, MSM and IDU sampling used the RDS sampling method in all locations. In 2007, some areas used a partial TLS and RDS method, resulting in problems for data analysis. Sampling methods are shown in Table 2.

Table 2. Sampling Methods

Population	Type of location	Population characteristic	Method
DFSW	*Lokalisasi*/brothels	Static	Two-stage PPS
	Roadside/parks/cemeteries	Mobile	
IFSW	Massage parlour/sauna/spa, etc.	Static	Two-stage PPS
	Restaurant/bar/karaoke/disco/pub	Mobile	
	Hotel/motel/guest house, etc.	Mobile	
Seafarer	Seaport	Mobile	Two-stage PPS
Dock worker	Seaport	Mobile	Two-stage PPS
Truck driver	Truck parks	Mobile	TLS
	Truck stops	Mobile	
Moto-taxi driver	Moto-taxi stand	Mobile	Two-stage PPS
Waria	Salon/karaoke/bar/mall	Mobile	Two-stage PPS
MSM	–	Mobile	RDS
IDU	–	Mobile	RDS
Prisoner	Prison	Static	Two-stage PPS
Youth	School	Static	Two-stage PPS

Biological Testing Quality Assurance

To ensure the quality of the test of biological specimens, the following activities were carried out:

1. Determination of reagents used. HIV tests were done using Fokus (R1) and Oncoprobe (R2) reagents. Syphilis test used Rapid SD (TPHA) and RPR Shield (RPR).
2. Designating the Health Research and Development Agency, Ministry of Health as the centre for PCR examination and HIV test quality assurance. Regional Health Laboratories were designated as centres for HIV and syphilis testing in the regions.

3. Unique barcodes were used for each biological sample to associate them with related behaviour questionnaires.
4. Training of specimen collectors on how to obtain a specimen correctly.
5. Training of laboratory staff in reading test results, especially for HIV and syphilis.
6. Supervision of collection of biological specimens, specimen transport and results of biological tests.
7. Quality assurance of HIV test results by performing a cross check, i.e. the re-testing of all positive and indeterminate as well as 10% of negative results. On cross-checking the results, there were two cities that achieved less than 95%, Jayapura and Jakarta, so their entire sample was re-tested.
8. Internal control of NG/CT test.
9. The use of negative control and positive control for syphilis testing.
10. Results of HIV and syphilis testing were recorded in the form discussed in the data management section.

Instruments and Data Collection Method

Data collection used previously validated questionnaires. For FSW, HRM, Waria, MSM, and IDU, completion of the questionnaire was conducted by the interviewer. Prisoners and youth either self-completed or dictated the answers. For behaviour measurement, the instruments used were different behaviour questionnaires for each risk population.

Data Management

Data were grouped into four types, behavioural data, biological data, quality control forms, and data mapping and listing. At the regency/city level, all data was managed by the supervisor and the field coordinator. Once the data was complete, the data was sent to the national level.

At the national level, a data entry clerk entered the data using a data entry application based on CSPro version 4. Data was entered twice by different clerks, followed by a cross-check of the two sets of data. If there was any difference, data was verified by rechecking the questionnaires.

In the next phase, data consistency checks were performed by identifying problems in questionnaires and data entry. The results of the consistency check was presented to the experts who then sought solutions.

The final step was to combine behaviour and biological data, analyse data and write reports.

Implementation of the 2011 IBBS

Respondents participating in the 2011 IBBS totalled 25,150 people. In some locations the number of samples taken was not in accordance with the plan. This was related to the population size in these locations, where the numbers were

less than a predetermined sample size, so that the sample population consisted of all those found.

Planning and achievement of the number of samples can be seen in Table 3.

Table 3. Sample Planning and Achievement

Target Population	Planned Sample	Achieved Sample
DFSW	4,250	4,069
IFSW	3,250	3,157
Seafarer	2,400	2,399
Dock worker	400	400
Truck driver	1,500	1,500
Moto-taxi driver	600	600
Waria	1,250	1,089
MSM (RDS)	1,250	1,250
IDU	1,500	1,420
Prisoner	2,000	2,000
Youth	7,000	7,022

Analysis

Data analysis was conducted descriptively to look at demographic, behavioural and biological variables of the 2011 IBBS, while bivariate analysis was used to determine the factors thought to be associated with the 'key variables'. The data used for descriptive and bivariate analyses of data was from all respondents who were involved in the 2011 IBBS. The application used for analysis was Stata version 11.

The next analysis compared the results of the 2011 IBBS with those of the 2007 IBBS. The data was compared to population groups in the same location.

Limitations

1. **Questionnaire**
   Errors in stepping from question to question meant that some data was not collected; differences in questions compared with the previous year, so that at the time of analysis they could not be compared; and the large number of questions resulting in respondents suffering fatigue and burnout when answering. Therefore, these limitations should be considered in any analysis.
2. **Different sampling methods**
   The sampling method for MSM and IDU were different in some areas between 2007 and 2011, leading to limitations in the analysis, so that caution is needed in drawing conclusions when comparing these results.
3. **Limitations related to listing**
   Not all regencies/cities have current mapping of most at risk populations, and security reasons as well as geographical location made it difficult to visit them. This affected the process of sampling. A similar problem arose with the sampling that used the TLS method. The number of respondents and data

obtained was not necessarily the same as a result of problems in the field such as delayed crossings of trucks.

4. Refusal by respondents

Some selected respondents in several locations declined to take part. Reasons for this included that similar activities had recently been carried out; ‘mothers’ of Waria who were uncooperative; pimps and owners of entertainment venues unwilling to allow the survey team to enter the selected sites; and respondents scared of biological sampling. Therefore the data analysis should apply appropriate weighting to take account of these limitations.

CHAPTER III. RESULTS AND DISCUSSION

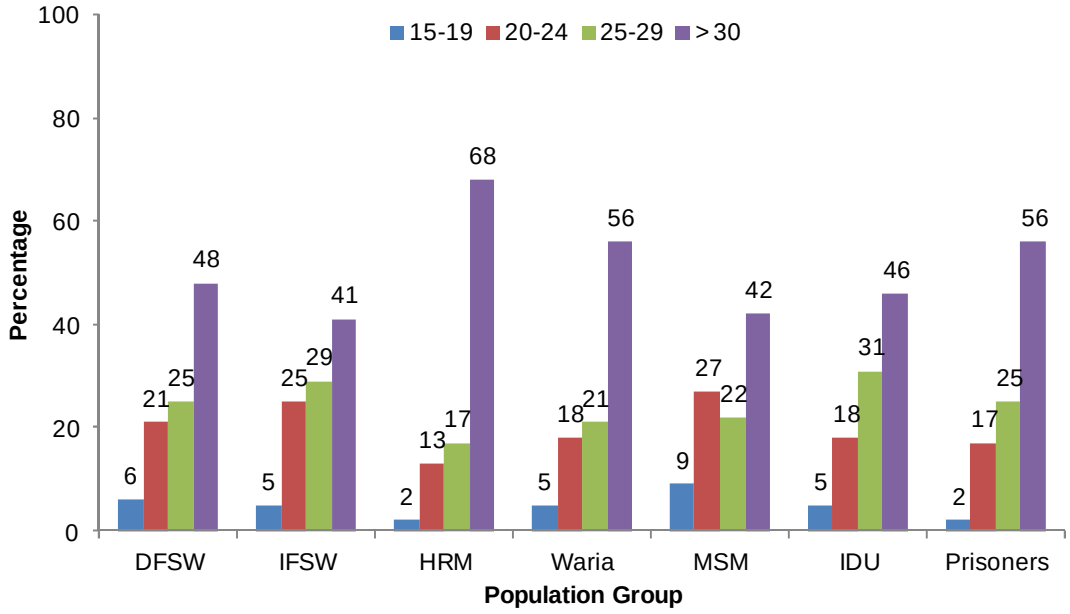
A. Characteristics of the Population Groups

The characteristics that will be discussed in this chapter are age, education level, marital status, source of income, and residence.

1. Age

Most of the respondents aged 20-29 years were from FSW, MSM and IDU groups. Most of those aged 15-19 years were MSM (Figure 1).

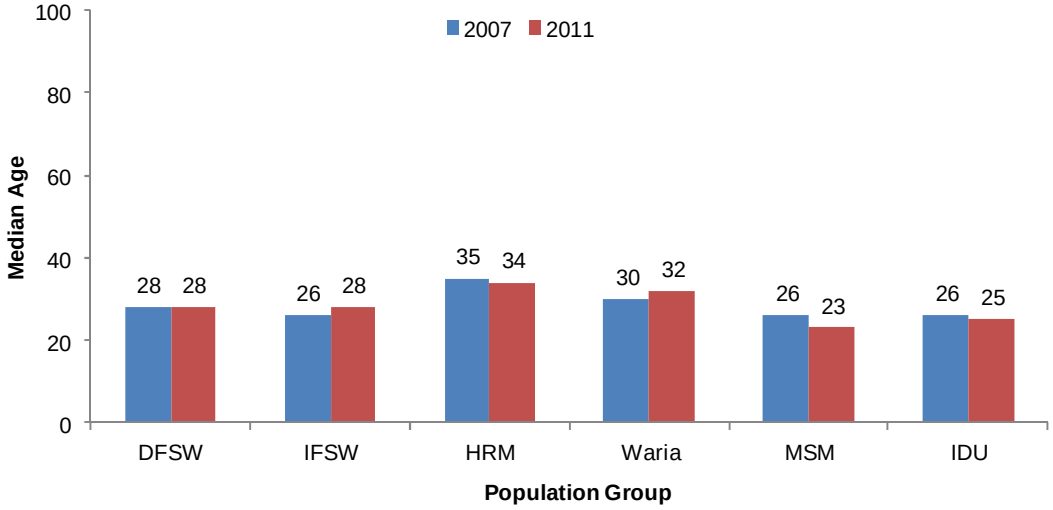
Figure 1. Population Distribution by Age Group, 2011 IBBS



The median age in each population was: HRM, 34 years; prisoners, 31 years; Waria, 31 years; DFSW, 28 years, IFSW, 28 years, MSM. 27 years; and IDU, 25 years.

When compared with the results 2007 IBBS in the same locations, the median age in all populations being compared did not change significantly (Figure 2).

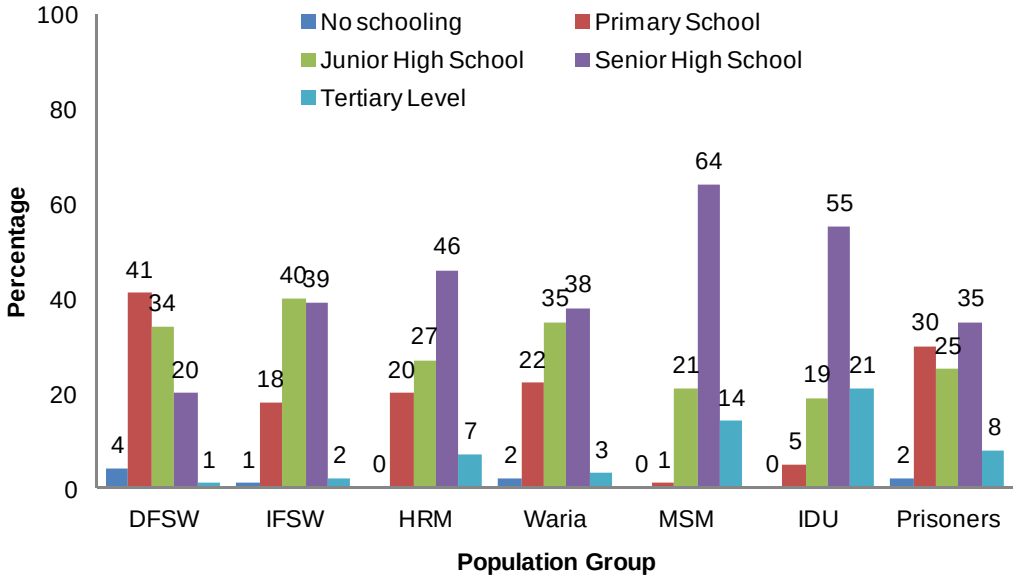
Figure 2. Population Distribution by Median Age, 2007 and 2011 IBBS



2. Education level

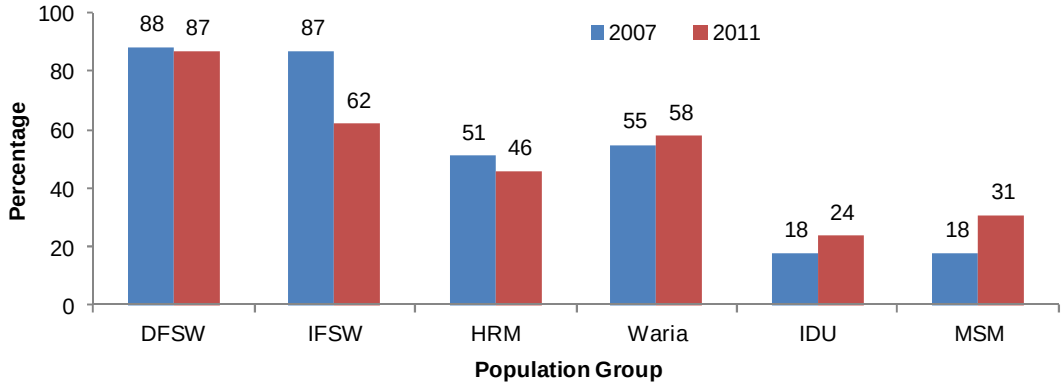
The majority of FSW (both direct and indirect), Waria and prisoners were poorly educated, that is below junior high school, while the HRM, MSM, and IDU were well educated (high school up to tertiary level). The highest number of the highly educated population was MSM (Figure 3).

Figure 3. Population Distribution by Education Level, 2011 IBBS



Comparing the percentage of population who had low education levels among IBBS respondents in 2007 (MoH, 2008) and 2011 in the same locations indicates that the results are not much different in the DFSW and Waria. But in other populations there were significant differences (Figure 4).

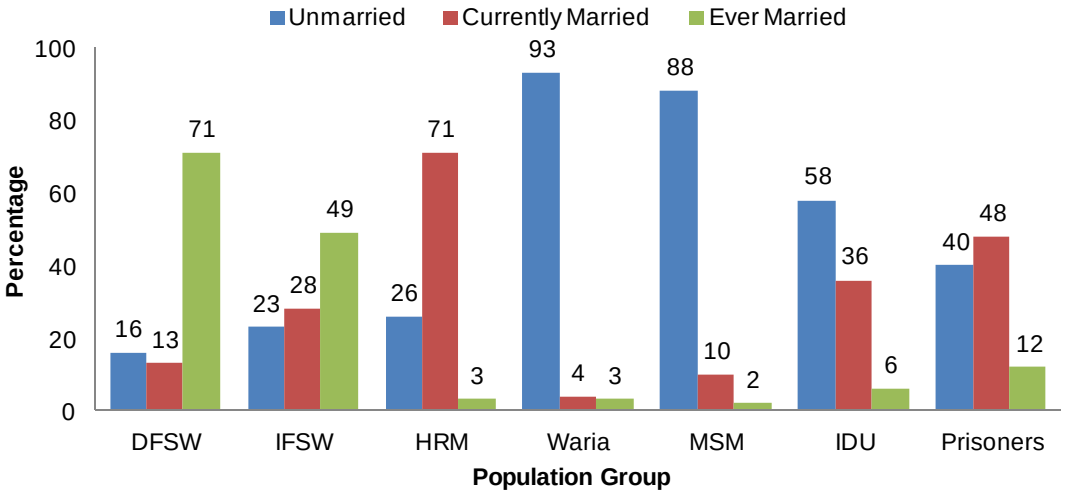
Figure 4. Population Distribution by Low Educational Level, 2007 and 2011 IBBS



3. Marital status

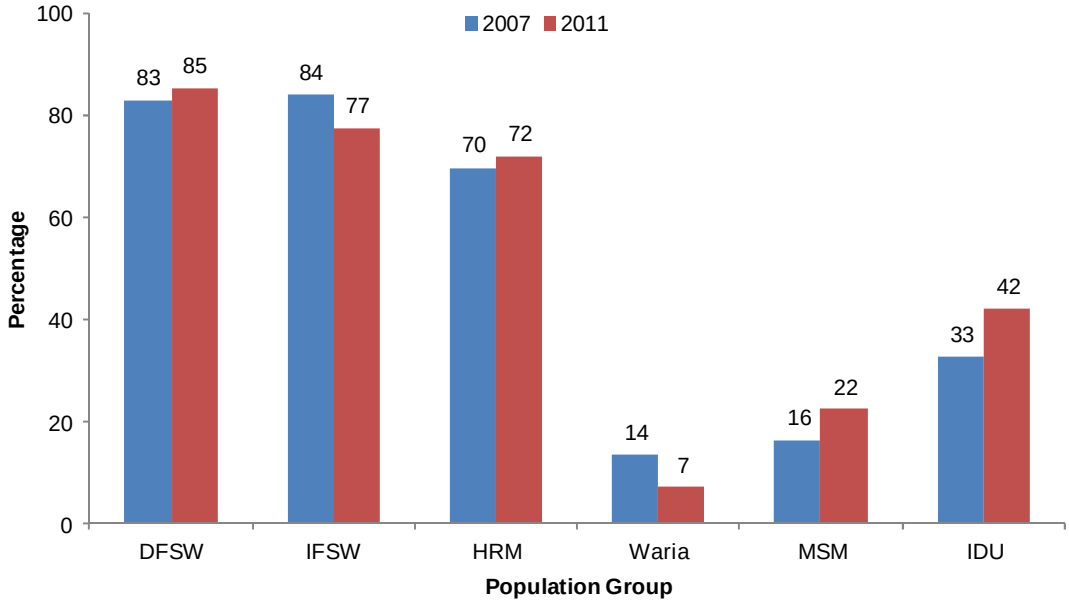
Marital status should be considered related to the possible interaction between high-risk populations and the general population. Marital status was assessed based on a legal marriage between partners of the opposite sex. The majority of those with unmarried status were Waria, MSM, and IDU. The majority with status ever married were FSW, while the majority of those currently married were HRM and prisoners (Figure 5).

Figure 5. Population Distribution by Marital Status, 2011 IBBS



When compared with the results of the 2007 IBBS (MoH, 2008) in the same locations, the distribution of marital status (married or ever married) for each of the survey population did not show significant differences (Figure 6).

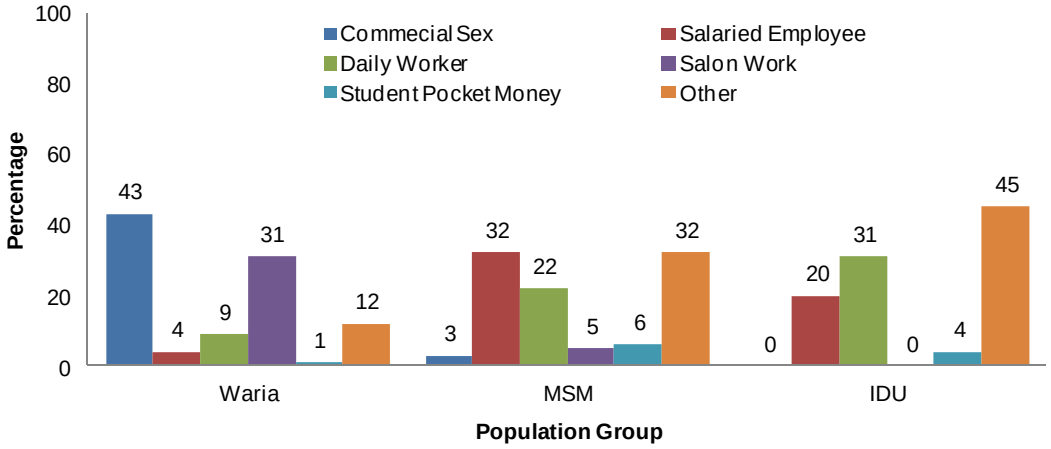
Figure 6. Population Distribution by Marital Status (Ever Married or Currently Married), 2007 and 2011 IBBS



4. Main source of income

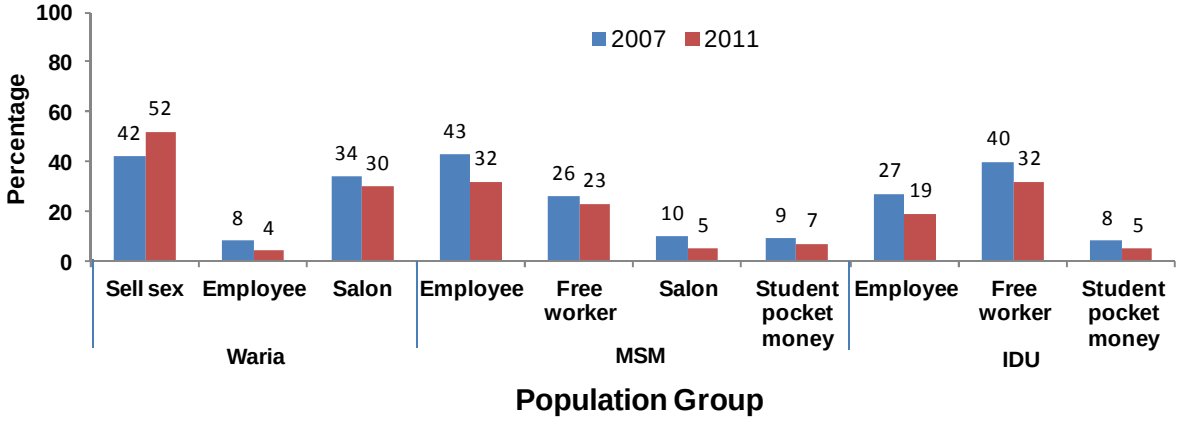
The main source of income for Waria was selling sex and working in a salon. The primary source of income for IDU and MSM was self-employment or working for others. A few of the MSM and IDU admitted to receiving pocket money as students (Figure 7).

Figure 7. Population Distribution by Main Income Source, 2011 IBBS



When compared with the results of the 2007 IBBS (MoH, 2008) in the same locations, there was no significant difference in major income sources of each population (Figure 8).

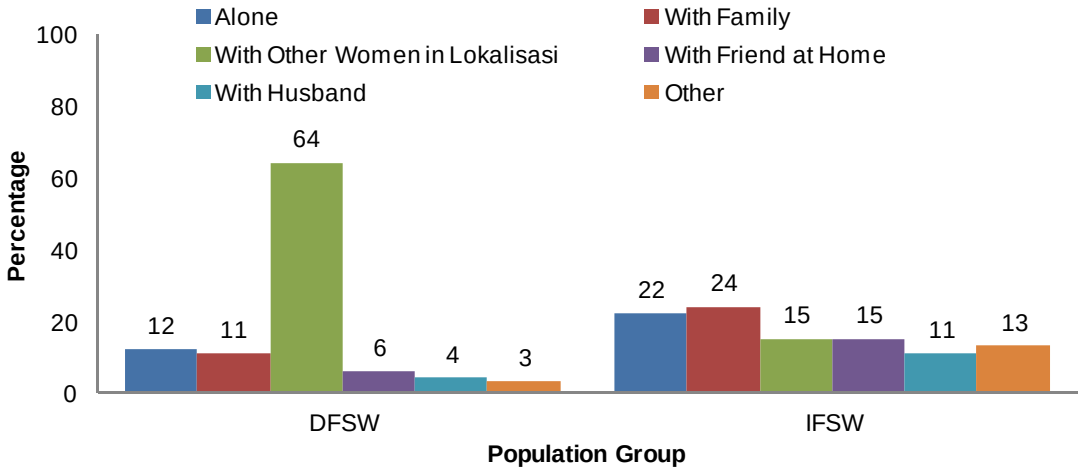
Figure 8. Population Distribution by Main Income Source, 2007 and 2011 IBBS



5. Residence

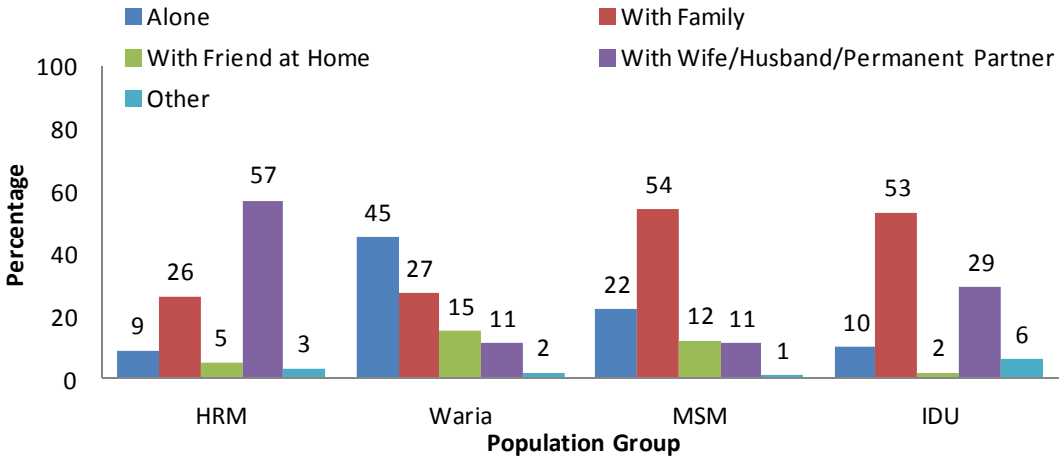
Most of the DFSW reported that they lived with other women in *lokalisasi*, while about 4% lived with their husbands. Most IFSW lived with their family, while 11% lived with their husbands (Figure 9)

Figure 9. Distribution of DFSW and IFSW by Residence, 2011 IBBS



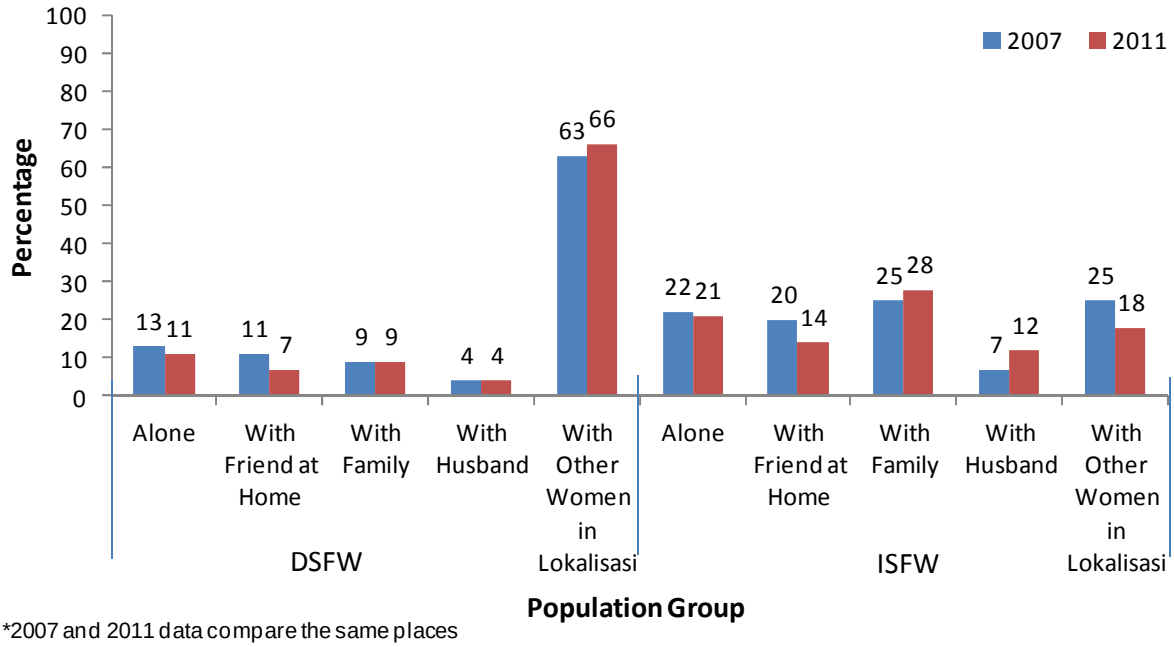
The majority of HRM lived with their wives. Many MSM and IDU lived with their family. The majority of Waria (45%) lived alone, likely related to the fact that the majority of these stated that they were unmarried (Figure 10).

Figure 10. Population Distribution by Residence, 2011 IBBS



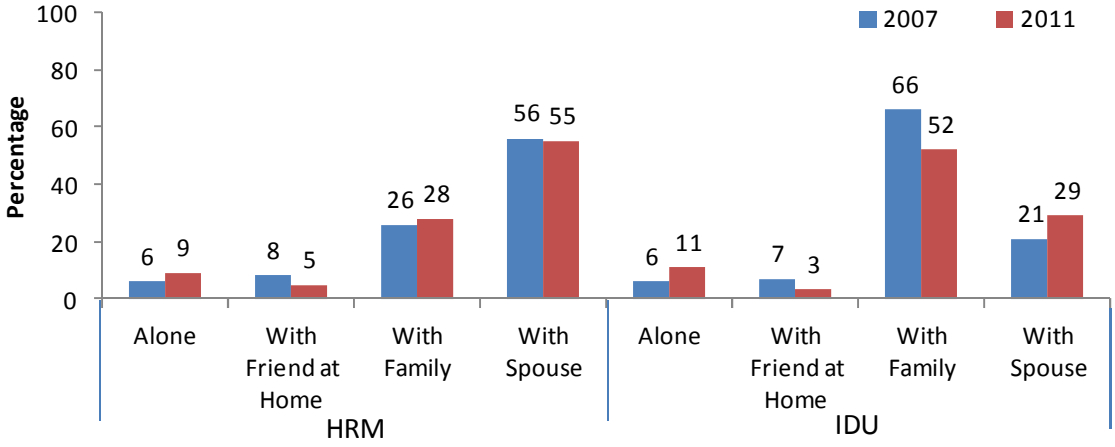
When compared with the results of the 2007 IBBS in the same locations, there was no significant difference in residence of each population (Figure 11-13).

Figure 11. Distribution of DFSW and IFSW by Residence, 2007 and 2011 IBBS



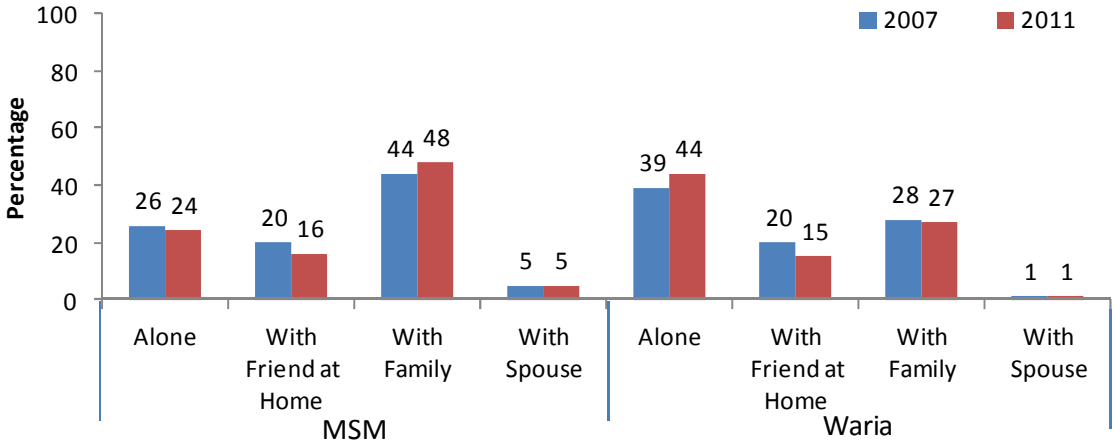
*2007 and 2011 data compare the same places

Figure 12. Distribution of HRM and IDU by Residence, 2007 and 2011 IBBS



*2007 and 2011 data compare the same places

Figure 13. Distribution of MSM and Waria by Residence, 2007 and 2011 IBBS

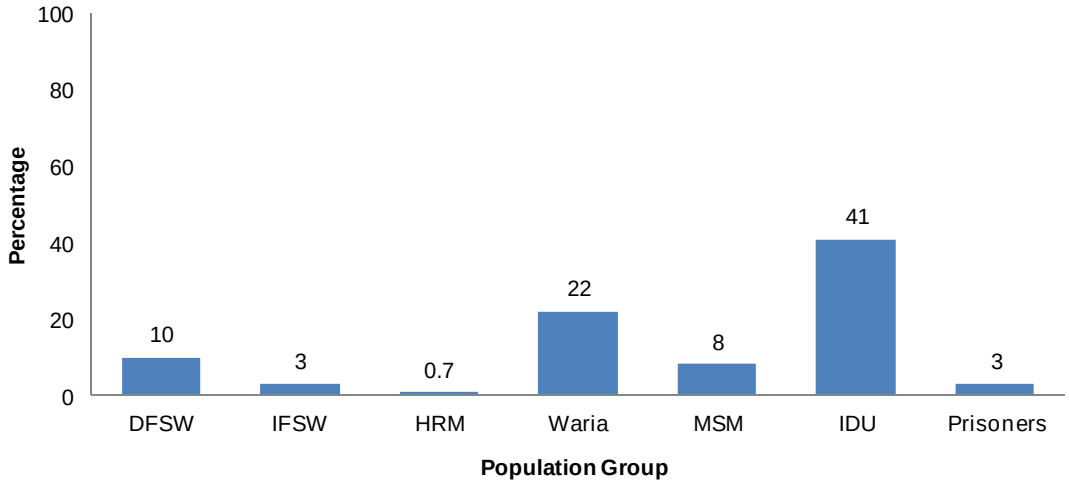


*2007 and 2011 data compare the same places

B. HIV and STI Prevalence

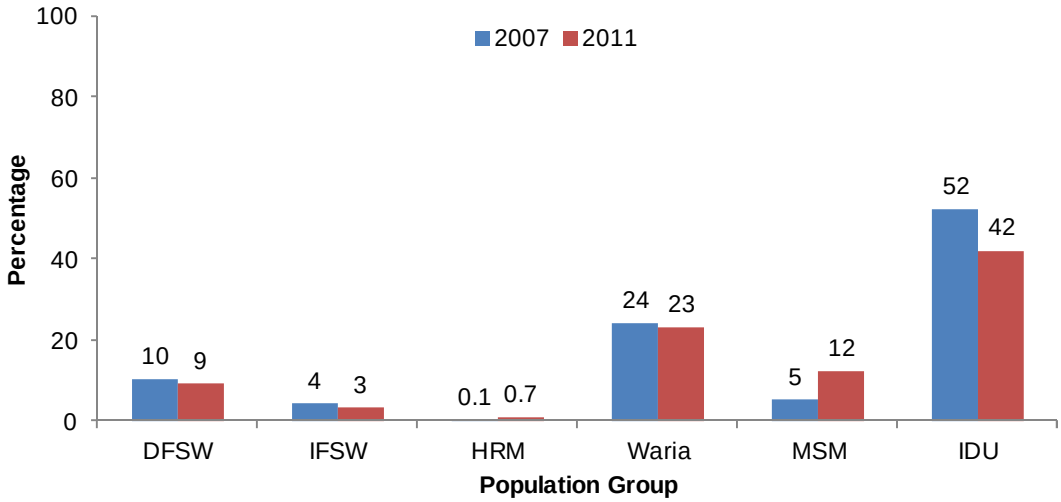
The highest HIV prevalence was found among IDU (41%), followed by Waria (22%), DFSW (10%), MSM (8%), prisoners (3%), IFSW (3%), and HRM (0.7%) (Figure 14).

Figure 14. HIV Prevalence by Population, 2011 IBBS



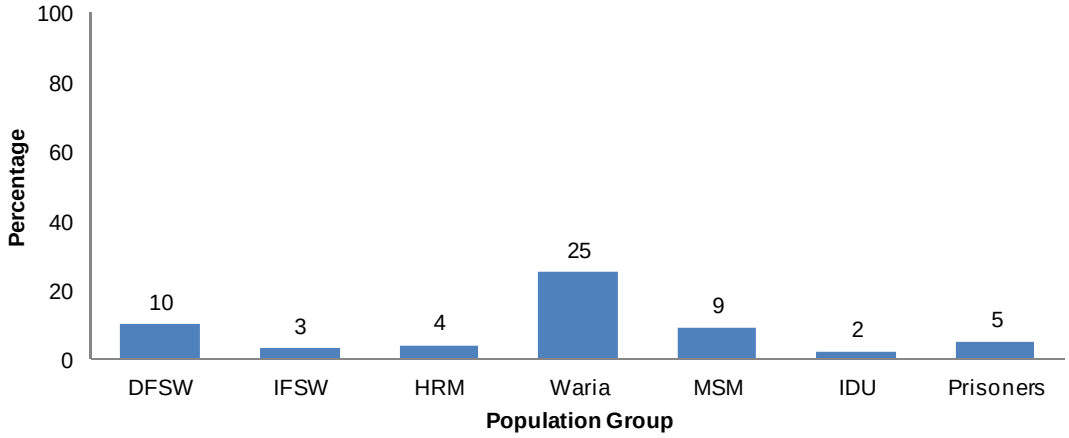
When compared with the results of the 2007 IBBS in the same locations, there has been a significant decline in HIV prevalence among IDU. A decline also occurred in among DFSW, IFSW and Waria, but this was not significant. Conversely there was an increase in HIV prevalence among MSM, from 5% to 12%, as well as among HRM from 0.1% to 0.7% (Figure 15).

Figure 15. HIV Prevalence by Population, 2007 and 2011 IBBS



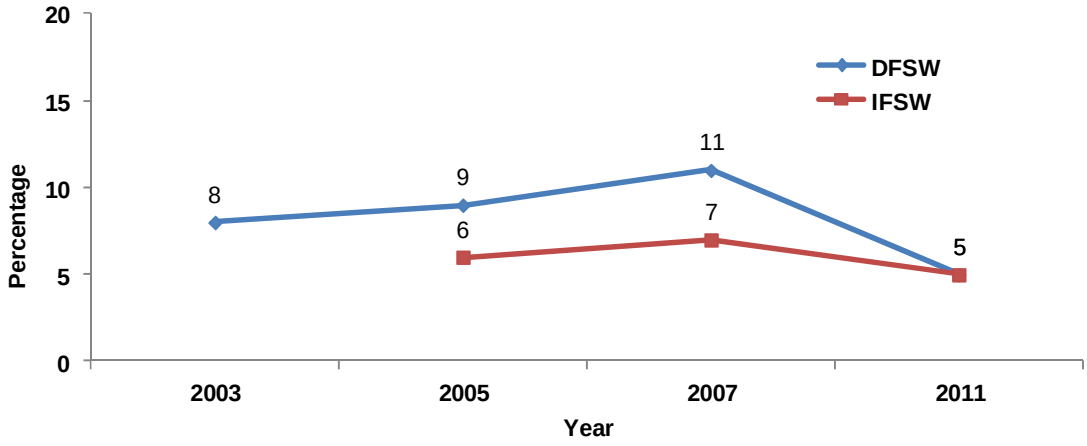
The highest prevalence of syphilis was found among Waria (25%), followed by DFSW (10%), MSM (9%), prisoners (5%), HRM (4%), IFSW (3%), and IDU (2%) (Figure 16).

Figure 16. Syphilis Prevalence by Population, 2011 IBBS



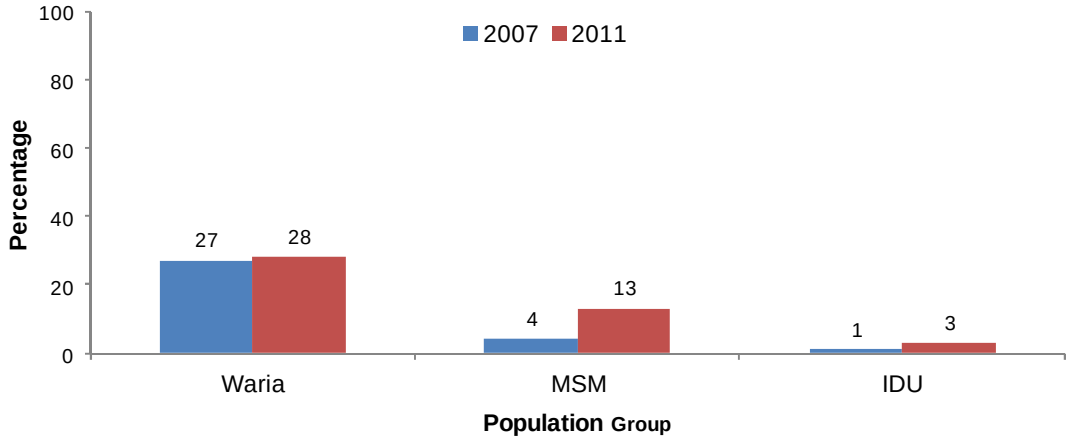
Data on the prevalence of syphilis among DFSW has been documented since 2003 and IFSW since 2005 in the same location (MoH, 2004; MoH, 2006, MoH, 2008). The prevalence of syphilis among DFSW in 2011 decreased when compared with 2003, 2005, and 2007. Also the prevalence of syphilis among IFSW in 2011 declined compared to 2005 and 2007, although the decline is not as much as among DFSW (Figure 17).

Figure 17. Syphilis Prevalence among DFSW and IFSW, 2003-2011



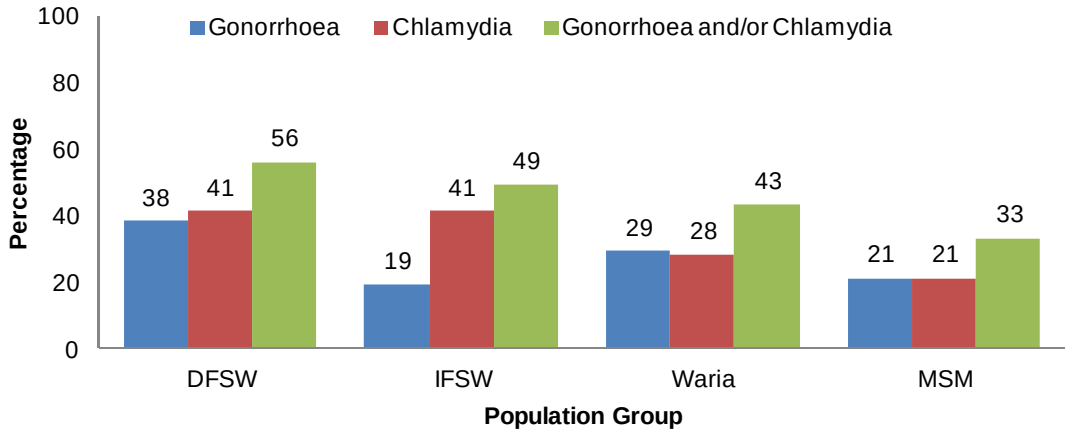
Compared to the results of the 2007 IBBS, in 2011 the prevalence of syphilis among MSM increased from 4% to 13%, among Waria from 27% to 28%, and among IDU from 1% to 3% (Figure 18).

Figure 18. Syphilis Prevalence by Population, IBBS 2007 and 2011



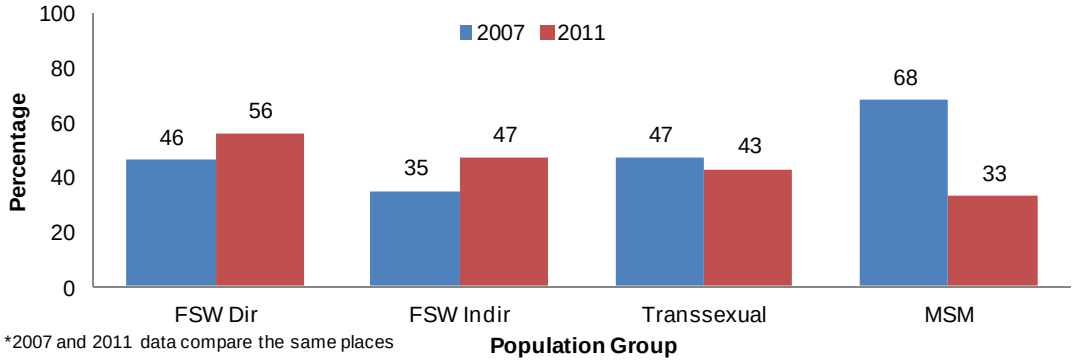
Gonorrhoea and chlamydia testing was only performed on DFSW and IFSW, Waria and MSM. Testing used the Polymerase Chain Reaction (PCR) method performed in the laboratory of the Research and Development Agency, Ministry of Health. For the tests, vaginal smears were taken from the FSW, and anal swabs from Waria. The highest prevalence of gonorrhoea was among DFSW (38%), followed by Waria (29%), MSM (21%), and IFSW (19%). The highest prevalence of chlamydia was among FSW (41% for both direct and indirect) followed by Waria (28%) and MSM (21%). The prevalence of gonorrhoea and/or chlamydia ranged between 33% (MSM) and 56% (IFSW) (Figure 19).

Figure 19. Gonorrhoea and/or Chlamydia Prevalence by Population, 2011 IBBS



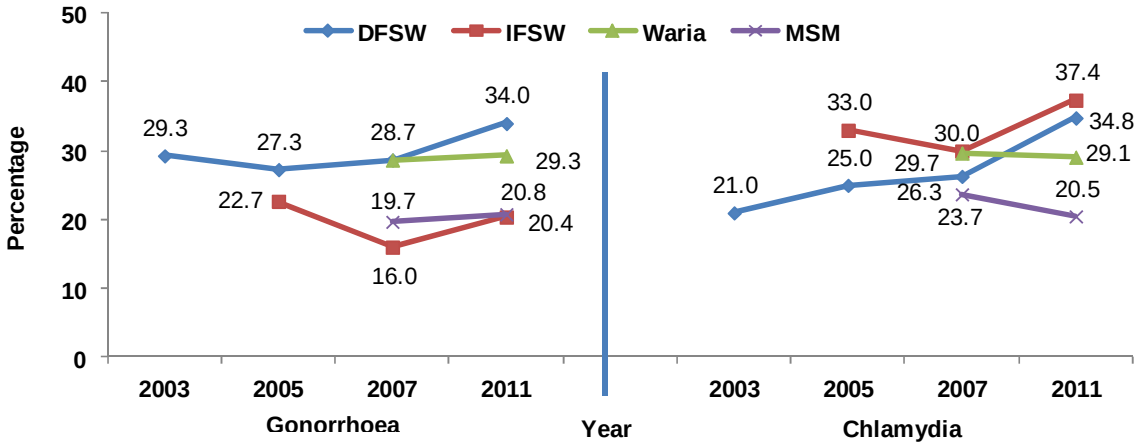
When compared with 2007 IBBS in the same locations, the prevalence of gonorrhoea and/or chlamydia increased among DFSW and IFSW, while it declined among Waria and MSM (Figure 20 and 21).

Figure 20. Gonorrhoea and/or Chlamydia Prevalence by Population, IBBS 2007 and 2011



*2007 and 2011 data compare the same places

Figure 21. Gonorrhoea and/or Chlamydia Prevalence by Year, 2003-2011



*data compares the same places

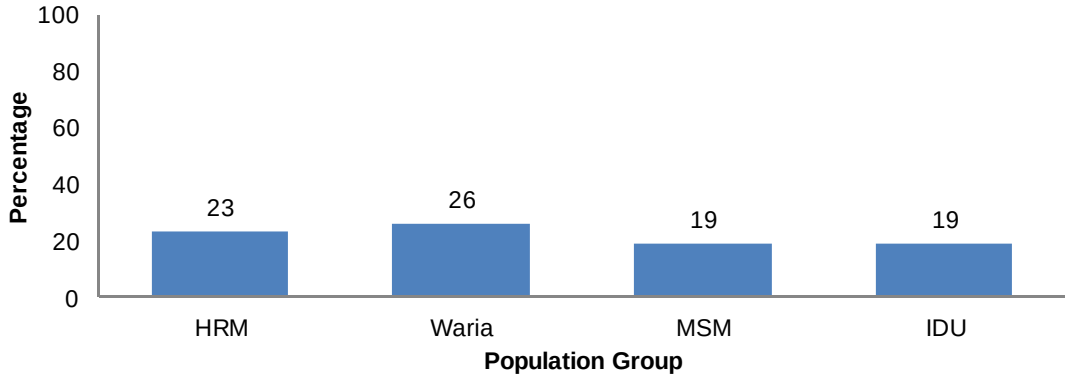
C. Risk Behaviour

Risk behaviours in the 2011 IBBS report include risks for HIV infection and other risk behaviours related to health in the population most at risk, and risk behaviours among the prisoners and youth.

1. Sex-buying behaviour

The highest rate of purchasing sex during the previous year was among Waria (26%), followed by HRM (23%), IDU and MSM (19% each) (Figure 22).

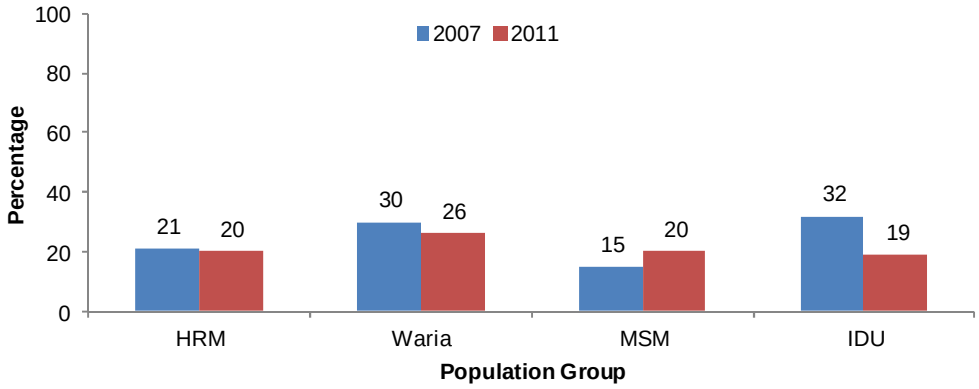
Figure 22. Population Distribution by Sex-Buying Behaviour in the Previous Year, 2011 IBBS



HRM bought sex in the previous year from FSW, while Waria and MSM bought sex from men (not Waria). Of the 24% of IDU who claimed to have bought sex in the previous year, 97% admitted to buying sex from women, 2% from Waria, and 1% from both women and Waria.

Sex-buying behaviour among Waria, HRM and IDU decreased when compared with the results of the 2007 IBBS at the same survey locations, while for MSM the behaviour increased (Figure 23).

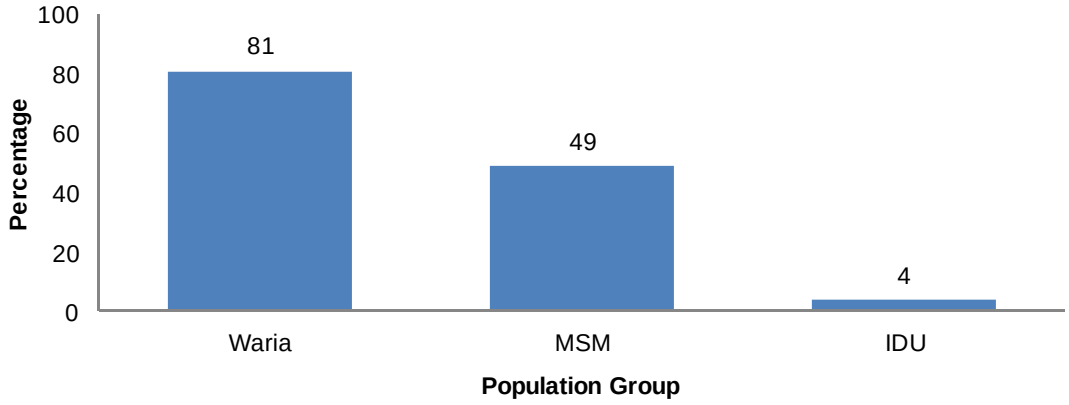
Figure 23. Population Distribution of by Sex-Buying Behaviour in the Previous Year, 2007 and 2011 IBBS



2. Sex-selling behaviour

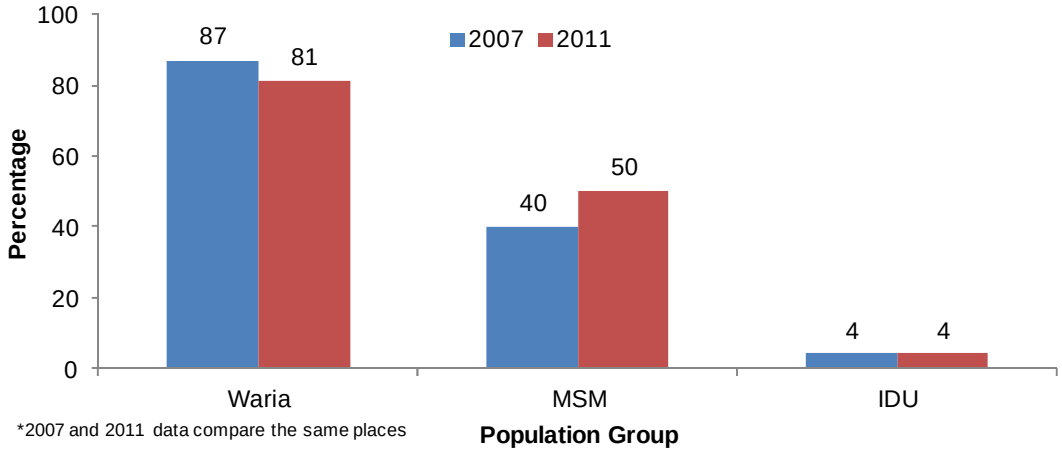
Among Waria, MSM, and IDU, selling sex in the previous year was highest in Waria (81%), selling sex to men. As many as 49% of MSM sold sex to both men and women. Among these, the majority (79%) sold sex to men, 4% to women, and 17% to both men and women. IDUs had the lowest rate of selling sex (4%) (Figure 24). Of those who did so, 81% sell sex to women, and 19% to men.

Figure 24. Population Distribution by Sex-Selling Behaviour in the Previous Year, 2011 IBBS



Sex-selling behaviour among Waria, MSM and IDU showed little change when compared with the results of the 2007 IBBS at the same survey locations (Figure 25).

Figure 25. Population Distribution by Sex-Selling Behaviour in the Previous Year, 2007 and 2011 IBBS



*2007 and 2011 data compare the same places

3. Frequency of commercial sex contacts

One of the things that can accelerate the transmission of HIV is the number of commercial sex contacts that occur. The number of commercial sex contacts can be determined from the number of buyers of sexual services from sex workers and the frequency of buying sex by the buyer.

In general, FSW, Waria, and MSM were the main populations who sold sex. FSW and Waria sold sex to men, and MSM sold sex to men and women. In addition, Waria and MSM also bought sex.

HRM and IDU were the main populations who bought sex. HRM bought sex from women, and IDU bought sex from women, men, and Waria. In addition to buying sex, IDU also sold sex.

The mean and median buyers of sexual services (in the population who sold sex) are shown in Figure 26. When compared to the average between the 2007 and 2011 IBBS results in the same locations, DFSW and IFSW showed

no change. However, among IDU there was a slight increase in buying sexual services, while among MSM there was a decrease (Figure 27).

Figure 26. Mean and Median Buyers of Sexual Services by Population Who Sold Sex, 2011 IBBS

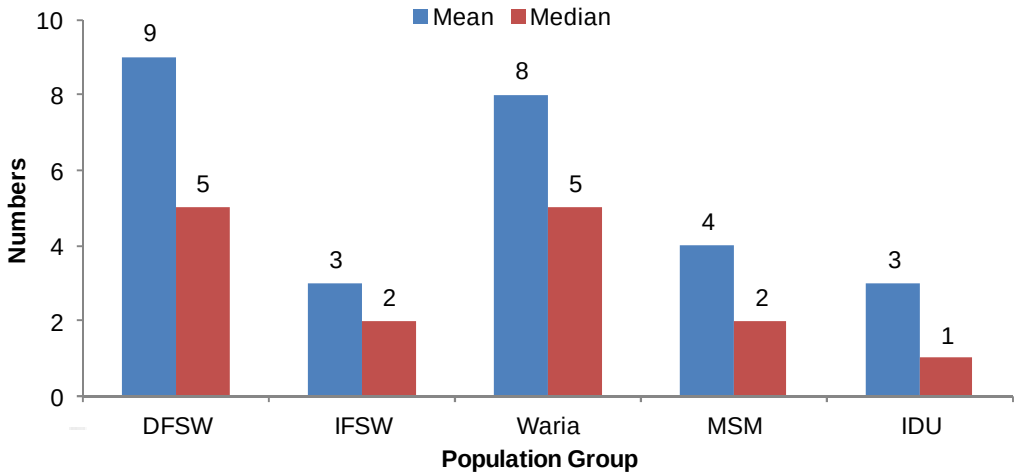
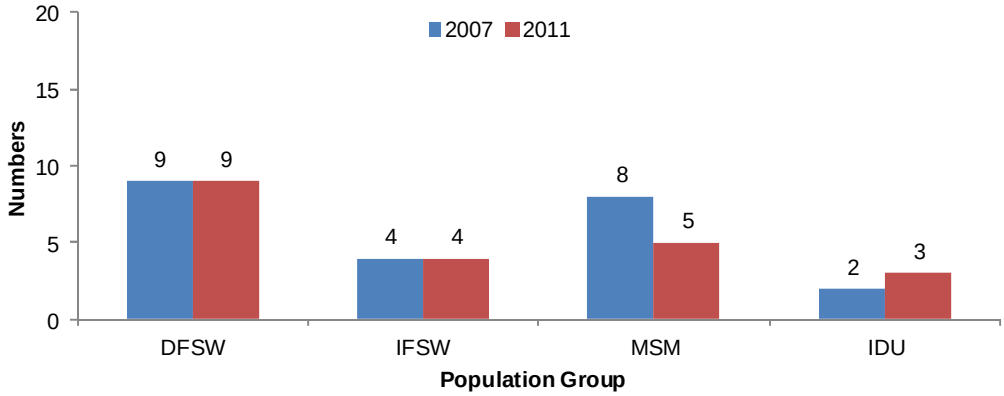


Figure 27. Mean Buyers of Sexual Services by Population Who Sold Sex, 2007 and 2011 IBBS



The mean and median of paid sex partners in the population who buy sex is shown in Figure 28. The average sex partners who are paid showed little difference between the 2007 and the 2011 IBBS (Figure 29).

Figure 28. Mean and Median Paid Sex Partners by Population Buying Sex, 2011 IBBS

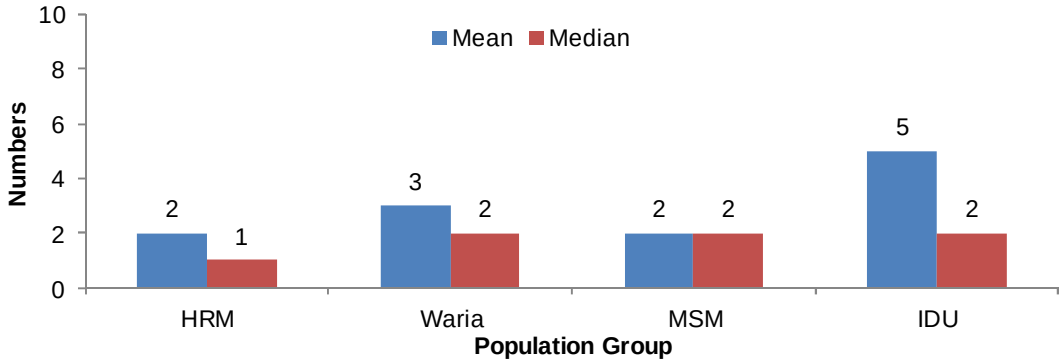
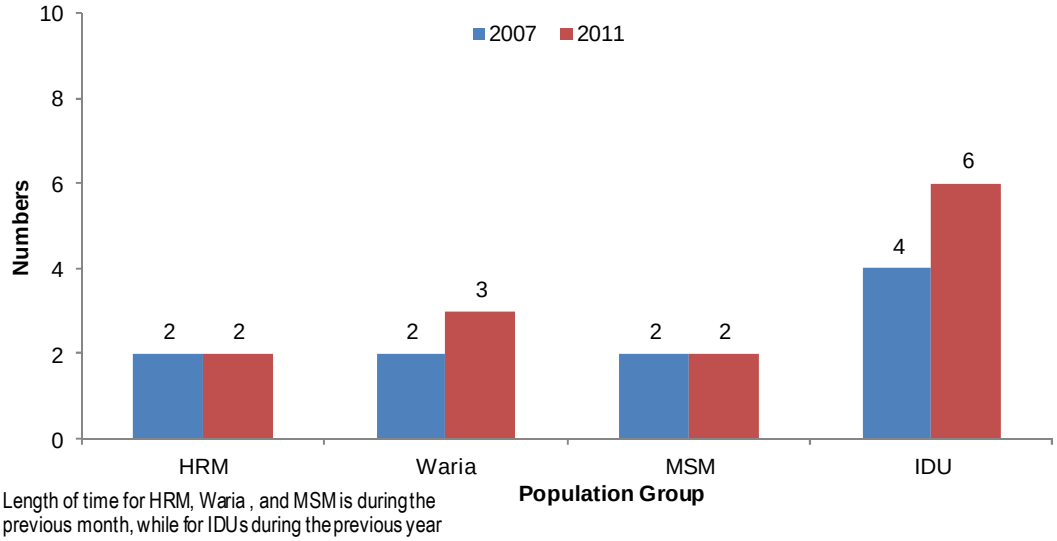


Figure 29. Mean Paid Sex Partners by Population Buying Sex, 2007 and 2011 IBBS

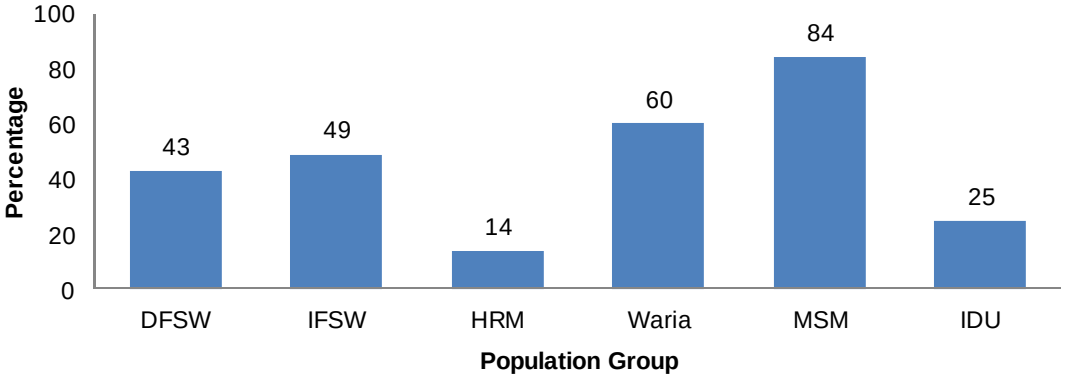


Length of time for HRM, Waria , and MSM is during the previous month, while for IDUs during the previous year

4. Other risky sex behaviour

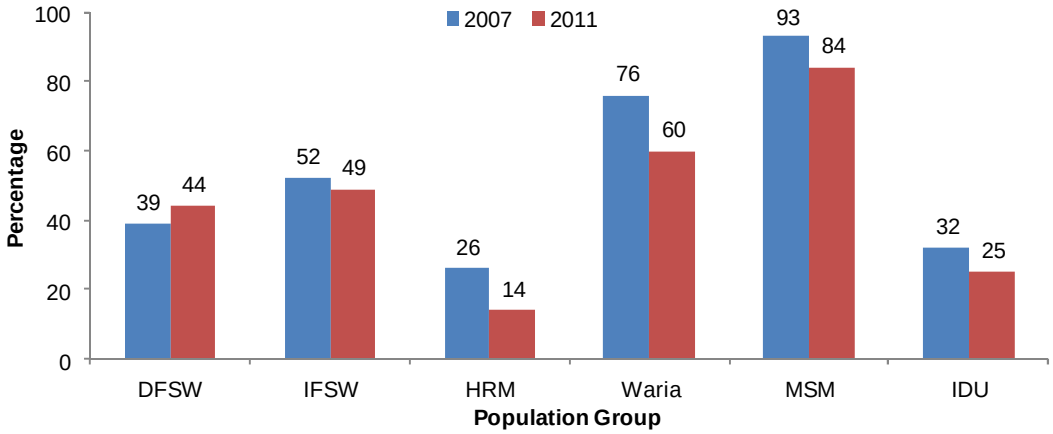
Risky sex behaviour does not occur only in commercial sex (sex with giving or receiving payment), but also in sex without payment. The survey population with the most unpaid sex was MSM (Figure 30). There was no change in these risky behaviours compared to the same sites in the 2007 survey.

Figure 30. Population Distribution by Risky Sex Behaviour in the Previous Year, 2011 IBBS



When compared with the results of the 2007 IBBS, sex with casual and non-commercial partners declined, except among DFSW, where there was a slight increase (Figure 31).

Figure 31. Population Distribution by Other Risky Sex Behaviour in the Previous Year, 2007 and 2011 IBBS

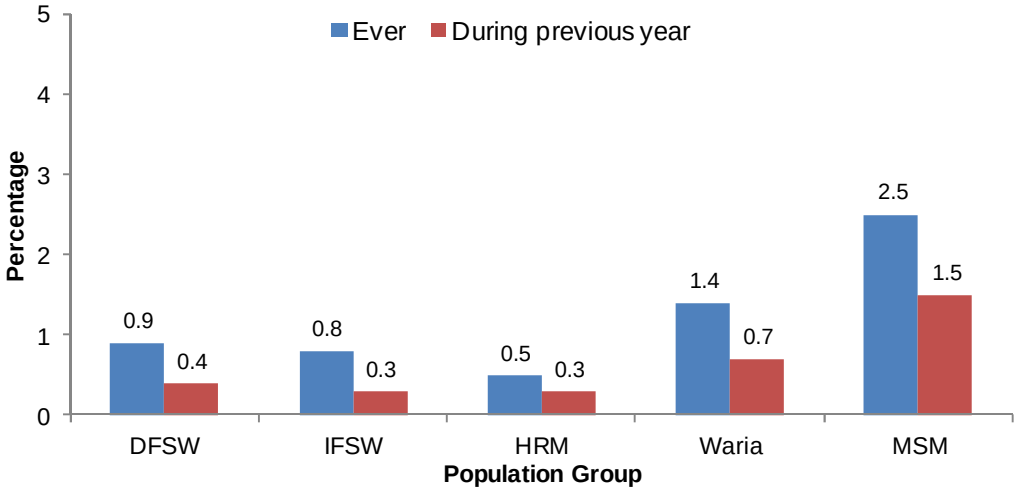


5. Risk behaviour related to injecting drug use

a. Injecting drug use among populations most at risk other than IDU

Except among IDU, injecting drug use in the previous year among populations most at risk was still quite low. The percentage of DFSW and IFSW, HRM, Waria, and MSM who had injected drugs in the previous year <2% (Figure 32).

Figure 32. Population Distribution by Injecting Drug Use, 2011 IBBS



When compared with the results of the 2007 IBBS in the same locations, there was a decline in injecting drug use, except among MSM and Waria in the previous year (Figures 33 and 34).

Figure 33. Population Distribution by Ever Injecting Drug Use, 2007 and 2011 IBBS

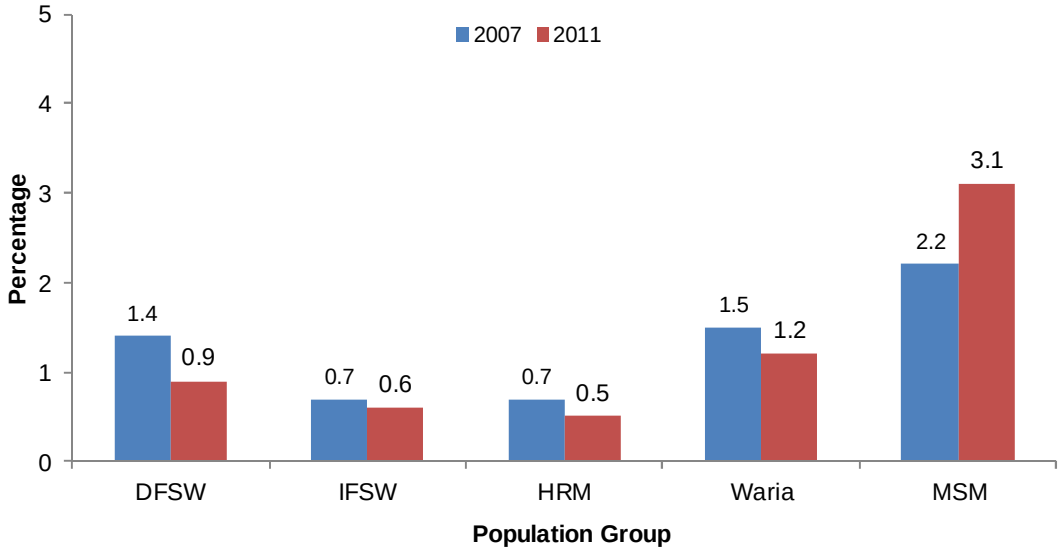
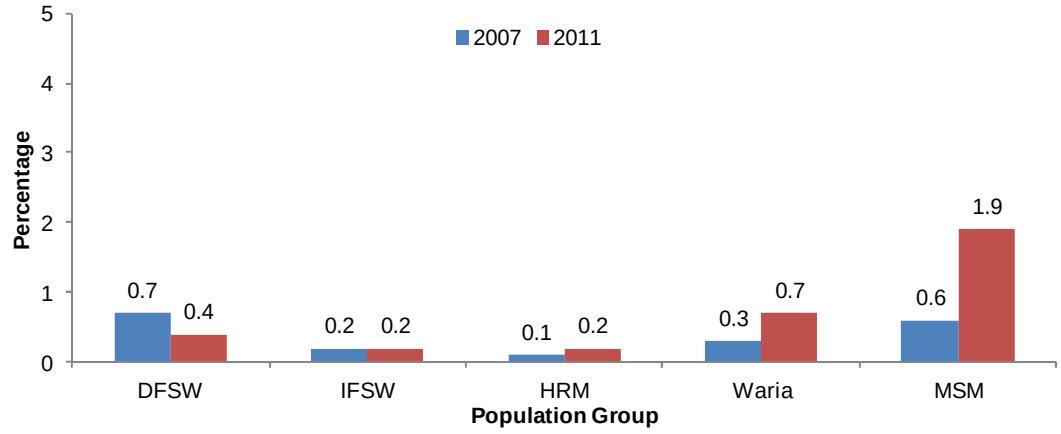


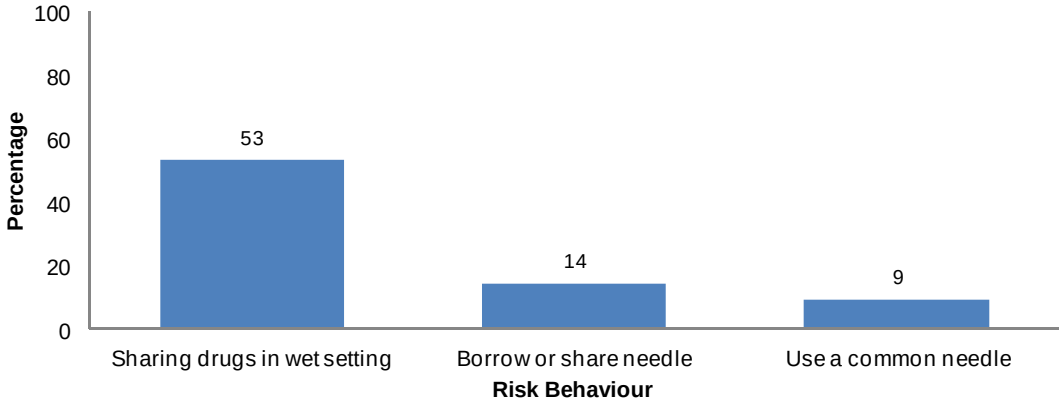
Figure 34. Population Distribution by Injecting Drug Use in the Previous Year, 2007 and 2011 IBBS



b. IDU injecting behaviour

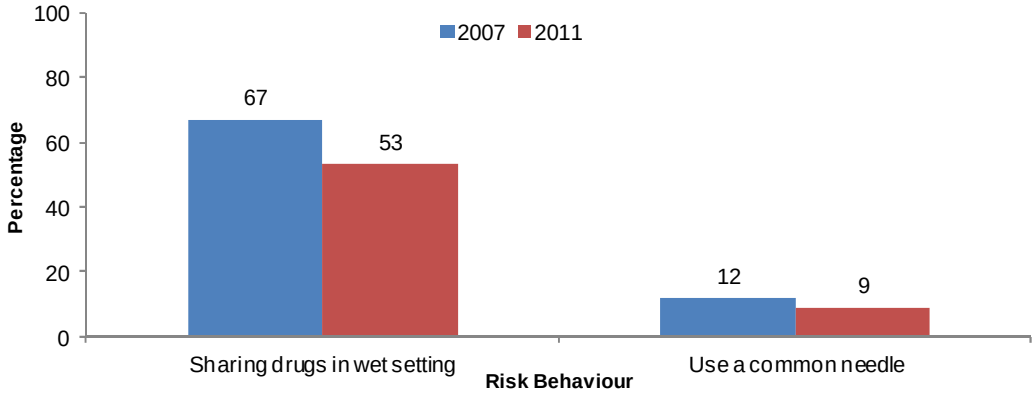
The 2011 IBBS results showed injecting behaviour by IDU during the previous week. The most common risky behaviour by IDU was injecting in a wet setting (53%), compared with borrowing or lending needles (14%) or using a common needle (9%) (Figure 35).

Figure 35. Distribution of IDU by Injecting Behaviour during the Previous Week, 2011 IBBS



There was a reduction in injecting in a wet setting and using a common needle compared with the 2007 data in the same locations (Figure 36).

Figure 36. Distribution of IDU by Injecting Behaviour during the Previous Week, 2007 and 2011 IBBS



c. Injecting frequency

The mean injection frequency in the previous week by IDU at six sites surveyed was seven times. The mean injection frequency on the previous day was twice. There has been no change in frequency compared with the 2007 IBBS, i.e. in 2007 the mean in the previous week was 7 times and the mean on the previous day was twice.

d. Sharing needles

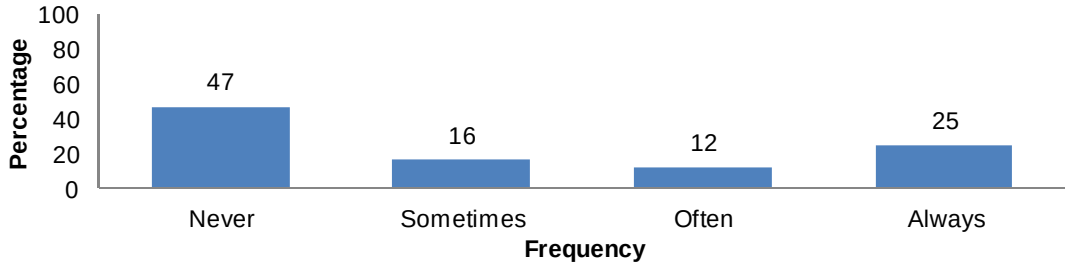
A total 13% of IDU admitted to sharing needles when last injecting, and 14% of IDU said they had borrowed or lent needles when injecting in the previous week.

e. Frequency of wet sharing

Injecting in a wet setting by IDU was more common than sharing needles or using a common needle. Among IDUs who shared in a wet setting,

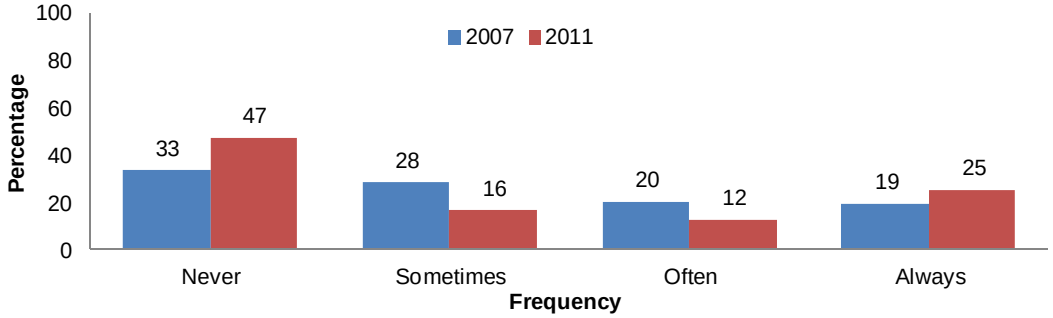
25% always shared in a wet setting, 12% often, 16% sometimes while 47% said they never shared in a wet setting (Figure 37).

Figure 37. Distribution of IDU by of Wet Sharing, 2011 IBBS



Compared with the 2007 IBBS, the percentage of IDUs who always injected in a wet setting has increased, from 19% (2007) to 25% (2011) (Figure 38).

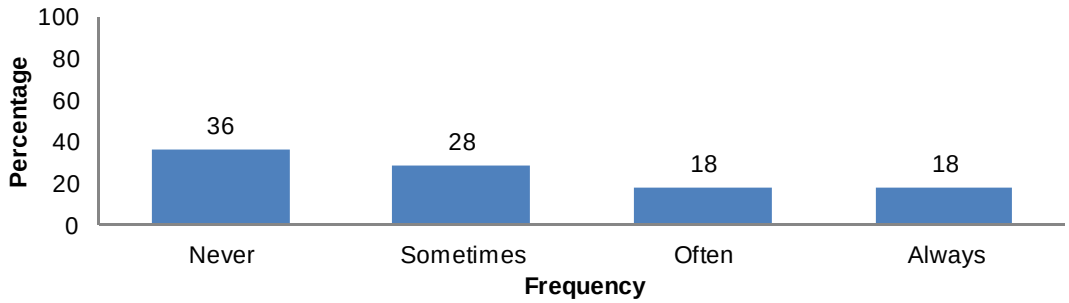
Figure 38. Distribution of IDU by Frequency of Wet Sharing, 2007 and 2011 IBBS



f. Joint buying behaviour

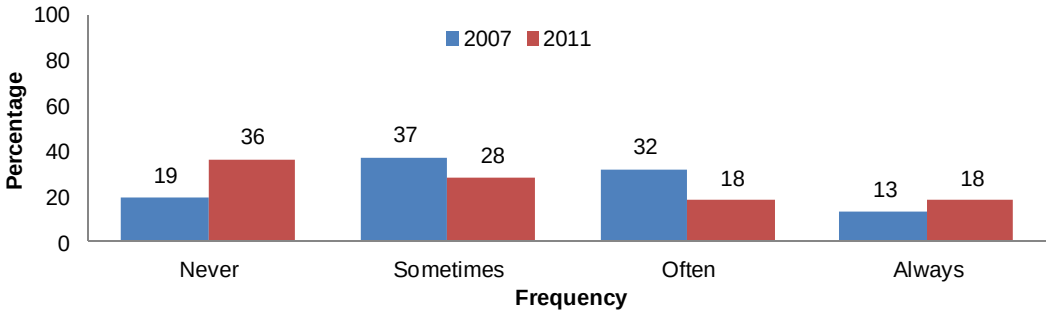
Figure 39 shows the percentage of IDU who bought drugs jointly in the previous week. A total of 18% of IDU always bought their drugs jointly, 18% often, and 28% sometimes.

Figure 39. Distribution of IDU by Frequency of Jointly Buying Drugs during the Previous Week, 2011 IBBS



There has been a reduction in the number of IDU who jointly bought drugs during the previous week when compared to the 2007 IBBS in the same locations (Figure 40).

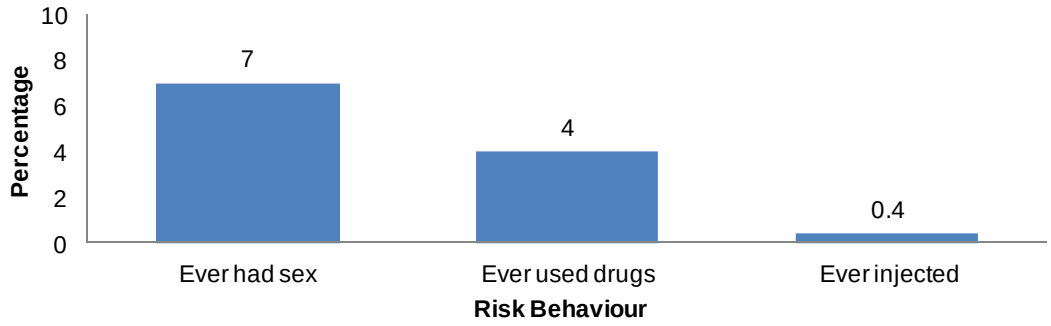
Figure 40. Distribution of IDU by Frequency of Jointly Buying Drugs during the Previous Week, 2007 and 2011 IBBS



6. Risk behaviour of youth

A total of 7% of the youth population admitted to having ever had sex. Among these, 51% reported using condoms at last sex. In addition, 4% of youth said they had tried using drugs, and the drug most frequently tried was cannabis. A total of 0.4% of youth admitted injecting drug use (Figure 41).

Figure 41. Distribution of Youth by Risk Behaviour, 2011 IBBS



7. Risk behaviour of prisoners

About 4% of prisoners said that they had had sex while incarcerated and 6% had ever injected drugs. One in five prisoners admitted first injecting drug use while in prison. Of prisoners who had injected drugs, one-third were still injecting while in prison. Of these, 67% used a needle that had previously been used by someone else and 62% used a common needle.

8. Other health-related behaviour

a. Pregnancy and contraceptive use by FSW

A total of 9% DFSW had become pregnant while working as sex workers, and 53% of these either aborted or had a spontaneous miscarriage. Contraceptives were used by most (76%) DFSW, with 64% of these using injectable contraception and 23% the pill. Among IFSW, 6% had become pregnant, and 73% of these either aborted or had a spontaneous miscarriage. Contraceptives are used by most (69%) IFSW, with 54% of these using injectable contraceptives and 31% the pill.

b. Hormone and silicone use

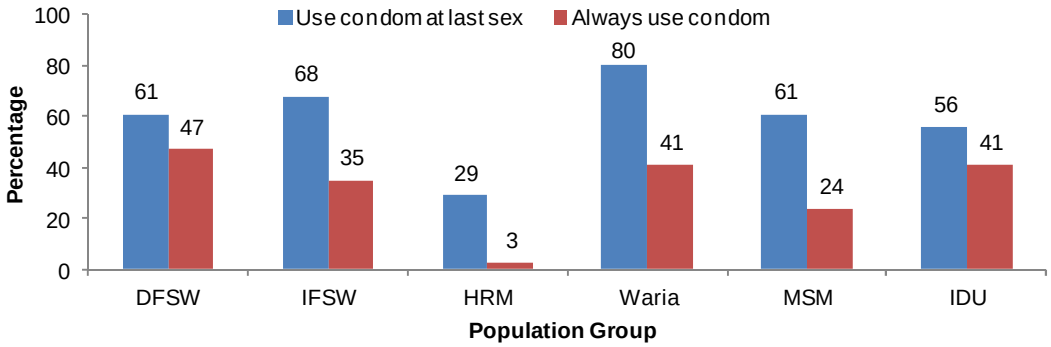
A total of 28% of Waria admitted to continuously taking hormones in the previous year without supervision from health workers, and 31% reported using silicone in the previous year. The potential side effects of hormone and silicone use were only known by 47%.

D. Prevention Behaviour

Condom use during commercial sex

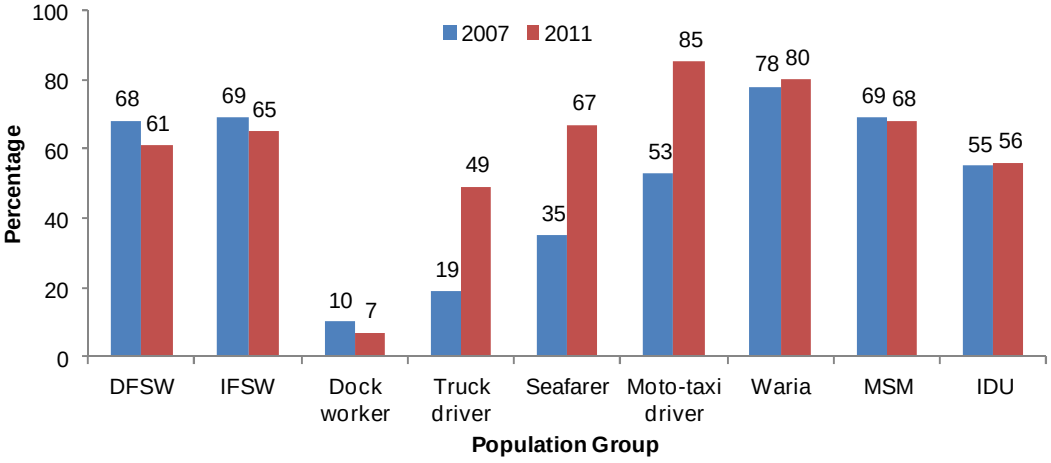
The highest rate of condom use at last commercial sex was by Waria, followed by DFSW, MSM, IFSW, IDU, and HRM (Figure 42).

Figure 42. Population Distribution by Condom Use During Last Commercial Sex, 2011 IBBS



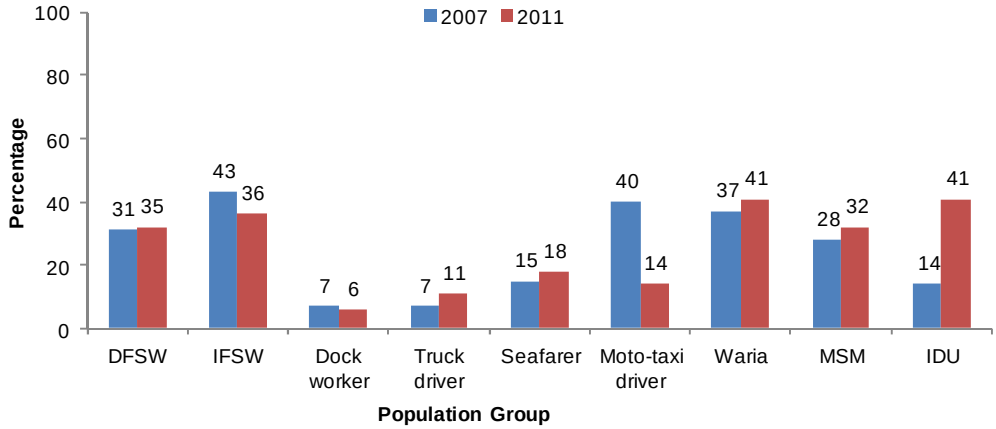
When compared with 2007 IBBS in the same locations, the rate of condom use during last commercial sex declined slightly among DFSW and IFSW, dock workers, and MSM (Figure 43).

Figure 43. Population Distribution by Condom Use During Last Commercial Sex, 2007 and 2011 IBBS



When compared with 2007 IBBS in the same locations, there was an increase in consistent condom use in the previous week among IDU, seafarers, truck drivers, MSM, and Waria, but there was a decrease among moto-taxi drivers, and DFSW and IFSW (Figure 44).

Figure 44. Population Distribution by Condom Use during Last Commercial Sex (DFSW and IFSW) and During the Previous Year (HRM and IDU), 2007 and 2011 IBBS

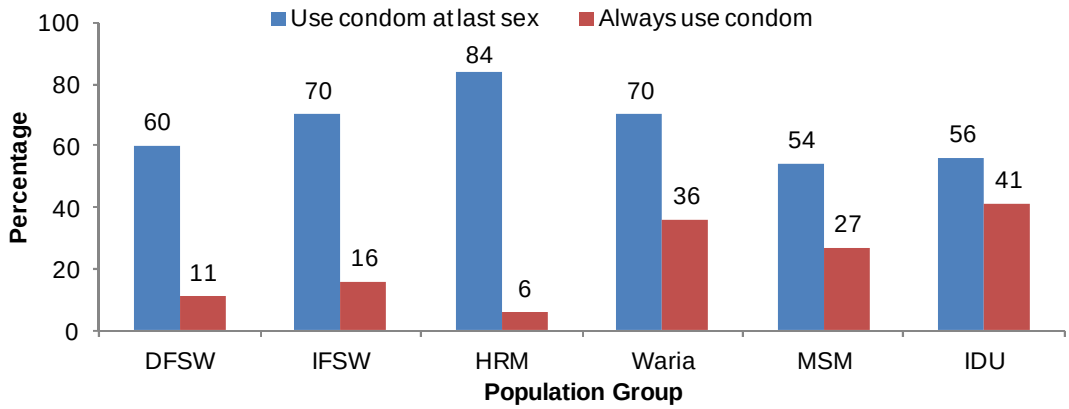


Related to the success indicators for the HIV-AIDS control program in Indonesia, the 2011 IBBS results showed that the rate of condom use in the previous week among women (in this case DFSW) is 35% and among men (in this case HRM) in the previous year amounted to 14%. Thus, the condoms use performance indicators among high-risk groups in 2011 amounted to 100% among women (target in 2011: 35%) and 70% in men (target in 2011: 20%).

2. Condom use during unsafe sex

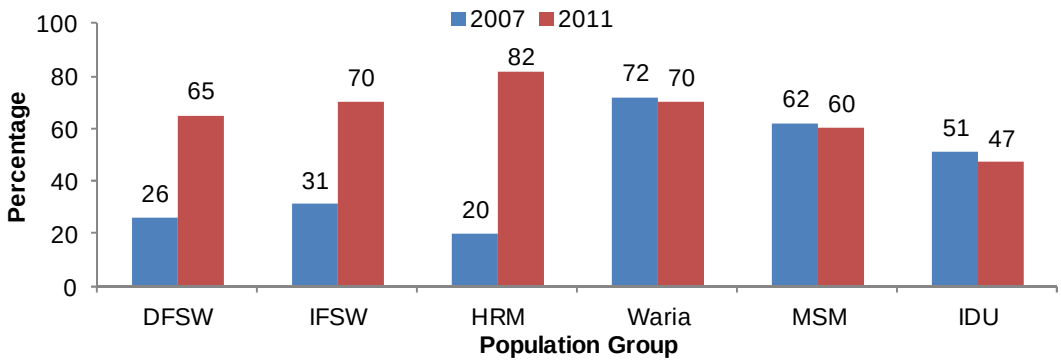
Other unsafe sex behaviour includes sexual intercourse with a casual partner and without payment (not commercial sex). HRM are the population that has the highest percentage of condom use at last sex with unpaid/casual partners (84%), while MSM is the population with the lowest percentage (54%) (Figure 45).

Figure 45. Population Distribution by Condom Use at Other Unsafe Sex, 2011 IBBS



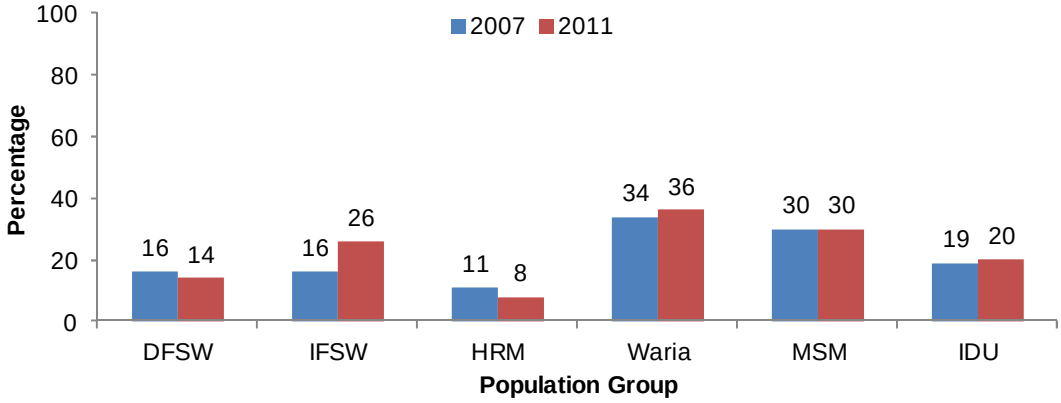
When compared with the 2007 IBBS in the same locations, condom use at last sex with an unpaid/casual sex partner increased significantly among HRM, and direct and IFSW (Figure 46).

Figure 46. Population Distribution by Condom Use at Last Other Unsafe Sex, 2007 and 2011 IBBS



The increase in condom use at last sex with an unpaid/casual sex partner in the same locations compared with the 2007 IBBS was not accompanied by an increase in consistent condom use. In general, consistent condom use has not changed from the previous year, except in IFSW, where it has increased from 16% in 2007 to 26% in 2011 (Figure 47).

Figure 47. Population Distribution by Consistent Condom Use at Other Unsafe Sex during the Previous Year, 2007 and 2011 IBBS

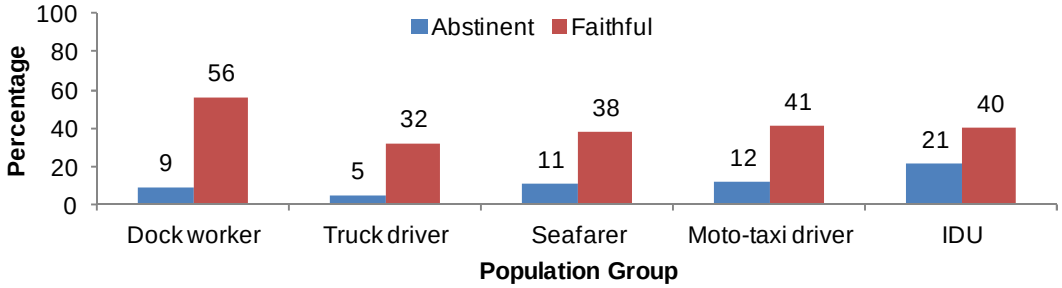


3. Abstinence and being faithful to permanent partner

One of the best approaches to prevention of HIV transmission through sex is abstinence (not having sex) or being faithful to only one sex partner. Among HRM surveyed, most said they had had sex during the previous year with a casual sex partner. IDU had the highest rate of abstinence (21%), while for truck drivers the rate was 5% (Figure 48).

The number of IDU who were faithful to their steady sex partners in the previous year reached 40%. Between 32-56% of HRM, such as seafarers, dock workers, moto-taxi drivers, and truck drivers, remained faithful. These percentages are relatively low, meaning that most men are at risk of acquiring and transmitting HIV (Figure 48).

Figure 48. Population Distribution by Abstinence and Faithful to Sex Partner in the Previous Year, 2011 IBBS



When compared with 2007 IBBS in the same locations, generally the percentage of abstinent men did not change much (Figure 49). On the other hand, being faithful to regular sex partners among truck drivers, seafarers, and IDU increased (Figure 50).

Figure 49. Population Distribution by Abstinence in the Previous Year, 2007 and 2011 IBBS

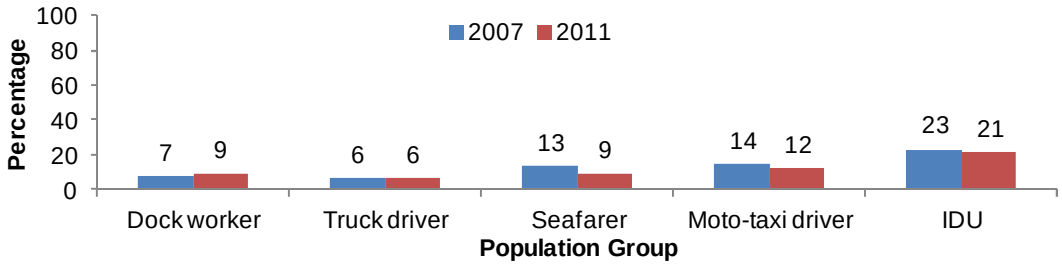
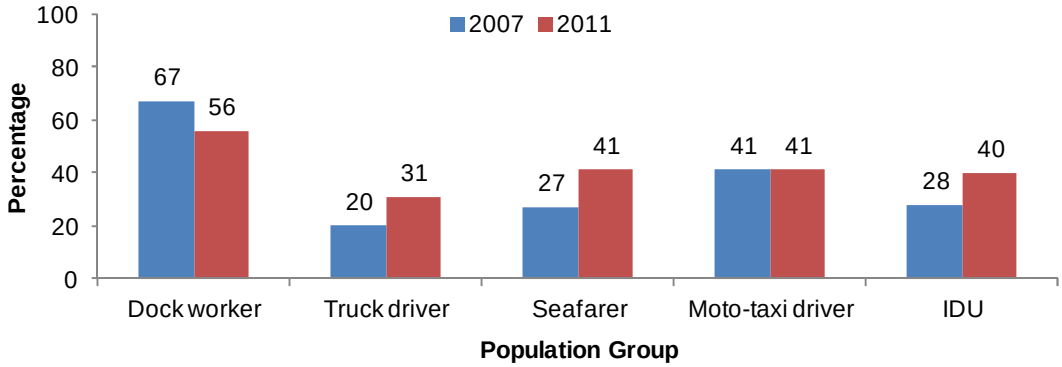


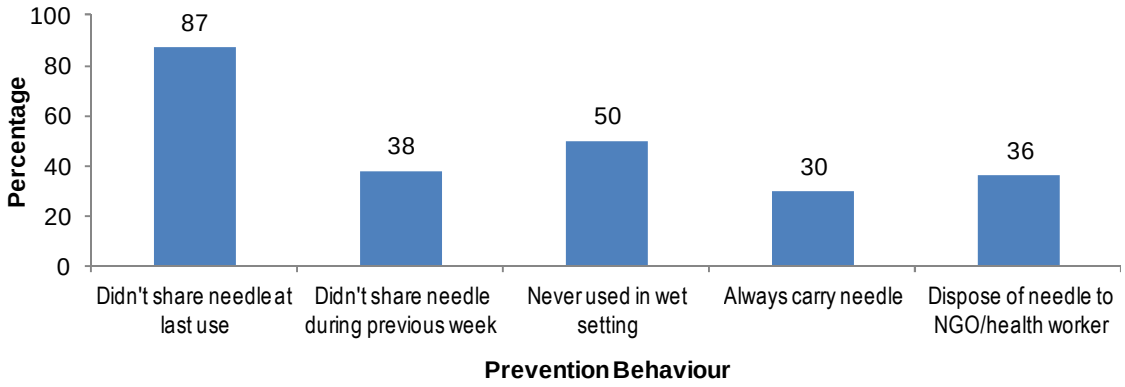
Figure 50. Population Distribution by Faithful to Sex Partner in the Previous Year, 2007 and 2011 IBBS



4. Prevention behaviour related to injecting drug use

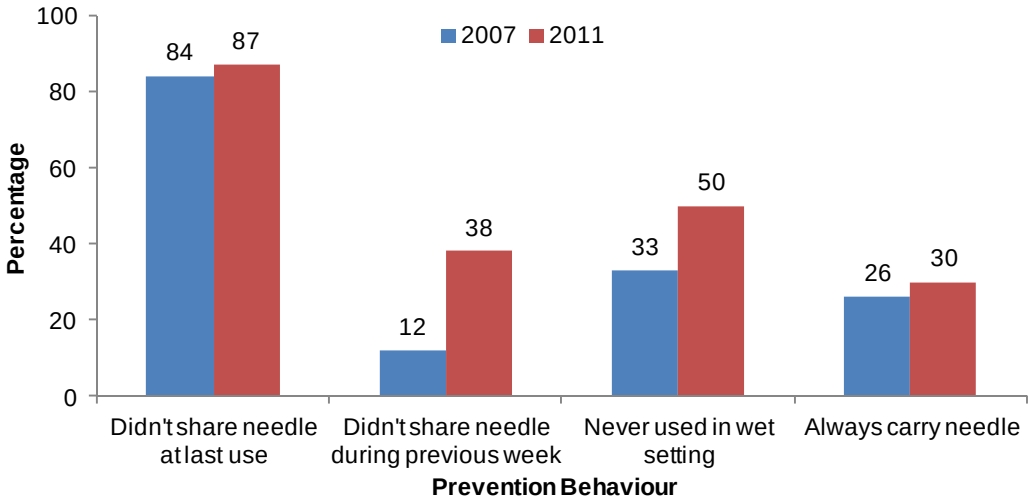
Prevention behaviour associated with injecting drugs has increased. The majority (87%) of IDU stated that they did not share needles with others. Half also claimed that they never shared drugs after these had been mixed with water (wet setting). Some 30% of IDU claimed that they always carried a syringe during the previous week. A total of 36% of IDU stated that the last time they disposed of a needle, they gave it to a health worker, an NGO worker or to a health care centre (Figure 51).

Figure 51. Distribution of IDU by Prevention Behaviour Related to Injecting Drug Use, 2011 IBBS



When compared with the 2007 IBBS in the same locations, the number who claimed that they had not shared the last time they injected increased slightly, from 84% to 87%, while those not sharing when injecting during the previous week increased significantly, from 12% to 38% (Figure 52)

Figure 52. Distribution of IDU by Prevention Behaviour Related to Injecting Drug Use, 2007 and 2011 IBBS



E. Knowledge Level and Perceptions

1. Comprehensive knowledge

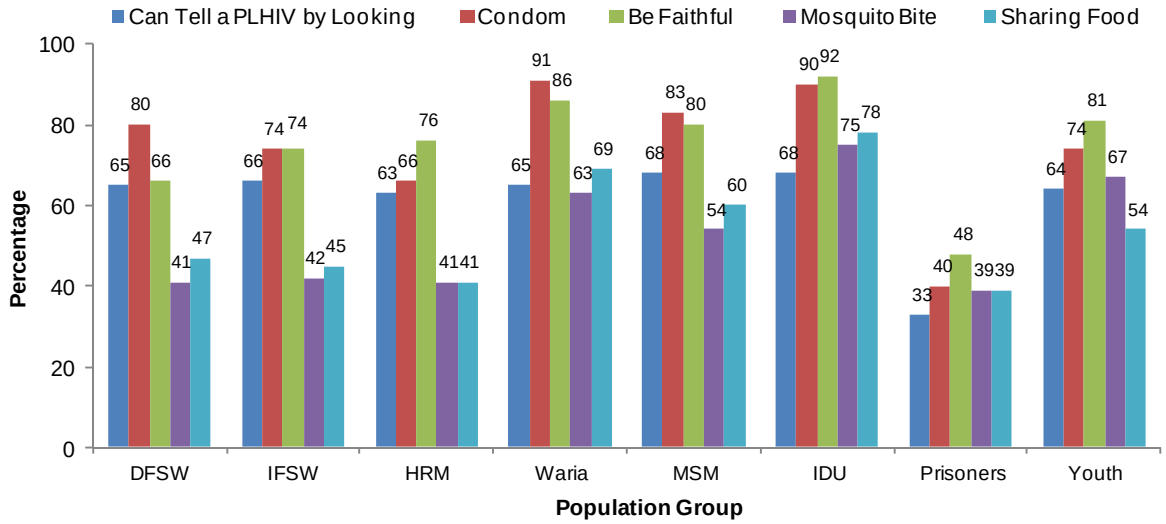
According to indicators of the Millennium Development Goals (MDG), a comprehensive knowledge of HIV-AIDS is based on the ability to answer five questions correctly. Respondents must know that: (1) Using a condom can prevent HIV infection; (2) Being faithful to one sex partner can prevent HIV infection; (3) Sharing food does not transmit HIV; (4) Mosquito bites do not transmit HIV; and (5) It is not possible to identify people living with HIV just by looking at them.

Respondents were categorized as having comprehensive knowledge about HIV-AIDS if they could answer all five questions correctly. If respondents only

answered one to four questions correctly, they were not classified as having comprehensive knowledge.

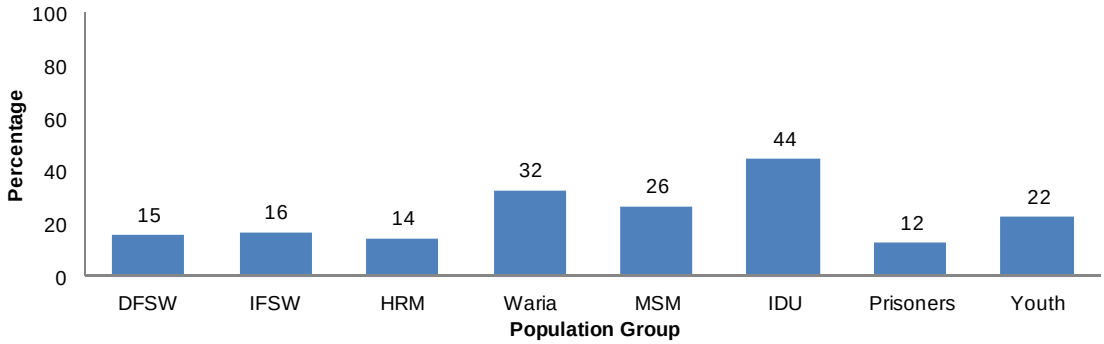
The 2011 IBBS results show that many respondents from all population groups know that HIV-AIDS can be prevented by using condoms and by being faithful, since these two questions were more often answered correctly than the three other questions (Figure 53).

Figure 53. Distribution of Population by Type of Comprehensive Knowledge Questions Answered Correctly, 2011 IBBS



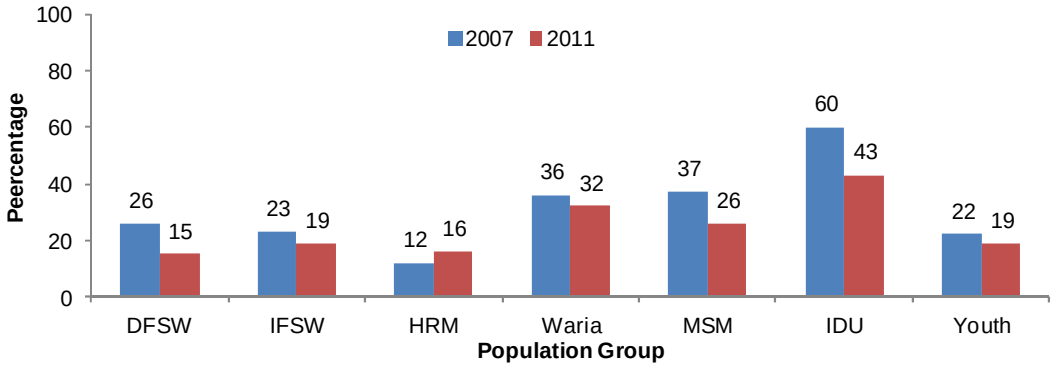
Among high-risk populations, IDU had the highest level of comprehensive knowledge (44%). Prisoners had the lowest level of knowledge at 12%. The level of comprehensive knowledge among youth was 22% (Figure 54).

Figure 54. Distribution of Population by Comprehensive Knowledge about HIV-AIDS, 2011 IBBS



When compared with the results from the 2007 IBBS in the same locations, in general comprehensive knowledge decreased in all populations, except in HRM, for whom comprehensive knowledge increased from 12% to 16% (Figure 55).

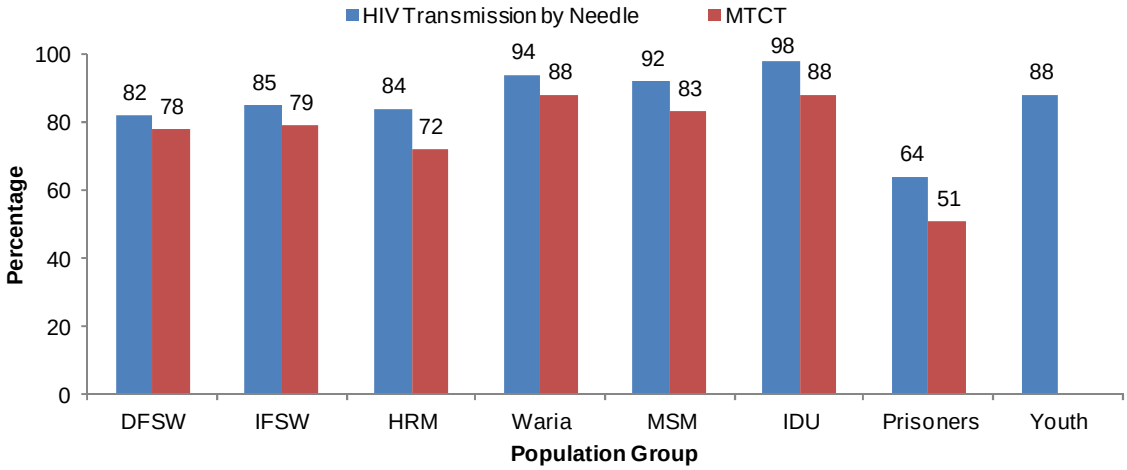
Figure 55. Distribution of Population by Comprehensive Knowledge about HIV-AIDS, 2007 and 2011 IBBS



2. Knowledge about mode of transmission of HIV

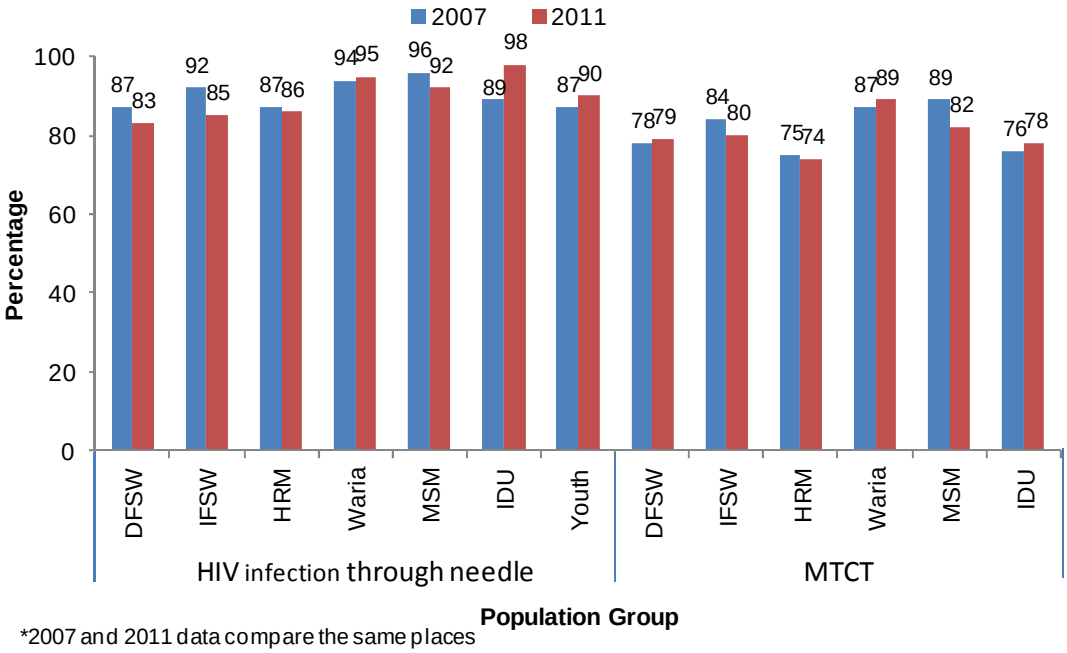
Most of the population groups were already aware about HIV transmission through needles and from mother to child during pregnancy, childbirth and breastfeeding (MTCT). However, knowledge about HIV transmission through needles and MTCT among prisoners is still low when compared with other population groups. (Figure 56).

Figure 56. Distribution of Population by Knowledge of Modes of Transmission of HIV through Needles and MTCT, 2011 IBBS



When compared with the results of the 2007 IBBS in the same locations, knowledge of HIV transmission through needles and MTCT is relatively unchanged (Figure 57).

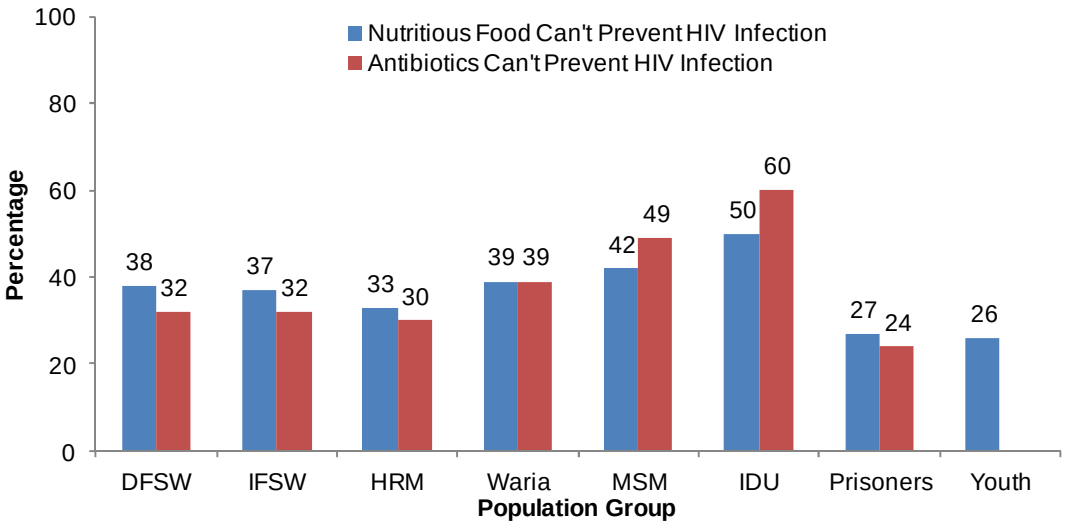
Figure 57. Distribution of Population by Knowledge of Modes of Transmission of HIV through Needle and MTCT, 2007 and 2011 IBBS



*2007 and 2011 data compare the same places

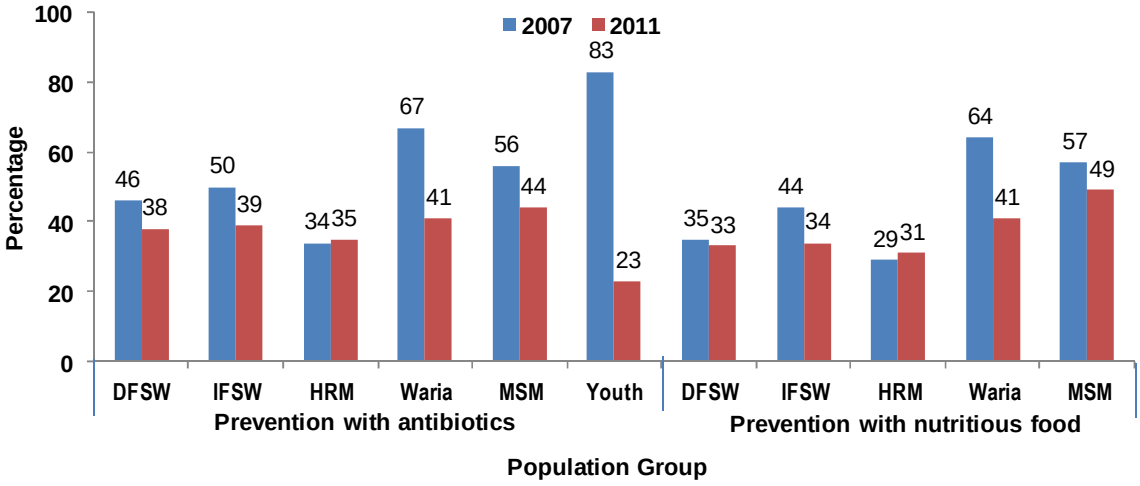
Knowledge that HIV infection is not prevented by use of antibiotics or by eating nutritious food is low in all population groups (Figure 58).

Figure 58. Distribution of Population by Knowledge about Prevention of HIV with Antibiotics and Nutritious Food, 2011 IBBS



When compared with the results of the 2007 IBBS, in general there were slight differences in the knowledge on HIV prevention with antibiotics and nutritious food, although knowledge by youth declined from 83% to 23% (Figure 59).

Figure 59. Distribution of Population by Knowledge about Prevention of HIV with Antibiotics and Nutritious Food, 2007 and 2011 IBBS



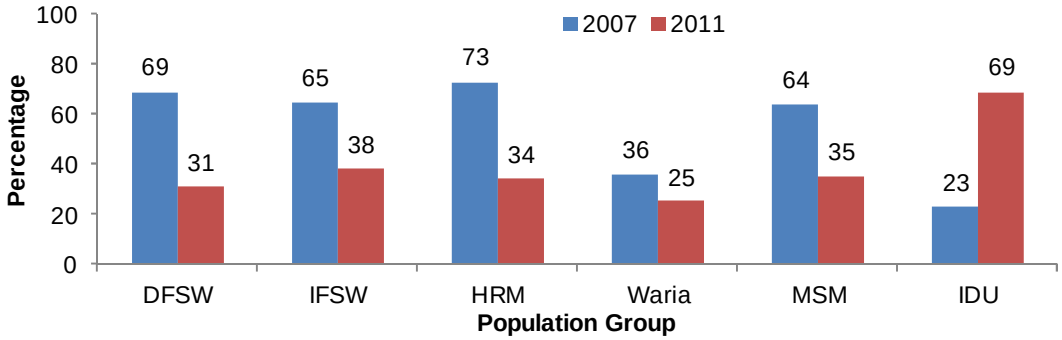
3. Misconceptions

Most people still have misconceptions about HIV transmission and prevention. These included respondents believing that they can tell a person's HIV status from sight alone, that eating nutritious foods can reduce the risk of HIV transmission, that taking antibiotics can reduce the risk of HIV transmission, or that mosquito bites can transmit HIV. Such mistaken understanding is highest among prisoners (70%), while the lowest is among Waria (24%) (Figure 60).

Figure 60. Distribution of Population by Misconceptions about HIV Prevention and Transmission, 2011 IBBS

When compared with the 2007 IBBS at the same locations, there has been a decline in the percentage of population who have a mistaken understanding on HIV prevention and transmission, except among IDU (Figure 61).

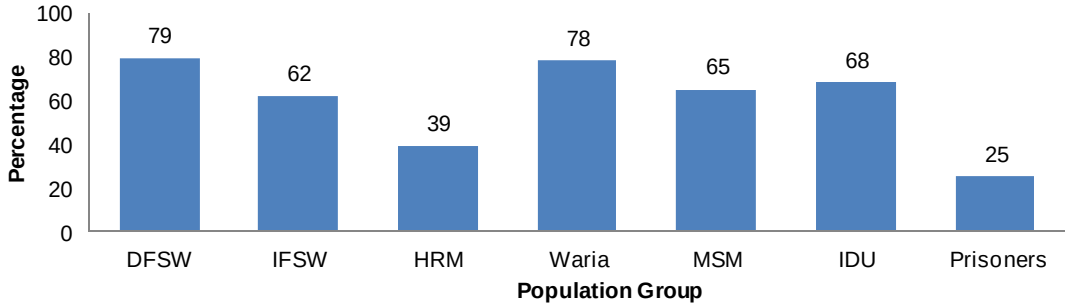
Figure 61. Distribution of Population by Misconceptions about HIV Prevention and Transmission, 2007 and 2011 IBBS



4. Risk perception

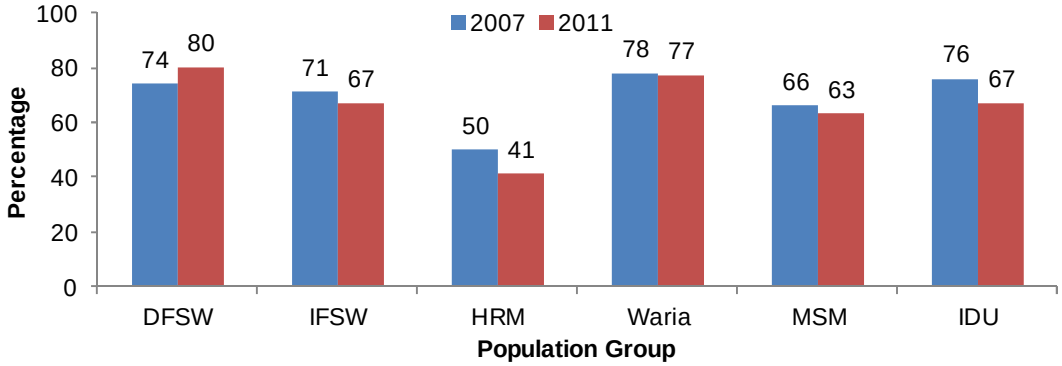
Feeling at risk of acquiring HIV is one indication that people are aware that their behaviour could lead to becoming infected with HIV. These perceptions typically arise from knowledge of the modes of transmission and prevention of HIV, which are then linked with personal experience of respondents who have conducted HIV risk behaviours. Most of the survey population except HRM and prisoners admitted that they were at risk of contracting HIV (Figure 62).

Figure 62. Distribution of Population by Perception of Risk of Acquiring HIV, 2011 IBBS



When compared with the 2007 IBBS at the same locations, the percentage of the populations who feel at risk has declined, with the exception of DFSW (Figure 63).

Figure 63. Distribution of Population by Perception of Risk of Acquiring HIV, 2007 and 2011 IBBS



5. Information sources

The IBBS always seeks to identify the main sources of information about HIV-AIDS that is obtained by the population, whether through the media or from other people.

Most of the respondents claimed that they had received information about HIV-AIDS. Television was the main source of information mentioned by youth (99%), IFSW (82%), and HRM (65%). Health workers are the main source of information mentioned by DFSW (78%) and prisoners (92%). Peers are the main source of information mentioned by Waria (79%) and MSM (53%). Field workers were the source of information most often mentioned by IDU (76%) (Table 4).

Table 4. Distribution of Population According to Sources of Information about HIV-AIDS, IBBS 2011

Population Group	Radio (%)	TV (%)	News-paper (%)	Poster (%)	Health-care worker (%)	Field worker (%)	Peer (%)	Counsellor (%)
DFSW	27	59	35	63	**78**	75	47	27
IFSW	33	**82**	52	54	56	44	38	14
HRM	40	**65**	54	48	23	14	25	2
Waria	32	58	52	65	60	71	**79**	45
MSM	27	48	45	**53**	30	39	**53**	23
IDU	33	69	61	71	63	**76**	73	48
Prisoners	89	91	90	89	**92**	88	88	89
Youth	92	**99**	96	94	95	91	97	NA

F. Program Coverage

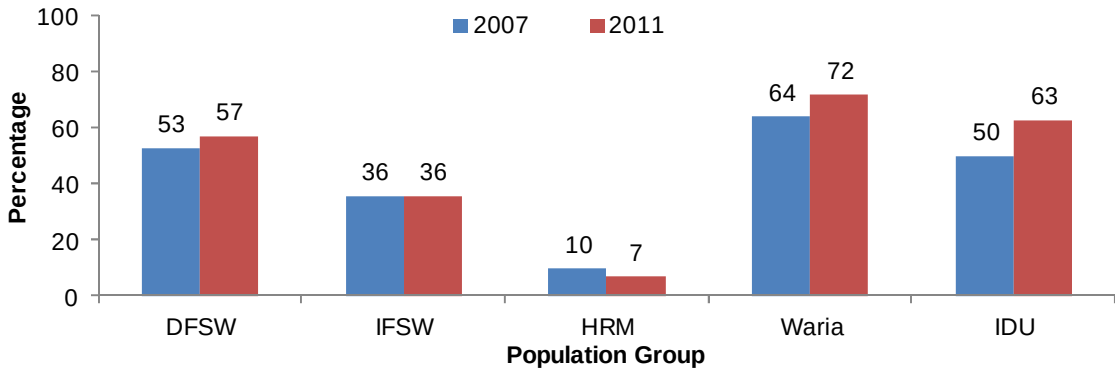
1. HIV counselling and test

HIV counselling and testing activities are intended so that high-risk populations may know their HIV status. If the results are positive, they can access needed follow-up services and avoid infecting others (positive prevention). HIV testing and counselling services are expected to impact on HIV prevention by encouraging people, whether already infected or not, to behave safely so as not to become infected or infect others.

HRM were the least likely to have had an HIV test, while Waria are most likely. Among those who had ever had an HIV test, some had not received the test results. Waria were most likely to receive HIV test results, while HRM were least likely to collect their test results. The data suggest that HIV testing and counselling services still need to be increased in scope. Risk populations should take advantage of HIV testing services by getting tested and receiving the results.

When compared with the results of the 2007 IBBS, there has been a slight increase in the number of DFSW, Waria and IDU that have had an HIV test, but there has been a reduction among HRM (Figure 64).

Figure 64. Distribution of Population by HIV Test, 2007 and 2011 IBBS

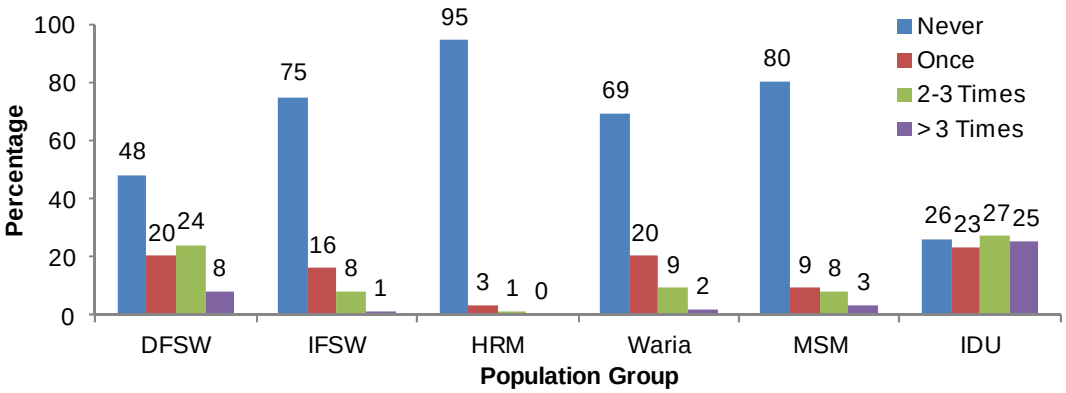


2. Frequency of discussion with field workers

One way to increase knowledge and change risky behaviours is through outreach activities, usually carried out by NGOs. Field workers usually work intensively with high-risk populations to improve their knowledge by discussing HIV transmission and prevention, and encourage safe behaviour related to HIV infection.

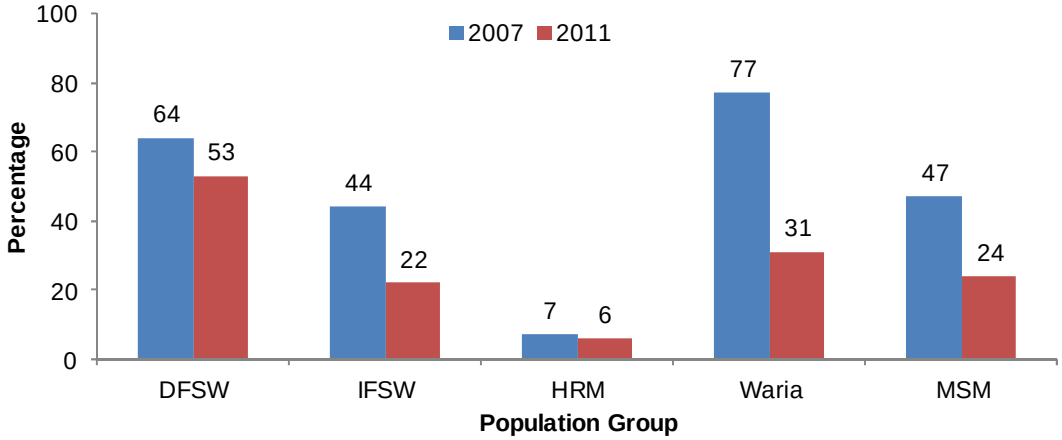
IDU were the group most likely to meet and hold discussions with field workers during the previous three months compared with other populations surveyed. On the other hand, HRM were least likely to meet and discuss with field workers (Figure 65).

Figure 65. Distribution of Population by Frequency of Meeting and Discussion with Field Workers in the Previous Three Months, 2011 IBBS



When compared with the results of the IBBS in 2007 in the same locations, there has been a reduction in the scope of outreach, especially among Waria, MSM, and IFSW (Figure 66).

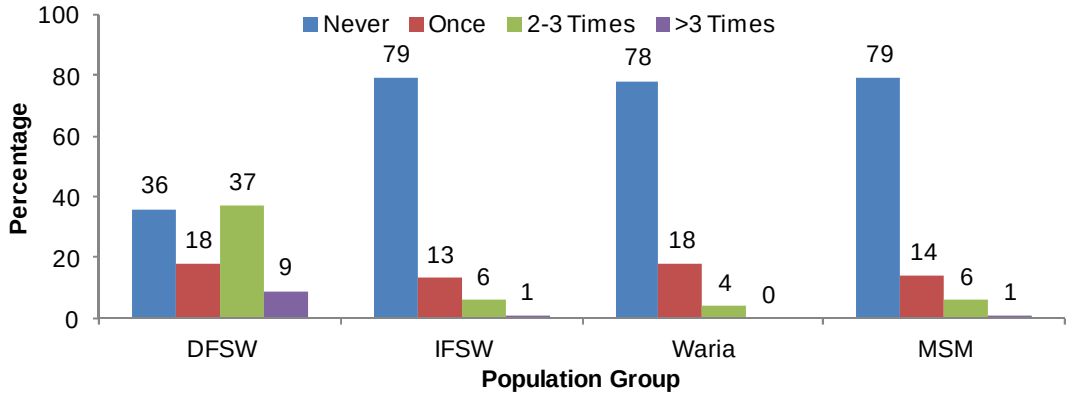
Figure 66. Distribution of Population by Ever Having Discussion with Field Workers in the Previous Three Months, 2007 and 2011 IBBS



3. Frequency of visits to STI clinics

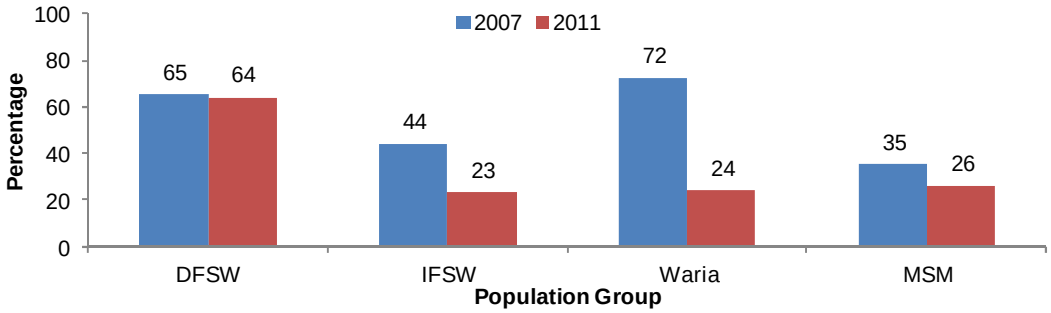
DFSW and IFSW, MSM and Waria were asked about visits to STI services (clinics), including related to STI screening at regular intervals. DFSW were the group that most often visited STI services in the previous three months. Conversely, most Waria, IFSW, and MSM stated that they had not visited STI services in the previous three months (Figure 67).

Figure 67. Distribution of Population by Frequency of Visit to STI Services in the Previous Three Months, 2011 IBBS



When compared with the results of the 2007 IBBS in the same locations, the percentage of the population who visited STI services in the last three months is decreasing. The decline is most prevalent among Waria (Figure 68).

Figure 68. Distribution of Population by Frequency of Visit to STI Services in the Previous Three Months, 2007 and 2011 IBBS



4. Signs of STIs and treatment steps

Several types of STIs are often asymptomatic, so people still feel healthy despite infection, and continue risky behaviour. Besides the stigma caused by the perception that STIs result from bad behaviour, seeking correct treatment causes embarrassment. This is one of the factors that complicate the control of STIs.

A total of 32% of DFSW, 23% of IFSW, 25% of Waria, 31% of MSM, 21% of IDU, 9% of HRM, and 6% of prisoners had experienced at least one of the symptoms of STIs in the previous year. The STI symptom most often experienced by the MSM, IDU, HRM and prisoners is pain when urinating. Symptoms of STIs among Waria vary from genital sores, lumps around the anus to pain while urinating. The STI symptom most commonly experienced by DFSW and IFSW was an abnormal discharge from the vagina, although this symptom is not always associated with STIs (Table 5).

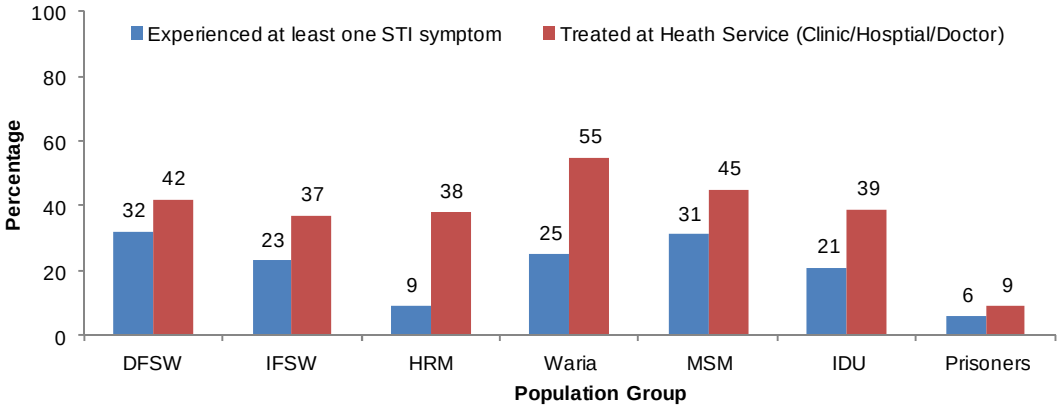
Table 5. Distribution of Population by STI Symptoms in the Previous Year, IBBS 2011

	DFSW (%)	IFSW (%)	Waria (%)	MSM (%)	IDU (%)	HRM (%)	Prisoners (%)
Ulcers around the genitals	16	7	11	7	6	2	NA
Lump around the genitals/anus*	7	3	11	3	2	1	1
Pain when urinating	NA	NA	11	23	16	7	2
Discharge from the genitals/anus*	22	19	6	17	8	4	1

*only for Waria and MSM respondents

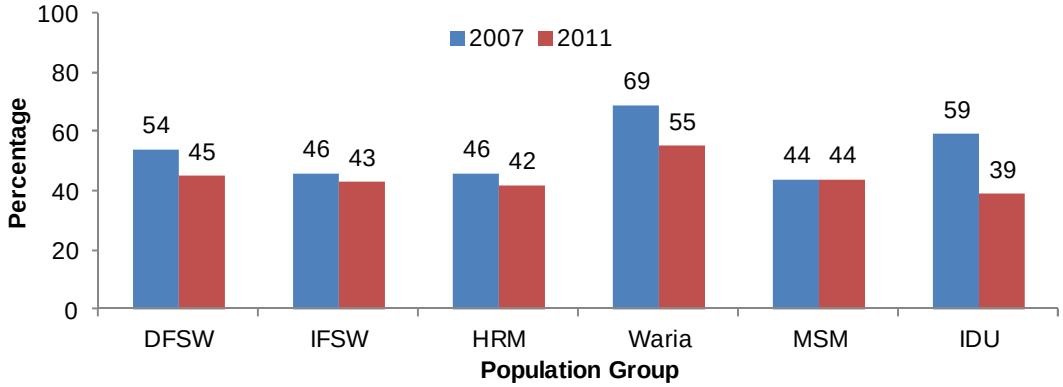
Among respondents who had STI symptoms, Waria more often sought treatment at health services (STI services) compared with other populations surveyed. In contrast, only a small percentage of prisoners who have symptoms of STI sought treatment at STI services (Figure 69).

Figure 69. Distribution of Population by Seeking Treatment at Health Care Services over the Previous Year, 2011 IBBS



When compared with the results of the 2007 IBBS at the same locations, there has been a decline in the population seeking correct treatment for STIs (Figure 70).

Figure 70. Distribution of Population According to Seeking Treatment at Health Care Services for Last STI Symptoms, 2007 and 2011 IBBS

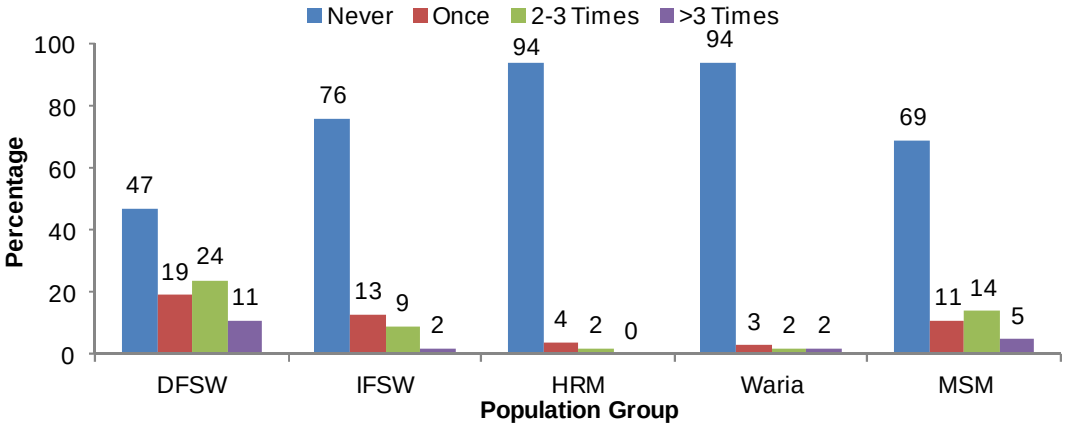


5. Frequency of condom receipt

One of the important HIV prevention efforts is to promote condom use for risky sex or unsafe sex. One of the activities carried out is to distribute free condoms to the high-risk population. Normally free condom distribution activities are held in conjunction with outreach activities, so that their frequency was closely related to the frequency of outreach.

More than half of DFSW stated that they had received free condoms in the previous three months, while the majority of Waria, IFSW, MSM and HRM claimed never to have received free condoms in the previous three months (Figure 71). IDU were not asked about receipt of free condoms.

Figure 71. Distribution of Population by Frequency of Receipt of Free Condoms in the Previous Three Months, 2011 IBBS



When compared with the results of the 2007 IBBS in the same locations, it appears that the number of respondents who have received free condoms has decreased for all populations surveyed (Table 6).

Table 6. Distribution of Population by Frequency of Receipt of Free Condoms in the Previous Three Months, 2007 and 2011

	Survey year	Frequency of Receipt of Free Condoms in the Previous 3 Months (%)			
		Never	Once	2-3 times	>3 times
DFSW	2007	27	17	29	23
	2011	49	18	23	10
IFSW	2007	54	22	12	6
	2011	75	13	10	2
Waria	2007	29	30	17	19
	2011	94	3	2	1
MSM	2007	45	16	23	14
	2011	63	13	17	6
HRM	2007	84	9	4	1
	2011	93	4	2	0

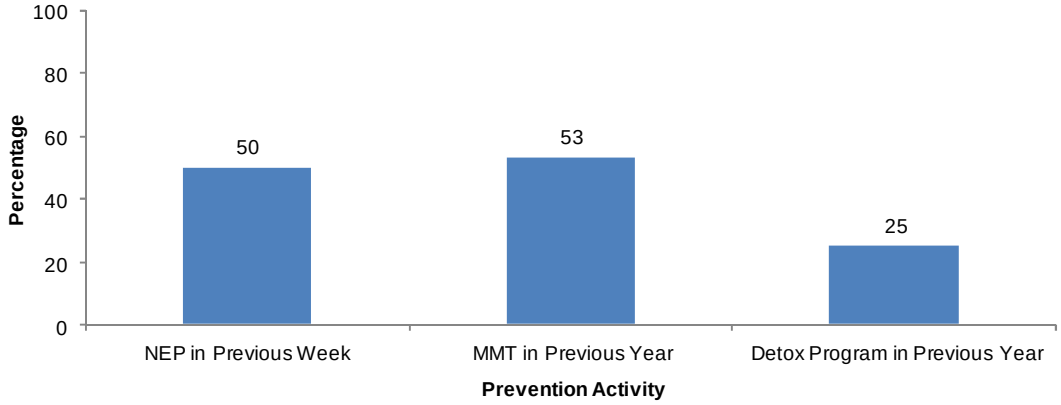
6. Services related to harm reduction

One way that HIV is transmitted is through the use of shared needles by IDU. Therefore, one of the HIV control activities is to increase knowledge by IDU about the importance of using sterile needles and to avoid sharing. Another intervention is to offer sterile syringe services through needle exchange programs (NEP).

Other activities that are also carried out include substitution therapy and detoxification. Therapeutic substitution is done by replacing the use of drugs that are injected with a drug such as methadone that is not injected, i.e. methadone maintenance therapy (MMT). Detoxification is the process of removing toxins (drugs or other addictive substances) from the body by totally stopping the use of all addictive substances or with a reduced dose of a substitute medication. Detoxification can be done either by out-patient or in-patient services. Usually the detoxification process is continued for one to three weeks.

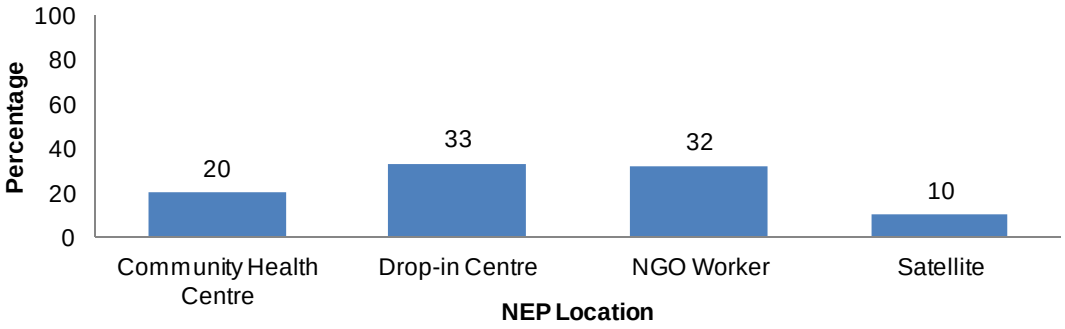
From the IDU population surveyed, 50% had utilized NEP services in the previous week and 53% had utilized MMT programs in the previous last year. Utilization of detoxification program in IDUs in the last year is still low (25%) (Figure 72).

Figure 72. Distribution of IDU by Access to Harm Reduction Related Services, 2011 IBBS



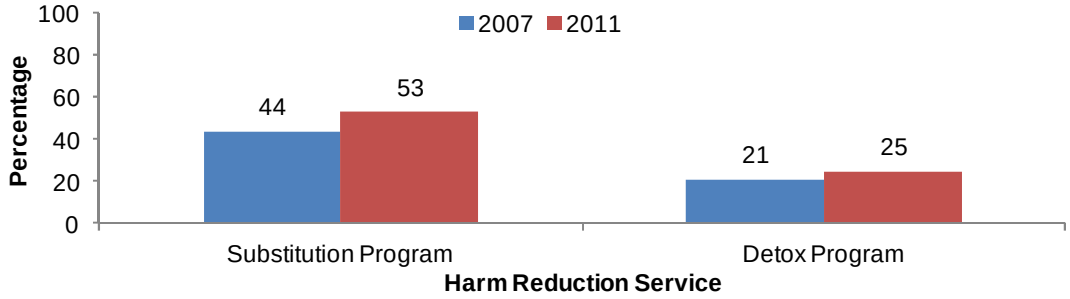
Needle exchange programs in Indonesia are implemented in community health centres and drop-in centres, by NGO workers, and at satellite NEP. Only 20% of IDUs accessed NEP in health services such as community health centres, but more accessed NEP outside community health centres, with 33% accessing at drop-in centres and 32% from NGO workers, while 10% accessed services in satellites (Figure 73).

Figure 73. Distribution of IDU by Access to NEP, 2011 IBBS



When compared with the results of the 2007 IBBS in the same locations, utilization of substitution and detoxification programs increased. Detoxification program utilization rose from 21% in 2007 to 25% in 2011, while the substitution program utilization rose from 44% to 53% (Figure 74).

Figure 74. Distribution of IDU by Utilization of MMT and Detoxification, 2007 and 2011 IBBS

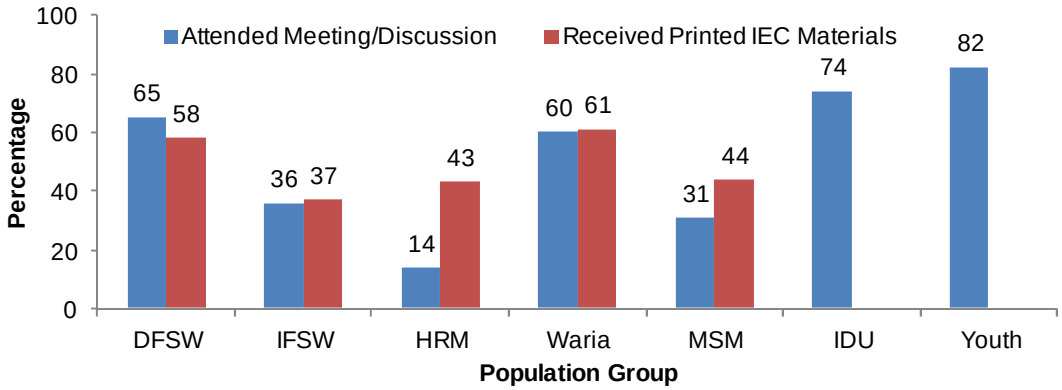


7. HIV discussion meetings and printed IEC materials

Among HIV-AIDS control program activities are efforts to increase knowledge and change HIV-related behaviour. Besides prevention activities through outreach, meetings and discussions disseminate information about HIV and distribute IEC materials (leaflets, brochures, etc.). Meetings or discussions on HIV are held by many parties such as health workers, NGOs, Social Services, Department of Tourism, private companies, schools and others.

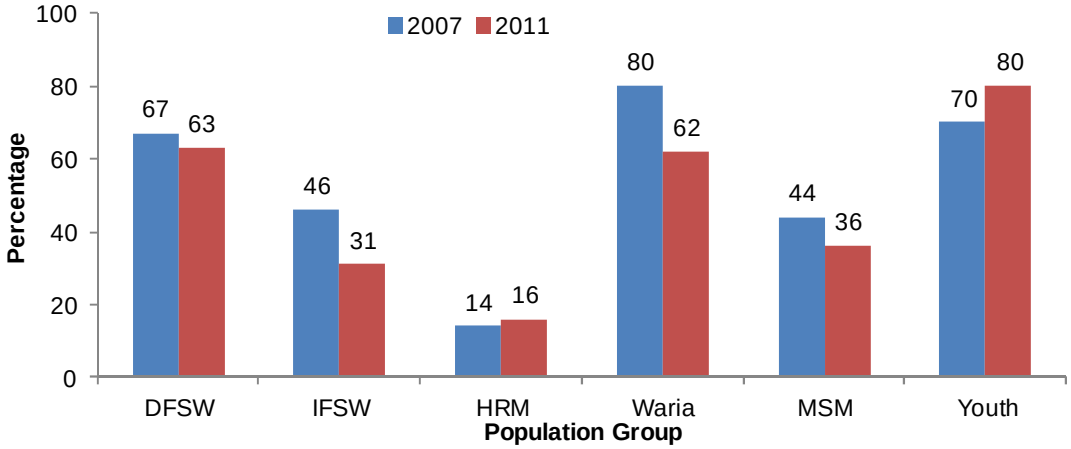
Youth were the population group that most frequently attended discussion or counselling on HIV-AIDS (82%), followed by IDU (74%). HRM least often attended discussions (14%) (Figure 75).

Figure 75. Distribution of Population by Attendance at Meetings and Discussions about HIV and Receipt of Printed IEC Materials during the Previous Year, 2011 IBBS



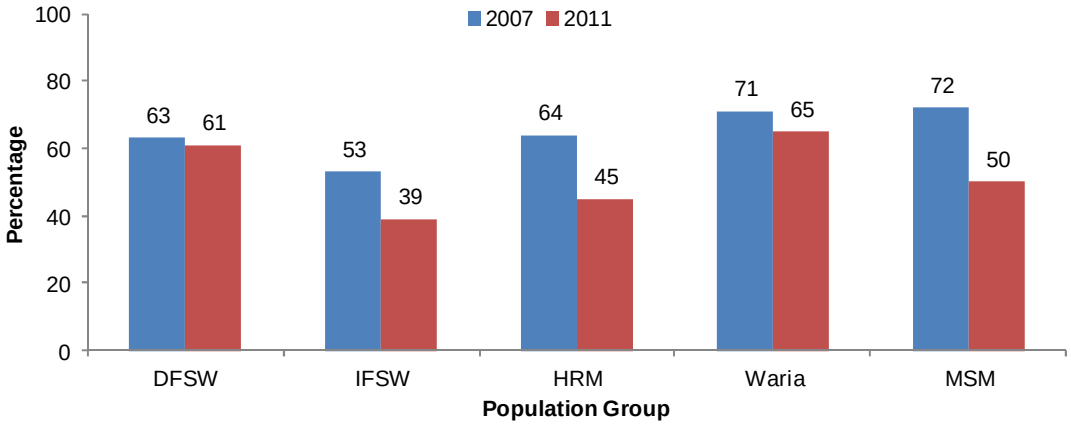
When compared with the results the 2007 IBBS in the same locations, there has been a decline in the percentage of the population who attended meetings and discussions about HIV in the previous year, except among youth and HRM (Figure 76).

Figure 76. Distribution of Population by Attendance at Meetings and Discussions about HIV during the Previous Year, 2007 and 2011 IBBS



Receipt of printed IEC materials has decreased when compared with the results of the 2007 IBBS. The greatest decrease occurred among MSM (Figure 77).

Figure 77. Distribution of Population by Receipt of Printed IEC Materials during the Previous Year, 2007 and 2011 IBBS



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Appendix

Direct FSW (%)	Regency/City																
	Deli Serdang	Lampung City	Batam City	North Jakarta	Bekasi	Bandung City	Batang	Semarang City	Banyuwangi	Malang City	Surabaya City	Denpasar City	Kupang City	Ambon City	Jayawijaya	Jayapura City	Total
N	247	248	249	248	245	250	178	249	251	249	249	248	249	198	187	248	3.793
Age (median, years)	29,0	26,0	27,0	26,0	26,0	23,5	29,0	29,0	30,0	34,0	32,0	28,0	36,0	34,0	27,0	33,0	29,0
Low education	73,3	85,9	84,0	93,2	86,7	78,4	90,5	83,6	95,6	97,2	86,0	89,2	83,6	83,8	87,0	86,8	86,5
Marriage status (married)	17,4	10,4	4,4	20,4	10,0	4,0	18,0	22,9	6,8	20,8	8,0	11,2	7,2	20,2	21,9	17,3	13,5
HIV positive	3,6	5,6	10,0	10,5	6,8	11,6	20,7	4,8	7,2	4,0	10,4	16,0	8,8	12,3	25,0	16,0	10,4
Syphilis positive	16,6	9,2	11,6	4,8	15,2	10,4	13,4	0,8	8,8	7,2	12,4	4,4	10,0	5,2	31,4	6,0	10,2
Gonorrhea positive	25,9	48,4	42,4	35,5	-	48,0	28,5	38,0	31,6	36,4	31,2	44,2	-	51,0	35,4	32,4	37,8
Chlamydia positive	32,4	47,6	51,6	34,7	-	51,6	38,6	46,0	27,2	34,0	32,4	50,2	-	49,5	44,8	31,2	40,7
Gonorrhea and/or chlamydia positive	42,1	65,2	66,8	50,8	-	68,8	53,1	58,0	46,4	52,8	49,2	67,1	-	68,0	56,3	47,2	56,5
Clients in one week (median, persons)	2,0	4,0	5,0	7,0	2,0	12,0	3,0	6,0	4,0	5,0	7,0	14,0	8,0	5,0	1,0	5,0	5,0
Ever injected	0,4	2,4	0,4	0,4	-	1,2	0,6	-	0,4	0,4	-	1,2	0,8	1,0	-	2,0	0,7
Injected in previous year	-	40,0	100,0	-	-	33,3	-	-	100,0	-	-	33,3	50,0	50,0	-	25,0	36,0
Used condom during last commercial sex	36,4	47,0	79,9	49,4	50,4	73,1	57,9	75,2	71,1	83,2	59,2	90,0	89,2	86,2	28,8	95,2	67,6
Used condom during commercial sex in the previous week	20,2	19,5	38,0	11,6	21,8	22,6	29,0	52,0	35,1	44,9	24,2	49,6	47,8	41,0	25,5	65,6	34,7
Correct understanding about HIV	25,1	10,0	8,0	8,0	12,4	2,8	17,3	30,0	8,7	14,4	4,8	15,2	24,4	21,7	10,9	32,8	15,4
Feel at risk of infection	70,9	73,6	79,2	78,8	86,0	77,6	78,2	89,2	81,0	80,0	61,6	82,4	86,8	70,7	82,8	89,6	79,4
Ever had HIV test	35,2	36,4	44,0	22,0	46,0	47,2	45,3	82,0	58,3	88,8	63,2	65,6	67,6	79,3	34,4	88,8	56,8
Ever received printed IEC materials	49,2	39,5	57,0	38,6	52,9	42,7	51,2	81,8	69,6	68,2	62,8	65,2	59,2	55,8	32,3	86,5	57,6
Frequency contact by field worker	34,4	34,2	43,8	15,1	45,4	35,5	62,7	69.3	56,6	70,0	41,3	83,5	76,5	52,3	30,9	78,2	52,2
Frequency visited STI clinic	13,0	29,3	57,3	29,9	42,2	43,4	68,2	85.7	90,0	87,1	81,3	84,2	75,3	49,0	20,5	89,9	60,1
Had STI symptoms in last year	11,0	28,0	35,2	45,6	47,2	57,8	25,8	33.5	33,7	29,2	22,0	26,4	22,8	21,7	38,5	34,2	32,2
Frequency of receipt of free condoms in the previous three months	28,0	69,3	57,6	48,9	43,5	32,5	51,2	44,4	53,7	30,5	69,3	90,0	47,4	96,3	25,7	68,4	53,1

Indirect FSW (%)	Regency/City													
	Medan City	Lampung City	Batam City	West Jakarta	Bekasi	Bandung City	Semarang City	Malang	Surabaya City	Denpasar City	Kupang City	Ambon City	Jayapura City	Total
N	**249**	**187**	**244**	**246**	**250**	**250**	**250**	**218**	**249**	**248**	**250**	**259**	**249**	**3.149**
Age (median, years)	33,0	26,0	27,0	29,0	25,0	28,0	31,0	29,0	30,0	28,0	27,0	26,0	27,0	28,0
Education	56,6	46,5	71,4	72,4	54,2	66,8	60,4	50,9	57,2	65,6	59,6	49,8	54,0	59,2
Marriage status	36,1	33,7	4,9	30,0	19,6	33,6	47,4	37,3	53,2	16,8	14,0	18,3	16,1	27,6
HIV positive	3,2	1,6	6,9	5,2	1,6	0,4	0,8	0,5	2,0	8,8	1,6	1,2	3,2	2,9
Syphilis positive	11,2	3,2	8,6	2,4	2,4	0,8	1,6	0,5	0,4	4,0	1,6	1,2	2,8	3,1
Gonorrhea positive	22,9	17,1	24,9	18,0	-	18,0	19,6	13,8	11,2	17,2	-	23,0	18,8	18,7
Chlamydia positive	30,5	36,9	57,6	38,8	-	42,0	50,4	39,5	27,2	40,4	-	51,2	31,2	40,6
Gonorrhea and/or chlamydia positive	44,2	45,5	64,5	44,8	-	48,4	58,8	46,3	33.2	48,4	-	59,7	39,6	48.6
Clients in one week	4,0	2,0	4,0	4,0	-	3,0	5,0	1,0	2,0	1,0	2,0	-	1,0	2.0
Ever injected	-	1,6	1,2	-	0,8	1,6	-	0,9	0,9	0,8	-	-	0,4	0,6
Injected in previous year	-	100,0	100,0	-	-	33,3	-	50,0	-	-	-	-	-	45,5
Used condom during last commercial sex	81,6	17,6	77,2	90,7	49,0	72,4	74,2	30,3	85,2	50,8	52,2	19,4	57,7	60,7
Used condom during commercial sex in the previous week	51,5	3,3	48,6	52,0	22,9	38,5	41,9	15,4	75,8	26,1	28,4	14,1	31,9	36,8
Correct understanding about HIV	16,5	13,4	7,4	15,6	21,2	18,4	34,4	5,1	4,8	16,4	22,4	14,6	19,6	16,3
Feel at risk of infection	77,9	41,7	67,8	86,8	69,6	70,0	78,0	42,2	35,6	54,0	52,4	38,9	78,4	61,5
Ever had HIV test	51,4	8,0	25,3	53,2	9,2	18,4	58,0	16,5	22,0	36,0	27,2	55,4	74,4	35,8
Ever received printed IEC materials	50,0	34,4	46,5	50,0	20,8	34,2	55,8	12,2	5,5	37,1	29,2	24,2	75,5	37,3
Frequency contact by field worker	29,6	1,7	24,0	20,6	13,6	16,9	20,4	2,9	1,0	61,5	15,3	30,8	71,6	24,8
Frequency visited STI clinic	33,3	2,7	28,3	40,7	10,0	11,6	22,4	5,7	4,9	33,2	6,9	8,0	53,7	20,9
Had STI symptoms	15,4	26,2	26,5	34,9	31,2	34,0	23,4	33,2	13,4	21,0	10,4	13,9	21,3	23,3
Frequency of receipt of free condoms in the previous three months	39,8	16,6	33,3	39,3	9,5	9,2	14,4	2,9	3,0	44,2	4,9	20,7	72,4	24,4

MSM (%)	Regency/City					
	Jakarta City	Bandung City	Semarang City	Malang City	Surabaya City	Total
N	**250**	**250**	**249**	**247**	**248**	**1.244**
Age (median, years)	26,0	27,0	33,0	23,0	30,5	27,0
Low education	20,9	22,4	34,4	49,8	28,5	31,2
Marriage status (married)	7,6	11,2	26,8	8,1	24,5	15,7
HIV positive	17,2	10,4	2,4	2,5	9,6	8,5
Syphilis positive	16,8	11,2	5,2	3,4	9,6	9,3
Gonorrhea positive	18,4	28.8	0,0	0,0	15,2	20,8
Chlamydia positive	14,4	32,0	0,0	0,0	15,2	20,5
Gonorrhea and/or chlamydia positive	27,6	45,6	0,0	0,0	25,2	32,8
Clients in one week	2,0	1,0	1,0	1,0	1,0	1,0
Ever injected	5,2	0,8	0,0	4,6	1,2	2,4
Injected in previous year	41,4	0,0	0,0	33,3	0,0	27,9
Used condom during last commercial sex	67,7	49,0	30,3	76,2	75,9	60,8
Used condom during commercial sex in the previous week	24,6	5,8	8,,4	39,8	38,5	24,4
Correct understanding about HIV	22,8	18,0	26,0	34,3	27,2	25,6
Feel at risk of infection	61,2	62,4	69,6	66,1	63,6	64,6
Ever had HIV test	43,2	31,6	25,6	58,1	38,4	39,3
Ever joined discussion	42,9	18,8	11,3	39,2	42,0	30,8
Ever received printed IEC materials	55,2	27,8	18,4	64,9	53,7	43,9
Frequency contact by field worker	28,6	8,1	6,1	32,1	25,5	20,0
Frequency visited STI clinic	28,9	10,8	2,8	50,9	14,6	21,3
Had STI symptoms	28,5	30,5	29,6	30,7	37,0	31,2
Frequency of receipt of free condoms in the previous three months	59,4	88,8	93,2	36,9	67,2	69,3

Waria (%)	Regency/City					
	Jakarta City	Bandung City	Semarang City	Malang City	Surabaya City	Total
N	**245**	**247**	**87**	**249**	**244**	**1.072**
Age (median, years)	30,0	29,0	30,0	32,0	32,0	31,0
Low education	57,4	55,4	52,3	65,2	57,8	58,4
Marriage status (married)	89,2	94.4	91,0	94,8	94,0	92,9
HIV positive	30,8	14.4	24,7	16,8	24,4	21,9
Syphilis positive	31,2	26,4	18,0	20,8	25,2	25,3
Gonorrhea positive	25,2	38,4	22,4	29,2	24,4	28,8
Chlamydia positive	23,2	44,4	23,5	27,6	19,6	28,3
Gonorrhea and/or chlamydia positive	38,0	58,4	37,7	41,2	35,2	42,8
Clients in one week	3,0	3,0	6,5	4,0	6,0	4,0
Ever injected	2,4	1,2	1,1	0,8	0,4	1,2
Injected in previous year	10,4	22,2	0,0	5,0	0,0	9,1
Used condom during last commercial sex	88,9	77,3	83,3	65,9	86,2	79,6
Used condom during commercial sex in the previous week	59,4	56,4	42,3	243	29,4	41,3
Correct understanding about HIV	29,2	25,2	38,2	41,6	29,6	32,0
Feel at risk of infection	82,8	80,0	73,0	84,0	67,2	78,1
Ever had HIV test	72,0	74,8	70,8	58,0	84,4	72,2
Ever received test result	80,0	71,1	96,8	88,3	90,1	83,5
Frequency contact by field worker	45,9	11,5	36,1	15,6	48,6	31,0
Frequency visited STI clinic	32,7	10,0	36,4	8,2	33,6	22,4
Had STI symptoms	34,9	21,2	12,4	15,6	32,4	24,9
Frequency of receipt of free condoms in the previous three months	9,5	4,6	5,8	5,4	5,9	6,3

High-risk men (%)	Regency/City												
	Deli Serdang	Medan City	Lampung	Batam City	North Jakarta	Batang	Semarang City	Surabaya City	Denpasar City	Kupang City	Ambon City	Jayapura City	Total
N	**599**	**398**	**399**	**395**	**374**	**396**	**399**	**397**	**400**	**391**	**397**	**299**	**4.844**
Age median	36,0	32,5	36,0	35,0	42,0	34,0	33,0	31,0	36,0	29,0	35,0	31,0	34,0
Low education	51,3	16,8	78,0	39,1	83,6	71,7	29,4	38,3	64,6	22,6	29,1	39,0	47,3
Marriage status (married)	77,3	61,8	81,5	65,3	90,2	74,9	63,0	59,2	76,8	54,1	73,8	63,0	70,5
HIV positive	0,3	1,3	0,3	0,8	0,3	1,0	0,5	0,3	2,3	0,5	0,0	2,0	0,7
Syphilis positive	2,2	1,0	7,8	5,3	5,0	9,8	3,5	5,0	3,3	3,0	1,8	6,3	4,4
Ever injected	0,8	0,0	0,5	0,3	0,5	0,3	1,3	0,5	0,3	0,3	0,0	0,7	0,5
Injected in previous year	8,0	0,0	0,0	0,0	6,7	0,0	7,1	0,0	0,0	0,0	0,0	22,2	7,3
Used condom during last commercial sex	67,5	27,9	56,5	74,3	7,1	21,3	29,0	70,7	53,5	72,2	70,1	84,8	60,6
Used condom during commercial sex in the previous week	23,9	25,0	10,5	17,2	5,5	7,6	21,7	6,4	7,1	20,6	5,5	13,7	13,9
Correct understanding about HIV	23,3	11,8	6,0	6,3	3,3	16,5	18,8	21,8	11,7	20,8	6,5	23,7	14,4
Feel at risk of infection	43,7	49,3	34,5	49,5	23,0	40,8	33,3	29,3	55,1	47,9	13,8	41,7	38,6
Ever had HIV test	1,7	12,0	1,8	7,0	3,0	3,8	8,0	3,5	2,7	9,5	10,0	22,3	6,6
Ever received test result	1,2	9,3	1,0	5,3	2,3	2,0	4,0	2,5	1,5	5,3	3,8	22,3	4,5
Ever received printed IEC materials	67,2	44,8	48,1	19,2	22,8	33,1	57,0	46,5	36,4	50,3	16,9	73,4	43,3
Frequency contact by field worker	12,8	2,0	1,3	2,8	2,3	2,0	1,5	0,0	3,0	3,0	0,3	29,0	46
Had STI symptoms	11,4	2,8	14,0	8,0	7,8	10,3	13,9	4,0	13,0	6,8	4,0	10,7	9,0
Frequency of receipt of free condoms in the previous three months	8,5	2,0	4,5	1,5	4,9	6,4	3,5	1,0	5,0	5,5	2,3	28,7	5,8

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Prisoners (%)	Regency/City					
	Batam City	Central Jakarta	Semarang City	Malang City	Denpasar City	Total
N	**399**	**387**	**391**	**394**	**394**	**1.965**
Age median	31,0	30,0	31,0	31,0	32,0	31,0
Education	60,5	53,8	56,3	69,8	45,5	57,1
Marriage status (married)	40,5	45,3	49,0	55,5	49,4	47,9
HIV positive	1,0	8,0	0,8	0,8	4,3	3,0
Syphilis positive	8,0	4,8	3,0	2,0	6,0	4,8
Ever injected	3,8	13,3	2,8	4,1	8,1	6,4
Used condom during last commercial sex	98,8	88,9	97,7	98,7	98,3	96,5
Used condom during commercial sex in the previous week	0,0	4,6	0,0	0,0	0,0	2,1
Correct understanding about HIV	11,0	8,8	14,5	10,0	13,9	11,7
Feel at risk of infection	35,3	34,8	14,5	19,5	23,5	25,5
Ever had HIV test	36,0	24,0	14,5	19,0	28,9	24,5
Ever joined discussion	54,5	59,5	41,5	49,7	43,8	49,9
Had STI symptoms	3,8	15,3	2,6	5,0	4,0	6,1

IDU (%)	Regency/City						
	Medan City	Jakarta City	Bandung City	Semarang City	Malang City	Surabaya City	Total
N	**250**	**250**	**250**	**169**	**250**	**250**	**1.419**
Age (median)	29,0	31,0	27,0	24,0	30,0	31,0	29,0
Low education	16,4	25,2	20,0	17,1	38,8	22,1	23,6
Marriage status (married)	36,4	39,0	24,8	16,5	48,4	43,6	35,8
HIV positive	39,2	56,4	25,2	1,2	36,4	48,8	36,4
Syphilis positive	5,6	4,4	0,4	0,6	0,8	0,4	2,1
Used condom during commercial sex in the previous month	1,2	40,0	33,3	32,7	25,5	25,5	29,8
Correct understanding about HIV	42,8	30,8	38,0	24,1	46,8	74,4	43,9
Feel at risk of infection	81,6	80,8	60,8	34,1	64,0	78,0	68,4
Ever had HIV test	63,6	71,6	59,6	27,1	64,4	77,6	62,5
Ever joined discussion	71,2	76,8	54,0	74,0	82,4	83,1	74,3
Frequency contact by field worker	71,2	76,8	54,0	74,0	82,4	83,1	74,3
Had STI symptoms	7,3	16,8	28,8	32,7	21,8	19,6	20,5
Frequency last injecting (median)	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Frequency injecting during previous week	7,0	7,0	2,0	1,0	7,0	3,0	4,0
Number of friends at last injection	3,0	2,0	3,0	3,0	3,0	2,0	3,0
Number of friends injecting during previous week	4,5	3,0	3,0	3,5	3,0	2,0	3,0
Number of IDUs sharing needles	4,8	20,1	18,0	18,9	11,2	8,4	13,3
Use of common needle	13,8	16,1	4,8	5,4	3,8	6,5	8,5

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