Myanmar HIV Sero-Sentinel Surveillance Survey, 2020

National AIDS Programme
Department of Public Health
Ministry of Health
Myanmar

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Foreword

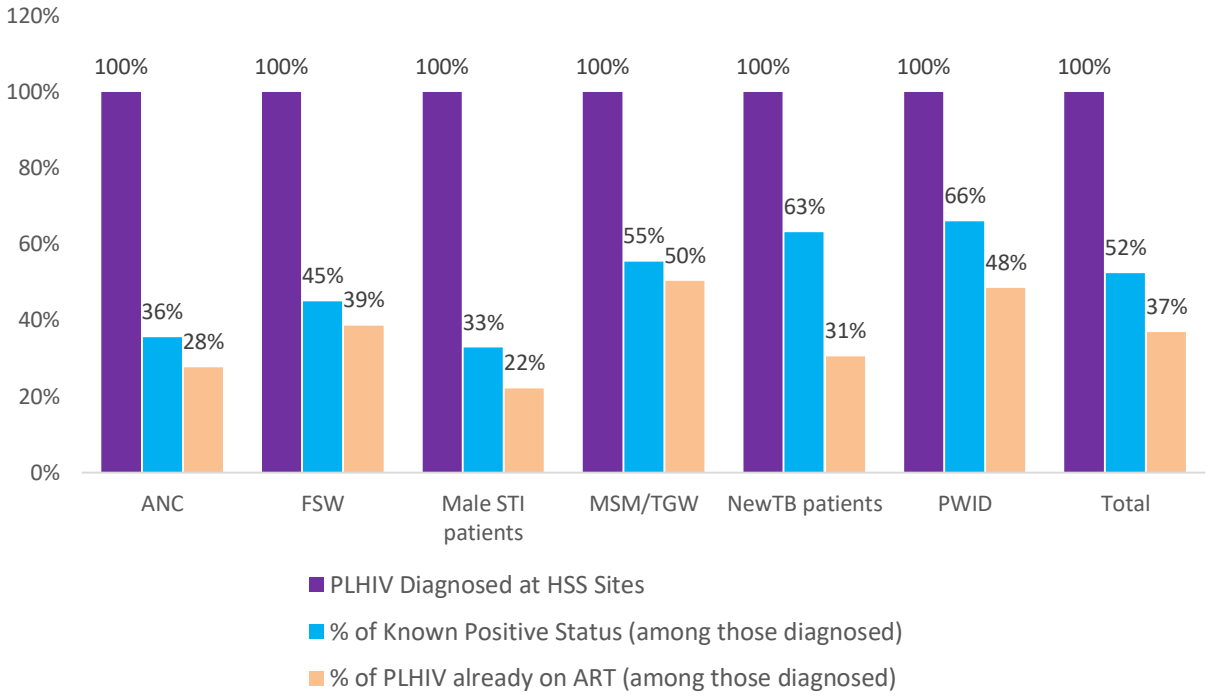
The HIV sentinel sero-surveillance survey has been conducted as one of the components of the second-generation surveillance system in Myanmar since the year 1992. The leadership of the National AIDS Program (NAP) and continuous collaborative efforts of the NAP team, National TB Programme (NTP) team, Directorate of Medical Defense, Blood Centers and implementing partners have made the surveillance system run smoothly over the years. In addition, the sentinel sites and sentinel groups have gradually been added overtime and a total of 35 sentinel sites, and 6 major sentinel groups have been included since the year 2012.

This report is the collective effort of NAP, UNAIDS, and UCSF. Appreciation must go first to the NAP's regional officers, team leaders of all sentinel sites, especially the M&E Officer who coordinated this hard work to produce quality results. The NAP will not forget the contributory efforts of the NGOs' participation in the data collection process.

Among three key populations, we have seen the declining trend of HIV prevalence among female sex worker (FSW) populations (from 33.5% in 2006 to 5.4% in 2020) and among people who inject drugs (PWID) (from 26.1% in 2016 to 18.9% in 2020); however, while the HIV prevalence among men who have sex with men/ transgender women (MSM/TGW) declined from 29% in 2007 to 6% in 2016, there has been an increase from 6% in 2016 to 11.8% in 2020. While the reasons for this are unclear, it is important to note this change. Among other (general) populations, HIV prevalence was stable among pregnant women at around 0.5% (between 2016 and 2020), and among new TB patients at around 8.5-9.2% (between 2014 and 2020). We have seen an upward trend of HIV prevalence among male STI patients (from 4% in 2014 to 11.8% in 2020).

Looking at the young age group (15-24 years) shows that HIV prevalence among PWID is the highest but has been decreasing (from 19.3% in 2016 to 11.9% in 2020). The HIV prevalence among young FSW has been also decreasing (from 7.1% in 2013 to 3.1% in 2020). Alarmingly, HIV prevalence among young MSM/TGW has been on the rise since 2014 (3.8% to 7.3%), which put them at the second highest prevalence after young PWID. Thus, these data indicate the need to intensify the scale-up of prevention interventions, particularly among young PWID and MSM/TGW.

HIV diagnosis and treatment coverage varies among sentinel groups in 2020 (see figure below). Overall, only 52% of the people living with HIV (PLHIV) were aware of their positive HIV status (ranged from 33% in Male STI patients to 66% in PWID). Of those sentinel populations who were aware of their positive HIV status, only 71% were on treatment (ranged from 48% in TB patients to 91% in MSM/TGW). Thus, there is a need to scale up the screening and diagnosis programs among almost all sentinel populations and in particular male STI patients, pregnant women, and FSW. Less than one in two of new TB patients diagnosed with HIV were on treatment, and the cause needs to be evaluated to properly address this gap.



The NAP anticipates that all stakeholders should consider responding to the local epidemic response by maximally using the information generated from the sentinel surveillance. However, this sentinel data alone cannot fully assess the trends of the HIV epidemic of Myanmar. Data from the integrated behavioral surveillance of key populations should be triangulated with the program data on the HIV continuum of care for a more robust understanding of the situation.

National AIDS Program
Department of Public Health
Ministry of Health

Acknowledgement

I am highly indebted to Director General, Department of Public Health for their guidance and constant supervision as well as for providing necessary action regarding the HSS and for their support in completing those HSS activities.

I would like to express my gratitude towards our colleagues of the NAP across the country for their dedication and their valuable capacities and abilities in implementation of this HSS.

I also appreciate the supporting partners, INGO friends who assisted in recruitment of participants for their kind cooperation.

My appreciations also go deeply to UNAIDS and WHO for its continued support in conducting of HSS and UNAIDS/UCSF in developing this report.

Program Manager
National AIDS Program

List of Abbreviations

AFB	Acid Fast Bacilli
ANC	Antenatal care
DoPH	Department of Public Health
DIC	Drop-in Center
FSW	Female Sex Worker
HIV	Human Immuno-deficiency Virus
HSS	HIV Sentinel Sero-Surveillance Survey
IBBS	Integrated Bio Behavioral Survey
INGO	International Non-Government Organization
KP	Key Population
M&E	Monitoring and Evaluation
MSM/TGW	Men who Have Sex with Men/ Transgender Women
MR	Military Recruit
NAP	National AIDS Programme
NHL	National Health Laboratory
NTP	National TB Programme
NGO	Non-Government Organization
PMTCT	Prevention of Mother to Child Transmission of HIV
PWID	People who inject drugs
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
TGW	Transgender Women
TB	Tuberculosis
UCSF	University of California, San Francisco
UNADIS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

Background

The National AIDS Program (NAP) has taken a lead role in the implementation of the HIV sero-surveillance survey (HSS) since its inception in 1992. From 1992-2000, HSS was done biannually in March and September. From 2000 to 2014, HSS was conducted every year. In 2014, it was decided that this survey would be conducted once every two years.

The sentinel groups at the beginning of HSS were male sexually transmitted infection (STI) patients, female STI patients, people who inject drugs (PWID), female sex workers (FSW), pregnant women, blood donors and military recruits. The sentinel sites also expanded gradually from 9 sites to the current 35 sites between 1992 and 2014. The guidelines were developed and published in 2000. The Tuberculosis (TB)-HIV sentinel surveillance protocol was finalized in 2005, with the technical support of the World Health Organization (WHO), including the addition of new TB patients as a new sentinel group. In 2007, the guidelines were reviewed and revised again to recalculate the sample size and the sampling methodology, with WHO support. At this time, the men who have sex with men (MSM) group (also including transgender women-TGW) was also introduced.

HIV testing was originally done at the National Health Laboratory (NHL) and Public Health Laboratory (PHL) by sending sera directly from sites in the microvials from 1992 to 2008. The blood specimens were tested for syphilis in the key populations (KP), male STI patients, pregnant women and military recruits at AIDS/STD teams in 2007. In 2008, due to the difficulties in sample transportation and the increased capacity of laboratory services among the AIDS/STD teams, HIV antibody testing was decentralized and testing was conducted by AIDS/STD teams. The recording forms were reviewed again in 2011 and short behavioural questions were added to determine the risk factors and relationship of HIV prevalence and risk practices.

The uptake of HIV testing among pregnant women increased alongside the expansion of Prevention of Mother to Child Transmission of HIV (PMTCT) to townships. Long term scrutiny of the prevalence data suggests the prevalence of pregnant women of HSS coincides with the results of routine PMTCT information. Similarly, the prevalence of new TB patients from routine program information corresponded with the prevalence of HSS. NAP realized these findings underscore the possibility of substitution of routine HIV testing information for HSS for pregnant women and TB patients.

Since 2014, the sociodemographic information questions were added to the routine collection form, which enabled collection of consistent and complete information to be used for the case-based recording and reporting. However, the case-based recording and reporting was not well established until 2016.

With the decentralization of HIV testing and increasing uptake of HIV testing for antenatal care (ANC) and new TB patients, it was found the HIV prevalence from routine health information from PMTCT projects and HSS data was almost the same. In this regard, it is under consideration for the NAP to substitute the routine health information data of ANC and TB patients with the HSS data in future years.

Objectives of HIV sentinel surveillance

The objectives of the HSS are the following:

- Monitor trends of prevalence of HIV and Syphilis infection over time
- Provide information on changes or trends by geographic and socio-demographic characteristics
- Assess the HIV infection and syphilis infection rates among different sentinel groups in different geographic areas
- Utilize surveillance data in the public health decision-making, including:
    - Advocacy
    - Target and prioritization of prevention and care programs
    - Monitoring and evaluation of prevention and care programs
    - Generation of data for HIV estimation and projections
    - Resource allocation and program planning
    - Direct operations research and other scientific research

Survey methodology

Survey design

The survey deployed a facility-based cross-sectional study design conducted at sentinel sites designated for each of the six sentinel groups. The data collection facilities were located mostly in urban areas, e.g., Maternal and Child health clinics, STI clinics, Drop-in-centers (DIC), etc.

Study area

There were a total of thirty-five (35) sentinel townships overall. Although the number of sentinel townships did not increase from the 2016 to 2020 rounds, the number of sentinel groups in each of the sentinel townships increased in most of the townships.

Study population/groups

The following population groups were included:

a) Key populations: FSW, PWID, MSM/TGW
b) Populations at medium risk (bridging population): Male STI patients
c) Populations at lower risk: ANC attendees
d) Other sentinel population groups: TB patients

Frequency and period of HSS

To adhere to consistent surveillance methodlogies, every round of the survey had to maintained consistent timing starting from 1st March to 31st May with an extendable period of four weeks if the required sample size was not achieved. The survey was extended the four weeks due to COVID-19. Although the survey was origianlly carried out every year since the beginning, since 2014 it was conducted once every two years.

Sample size calculation

HSS sample sizes were based on measuring HIV prevalence within an acceptable range of precision that enabled the detection of changes over time and differences between groups. The formula to determine sample size (n) needed for desired precision (confidence interval) was:

$$\text{sample size (n)} = \left[\frac{\frac{Z_\alpha{}^2 P(1-P)}{e^2}}{1+\left(\frac{Z_\alpha{}^2 P(1-P)}{e^2 N}\right)}\right]*2 \quad \text{where}$$

- zα is a factor that corresponds to the desired confidence level (for a 95% confidence level, zα = 1.96).
- P is the expected proportion of subjects with the outcome (i.e., HIV prevalence); for the current calculation we use a wide range of HIV prevalence observed in past HSS cycles (i.e., 0.5% to 30%)
- e is the margin of error; for the current calculation the desired precision is set to keep all confidence intervals at +/- 2.3% or less.
- N is the population size (how many population are there to choose your random sample from); the default value of 20,000 is used as it is the most conservative even for the largest key populations considered. Of note, small populations will mean there is greater precision given a finite population correction factor.
- Design effect is taken as 2; that is, a moderately high intra-cluster correlation when considering analysis of the combined data taking the site into consideration.

Sentinel facilities

The selection of sentinel facilities aimed to balance between the need for data, the logistical feasibility of implementation, and availability of services for the target populations. The selection process was guided by the following criteria:

- The site provided services for the selected sentinel populations, such as ANC clinics, STI clinics, TB clinics, Methadone Maintenance Therapy Centers, and DICs.
- The site provided services or healthcare to relatively large number of persons so that the minimal sample size could be obtained within the study period.
- The site had a possibility of collecting minimal demographic information for patients/clients.
- Blood was drawn from patients as part of routine care at the site.
- A reliable laboratory was available on site or nearby to perform the routine laboratory tests and reliable roads and transport options existed to send specimens to the reference laboratory.
- The site was readily accessible to the regional and national surveillance staff for supervision during the study period.
- On-site staff was cooperative and capable of conducting surveillance.
- On-site staff understood the need for HIV sentinel surveillance and were willing to be trained, supervised and implement activities.
- Geographic inclusiveness to represent the country.
- Ability of site to sustain participation over time.

Sampling procedures

"Consecutive sampling" of those who met the eligibility criteria for corresponding sentinel groups was used for this survey. All individuals attending the selected sentinel facilities and met the inclusion criteria should have been recruited in the order they attend the clinic. Therefore, all clients coming to respective facilities were selected using serial registration. This method applied to all attendees coming to the clinics regardless of their HIV status, but not on the frequency of attendance; therefore clients who attended the clinics more than once during the study period were not more likely to be selected. A candidate may only be enrolled in the surveillance ONCE during the intake period. This sampling method removed all chances of selection or exclusion based on individual preferences and other reasons, thus reducing the selection bias.

Eligibility Criteria

Pregnant women (PW): All pregnant women attending the antenatal clinic for the first time during the intake period and whose blood was drawn for syphilis testing and aged 15-49 years.

STI patients: All individuals seeking treatment for STI(s) through facility-based services whose blood was drawn routinely for syphilis testing, male and aged 15 years and above.

Female sex workers: Aged 15 years and above and either direct or indirect sex workers receiving services through facilities including targeted intervention sites and sold sex in exchange for cash/kind at least once in the past six months.

- Direct sex workers: Brothel-and street-based sex workers
- Indirect sex workers: Entertainment-based sex workers

People who inject drugs: Aged 15 years and above and had injected drugs for nonmedical reasons any time during the past one year and receiving services through the drug treatment center or through the services of a needle exchange program; Had injected psychotropic (or psychoactive) drugs in the past 12 months, including, but not limited to, opioids, amphetamine-type stimulants, cocaine, hypno-sedatives and hallucinogens.

Males who have sex with males/Transgender Women: Aged 15 years and above and had receptive and/or insertive sex with another male at least once in the last 12 months, and identified through self-identification or through the targeted intervention sites.

New TB patient: Aged 15 years and above and a new TB patient who attended the TB clinic during the survey period, newly diagnosed with TB, or if treated, the treatment must have been within one month.

Data collection (Socio-demographic data and specimen collection)

Once the candidate was eligible to be included in the HSS, he/she was asked a few questions specific for each sentinel group. The data collection form specific for each sentinel group was completed by survey staff working at blood collection facility using the clinic registration number.

Basic demographic data which had been routinely collected was recorded, namely:

- Age in completed years
- Marital status whether single, married, divorced, separated
- Education
- Living area (urban, rural)
- Parity for pregnant women, primipara or multipara
- For each of the at-risk group: age of initiating at risk behaviour, such as age of initiating sex work for FSW, initiating anal sex with men for MSM/TGW, and initiating injecting drug use for IDU
- In case of sex workers: additional information on type of sex work (whether direct or indirect), number of townships worked in the previous year were recorded
- For new TB patients, type of TB was recorded, e.g., AFB (+)ve, AFB(-)ve, or extra-pulmonary
- HIV testing and awareness status
- If HIV positive, ever ART, currently on ART

In case of most-at-risk populations, if there was a refusal by an individual to participate in the surveillance, even then, the socio-demographic variables were recorded on the Refusal form.

Specimen collection

For ANC, new TB patients, and male STI patients, testing was done through finger prick, with phlebotomy done for every 10th negative test and all positive cases for quality assurance. For key population groups, phlebotomy was conducted as lab technicians were available in all HSS centres. Serum specimens were sent for QA for all positives and every 10th sample for negatives.

Laboratory Testing

All the blood specimens were tested for HIV, and Syphilis testing using rapid test kit according to updated national testing guideline. All labs had internal and external quality assurance schemes/processes.

HIV Antibody Testing

Before HIV antibody testing, every eligible candidate went through the consenting/ counseling process in accordance with HTS guidelines. The process was carried out either in a group or individually. HIV testing was performed by simple/rapid tests at the local laboratory. The 3-test algorithm was used for all groups. After testing for HIV antibody, the result of the HIV test was recorded on HSS form. At the end of the survey, the complete forms were sent to local AIDS/STD team.

Syphilis Testing

Syphilis testing was done using RPR/VDRL and TPHA at the local facility laboratory. Confirmation with TPHA is accounted for in the syphilis diagnostic results. After syphilis testing, the result of the syphilis test was recorded in the corresponding forms. The result of test was returned to the clients.

Data Management

Data Flow, Data entry and cleaning

The respective AIDS/STD team is responsible for collecting completed forms (containing demographic, HIV, and STI result) from sentinel facilities, entering the data from HSS forms

through DHIS2 platform and sending the completed forms to the central NAP, when all tests are done.

To ensure accurate data entry, the following steps were undertaken:

- All data were initially collected on hard-copy HSS forms
- Data from HSS forms were entered through DHIS2 platform using the event capture module.
- Acceptable (legal) values for each variable were defined.
- 10% of random samples were cross-checked between hard- and soft-copy data
- Data entry operator were trained and supervised by the national surveillance focal person.

Data Analysis

All information collected at the sentinel sites was recorded through the DHIS2 platform before importing the data sets into SPSS version 25 for statistical analysis. The process of analyzing and interpreting sentinel surveillance data was focused HIV prevalence trends, disaggregated by age, sentinel groups, and geographic areas.

Confidentiality and ethical issues

All individuals seeking services at the sentinel facility were explained the purpose of surveillance and informed verbal consents were obtained. For those who consent to participate, blood collection and testing were done. No personal identifiable information (name, full address, contact number) was sent to the local laboratory or to the national program. The registration number was used for both tests. The results were returned to the participants with post-test counselling. For those who refused to participate, data was recorded in the refusal form.

HIV Sero-sentinel Surveillance Survey Results (2020) Overall

Sample size and recruited samples

Serum collection was conducted from March to June 2020, following advocacy to local partners at all sites of AIDS/STD teams. The sample size was determined according to the magnitude of the risk. The sample size for each selected sentinel site was 120 persons for FSW, 100 persons for MSM/TGW, 160 persons for PWID, and 100 persons for male STI patients. For new TB patients, 150 persons were to be sampled by the NTP from each selected sentinel site. For the low-risk population, i.e., pregnant women, each sentinel site aimed to recruit 400 persons.

Collection sites were identified according to the population size of the sentinel sites and the location of the AIDS/STD teams. The number of sentinel sites identified for pregnant women, new TB patients, and male STI patients was 35 townships. For FSW and MSM/TGW, 32 townships participated and for PWID, 11 sentinel sites were identified for the study.

In 2020, a total of 30,359 samples were collected (**Table 1**). The participation of pregnant women was from all (35) townships and the target samples achieved in 31 sites, with an overall target sample size achievement of 98.9% (=13,839/14,000). NAP received sera of new TB patients from 35 townships (13 sites recruited less than the target sample size, overall achievement = 88.7%). Male STI patients were recruited from all townships (13 did not achieve the target sample size, overall achievement = 90.7%). For FSW and MSM/TGW, the overall target sample size achievement was greater than 99%, and PWID above 95%.

Table 1. Sample size achieved for sentinel groups by sentinel site (HSS 2020)

Sentinel Site	ANC	FSW	Male STI patients	MSM/TGW	New TB patients	PWID	Total
Bago	400	120	81	104	150		855
Bhamo	400	120	100	100	150	126	996
Dawei	433	74	100	104	150		861
Hakha	399		99		38		536
Hinthada	404	120	100	100	150		874
Hpa-An	400	120	100	100	150		870
Kale	400	89	23	100	150	120	882
Kawthoung	298	88	101	104	59		650
Kengtung	400	126	10	40	150		726
Lashio	320	131	100	100	150	160	961
Loikaw	400		90		126		616
Magway	400	113	100	96	150		859
Mandalay	400	240	100	200	150	160	1,250
Maubin	400	120	100	100	150		870
Mawlamyine	400		100		150		650
Meiktila	400	120	100	100	105		825
Monywa	400	121	102	100	150	160	1,033
Muse	400	115	95	31	101	160	902
Myaungmya	400	80	82	72	147		781
Myawaddy	419	120	86	71	150		846
Myeik	400	120	46	100	150		816
Myingyan	400	120	100	100	150		870
Myitkyina	400	105	96	100	150	160	1,011
Nyaung-U	400	50	44	23	150		667
Pakokku	400	180	100	150	150		980
Pathein	449	120	100	100	150		919
Pyay	400	120	119	100	48		787

Pyinmana	411	43	73	102	90		719
Pyinoolwin	400	120	100	100	150	160	1,030
Shwebo	400	120	100	100	148		868
Sittwe	300	100	148	100	117		765
Tachileik	402	120	81	94	108	160	965
Taunggyi	400	120	100	100	120	160	1,000
Taungoo	400	119	100	97	150		866
Yangon	404	240	100	200	149	160	1,253
Total	**13,839**	**3,814**	**3,176**	**3,188**	**4,656**	**1,686**	**30,359**
% Target sample size achieved	**98.9%**	**99.3%**	**90.7%**	**99.6%**	**88.7%**	**95.8%**	

Basic characteristics of study participants

The basic sociodemographic characteristics data were collected for each sentinel group (**Table 2**)
With the exception of MSM/TGW participants (47%), the majority of other survey participants (68%) were above 25 years. Most participants (68%) were from urban areas.

Marriage was common in pregnant women (98%), TB patients (65%) and STI patients (52%). In the remaining key population groups, 41% of FSW, 22% of MSM/TGW, and 45% of PWID were married.

Only a small proportion of female participants in the population of TB patients and PWID were recruited at 35% and 3%, respectively.

Table 2. Basic characteristics of sentinel populations (HSS 2020)

Characteristic		**ANC**	**FSW**	**Male STI patients**	**MSM/ TGW**	**New TB patients**	**PWID**	**Total**
Age	<25 yr	4553 (33%)	1394 (37%)	957 (30%)	1686 (53%)	658 (14%)	388 (23%)	9636 (32%)
	≥25 yr	9286 (67%)	2420 (63%)	2219 (70%)	1502 (47%)	3998 (86%)	1298 (77%)	20723 (68%)
Resident	Urban	9149 (66%)	3185 (84%)	2199 (69%)	2491 (78%)	2380 (51%)	1319 (78%)	20723 (68%)
	Rural	4690 (34%)	629 (16%)	977 (31%)	697 (22%)	2276 (49%)	367 (22%)	9636 (32%)
	Single	225 (2%)	1229 (32%)	1447 (46%)	2353 (74%)	1233 (26%)	791 (47%)	7278 (24%)

Current marital status	Married	13551 (98%)	1561 (41%)	1656 (52%)	689 (22%)	3021 (65%)	766 (45%)	21244 (70%)
	Cohabiting	1 (0%)	25 (1%)	3 (0%)	28 (1%)	5 (0%)	0 (0%)	62 (0%)
	Separated/ Divorced	61 (0%)	821 (22%)	58 (2%)	105 (3%)	200 (4%)	116 (7%)	1361 (4%)
	Widow	1 (0%)	178 (5%)	12 (0%)	13 (0%)	197 (4%)	13 (1%)	414 (1%)
Sex	Female	13839 (100%)	3814 (100%)	----	----	1611 (35%)	53 (3%)	19317 (64%)
	Male	----	----	3176 (100%)	3188 (100%)	3045 (65%)	1633 (97%)	11042 (36%)

Age and Age at initiating key risk behaviors

Table 3 below presents the age at initiating key risk behaviors of different sentinel groups. The median age of the key populations ranged from 24 to 42 years. Median age of the pregnant women was 27 years, whereas that of male STI patients was 29 years, and of TB patients was 42 years. The mean age was higher than median age of each sentinel group. In this sense, the age distribution of each sentinel group was skewed to the right (**Figure 1**)

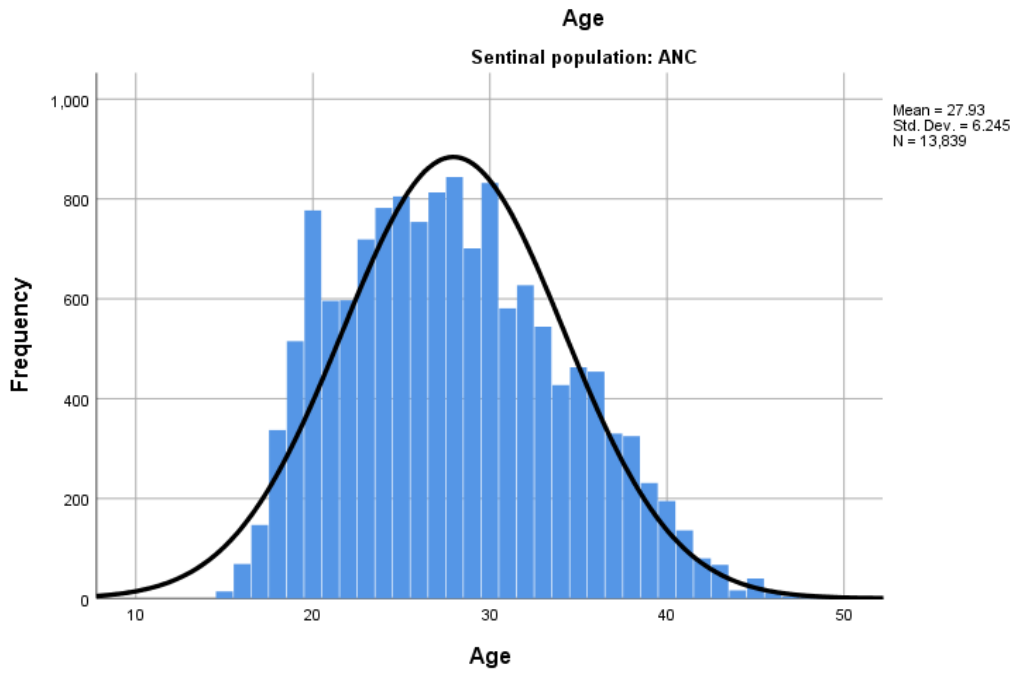
The median of age at initiating risk behavior was lowest in the MSM/TGW group at 19 years, while in FSW and PWID groups, the median ages at initiating risk behavior were 20 years and 24 years, respectively. The mean age at initiating risk behavior of FSW was 22.4 years, whereas that of MSM/TGW was 19.6 years and that of PWID was 24.7 years. As mean ages were higher than median ages, the distribution of age at initiating risk behaviors was positively skewed in each group (Figure 2).

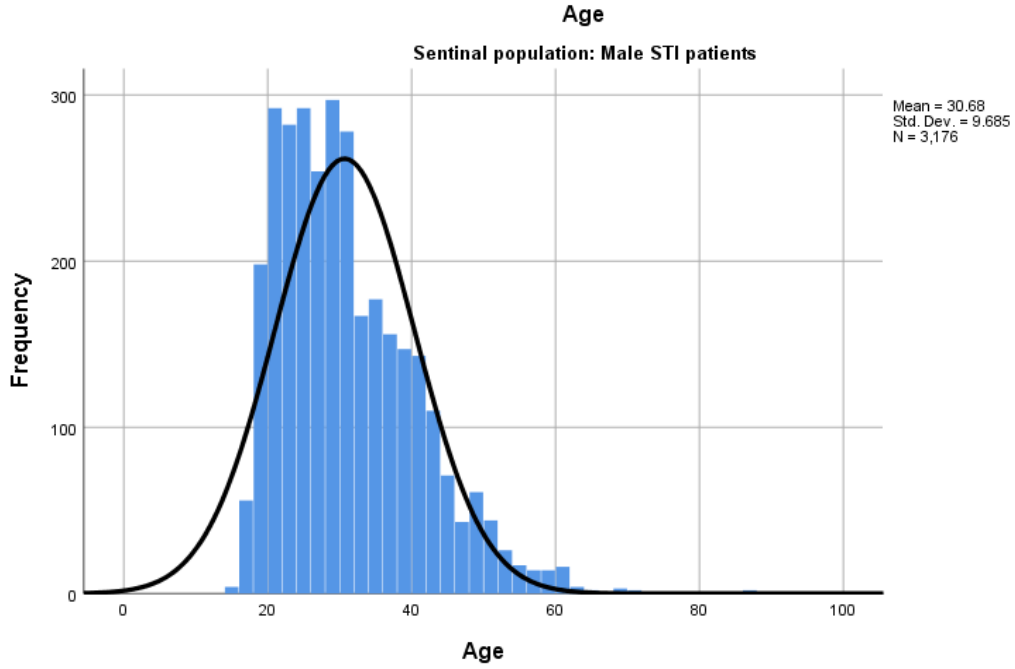
Table 3. Distribution of Age and Age at initiating key risk behavior by sentinel groups (HSS 2020)

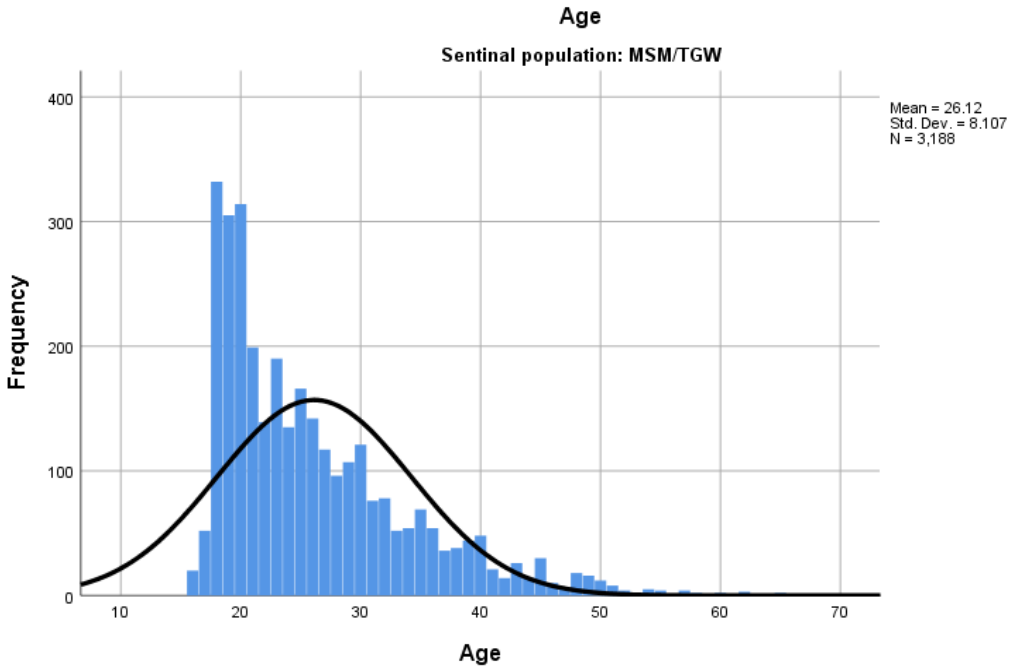
Sentinel Group	Age at the time of survey (years)		Age at initiating key risk behavior (years)	
	Mean (95%CI)	Median (Range)	Mean (95%CI)	Median (Range)
ANC	27.9 (27.8, 28.0)	27 (15, 49)		
FSW*	28.6 (28.3, 28.9)	27 (15, 64)	22.4 (22.2, 22.6)	20 (12, 48)
Male STI patients	30.7 (30.3, 31.0)	29 (15, 86)		
MSM/TGW**	26.1 (25.8, 26.4)	24 (16, 65)	19.6 (19.5, 19.8)	19 (6, 47)
New TB patients	43.1 (42.6, 43.6)	42 (15, 94)		
PWID***	31.4 (30.9, 31.8)	30 (15, 67)	24.7 (24.4, 25.0)	24 (10, 67)

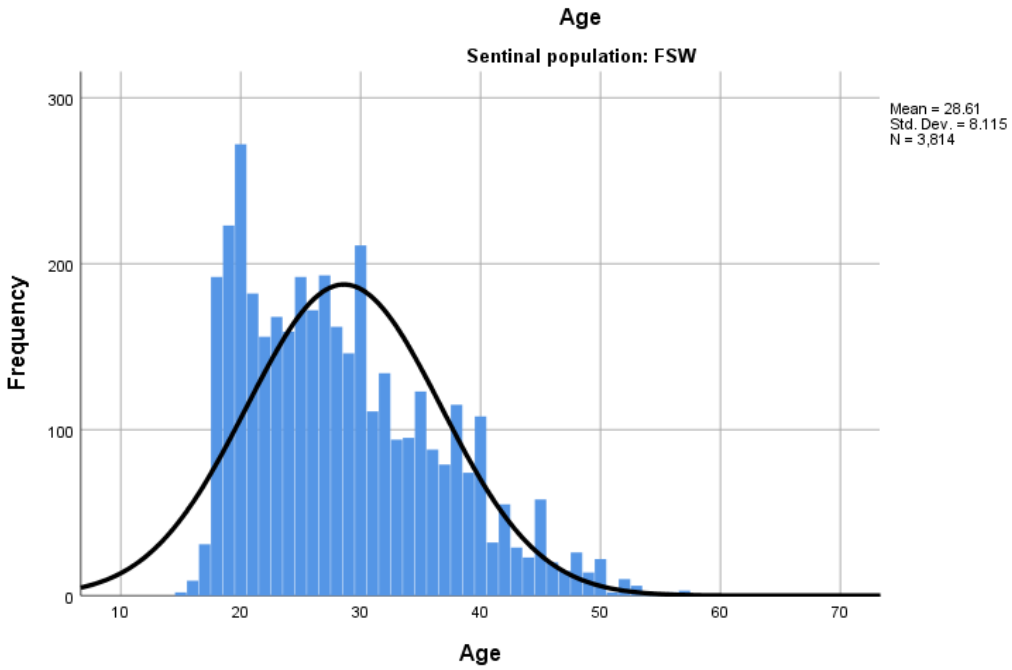
* Age of starting sex work; ** Age of first anal sex; *** Age at first injection

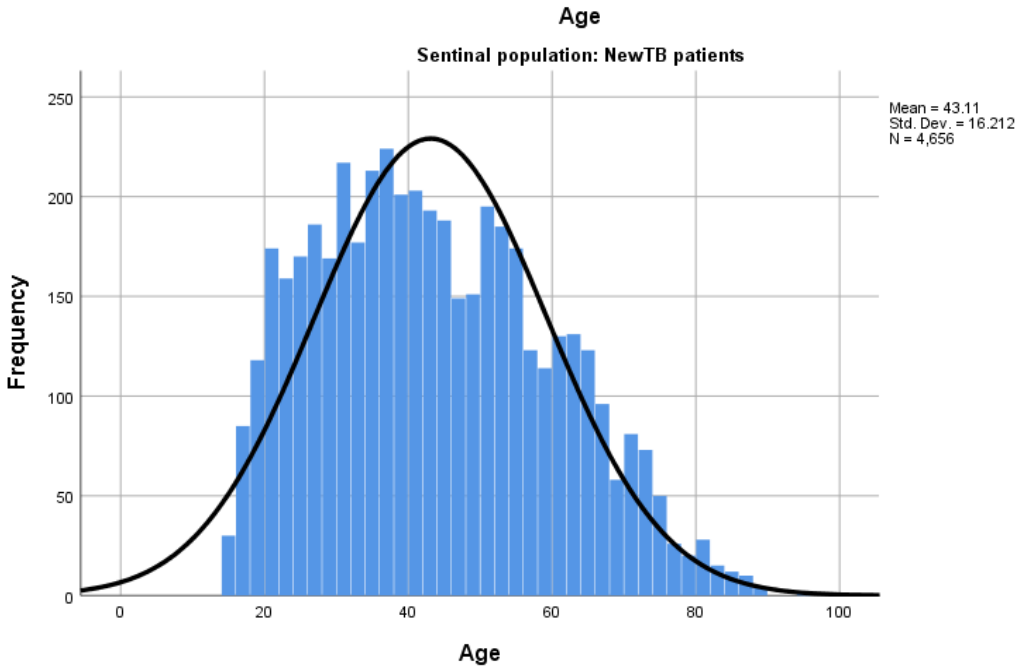
Figure 1. Distribution of age by sentinel groups (HSS 2020)






Age
Sentinal population: MSM/TGW
Mean = 26.12
Std. Dev. = 8.107
N = 3,188
Frequency
400
300
200
100
0
10
20
30
40
50
60
70
Age


Age
Sentinal population: FSW
Mean = 28.61
Std. Dev. = 8.115
N = 3,814
Frequency
300
200
100
0
10
20
30
40
50
60
70
Age


Age
Sentinal population: NewTB patients
Mean = 43.11
Std. Dev. = 16.212
N = 4,656
Frequency
250
200
150
100
50
0
0
20
40
60
80
100
Age

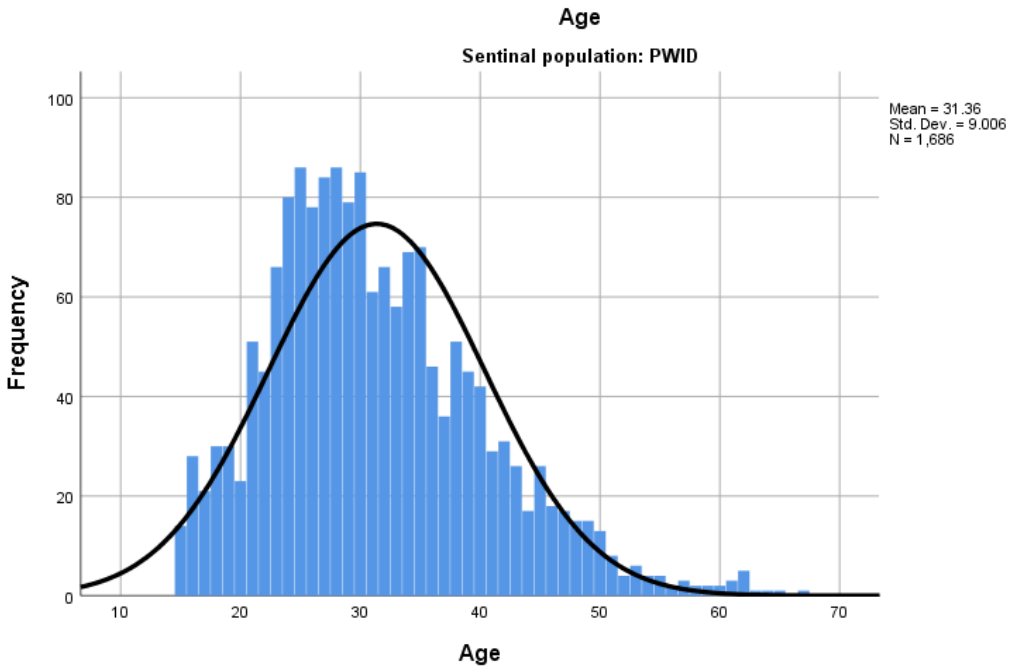
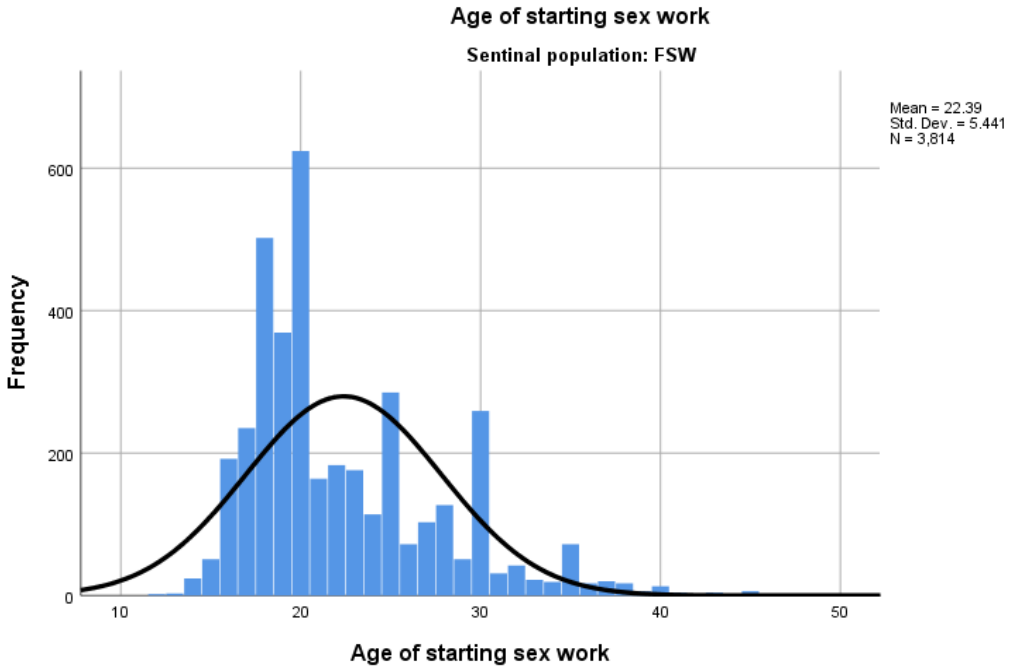
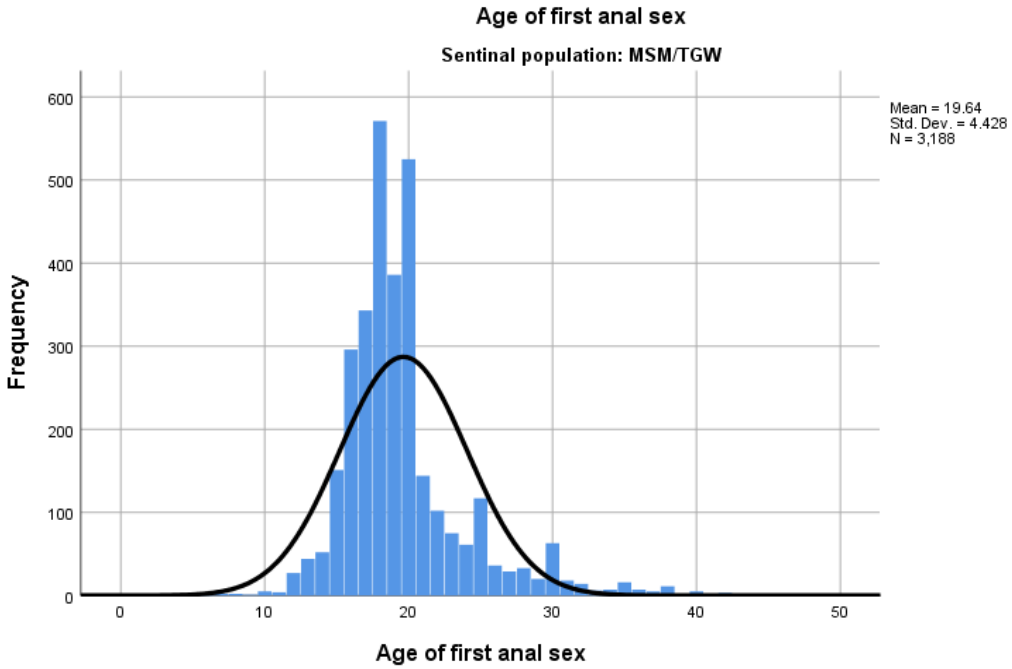
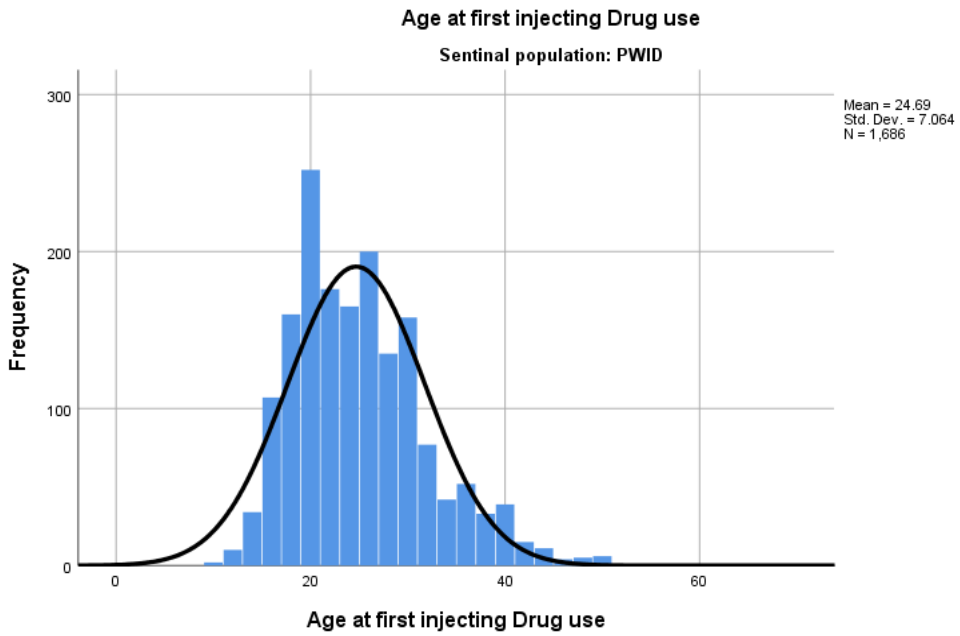

Age
Sentinal population: PWID
Mean = 31.36
Std. Dev. = 9.006
N = 1,686
Frequency
100
80
60
40
20
0
10
20
30
40
50
60
70
Age

Figure 2. Distribution of age at initiating key risk behavior by sentinel groups (HSS 2020)







HIV prevalence

Table 4 below compares the HIV positive results between <25 years and ≥25 years of age.

Among those less than 25 years old within the sentinel population, the HIV prevalence was highest in PWID at 11.9%, followed by 7.3% in MSM/TGW, 6.7% in male STI patients, 4.9% in new TB patients, 3.1% in FSW, and 0.3% in pregnant women.
Among those 25 years old and above, trends of HIV prevalence were similar to that of younger age group. The HIV prevalence was highest among PWID (21.0%), and lowest among pregnant women (0.7%).

Total HIV prevalence in PWID was highest at 18.9%, followed by 11.8% in both male STI patients and MSM/TGW. The HIV Prevalence among new TB patients was 9.2%, and then 5.4% among FSW, and 0.5% among pregnant women.

Table 4. HIV test results by age and sentinel groups (HSS 2020)

Sentinel Group	< 25 yr		≥ 25		Total	
	Tested, N	Positive, n (%)	Tested, N	Positive, n (%)	Tested, N	Positive, n (%)
ANC	4,553	13 (0.3%)	9,286	63 (0.7%)	13,839	76 (0.5%)
FSW	1,394	43 (3.1%)	2,420	164 (6.8%)	3,814	207 (5.4%)
Male STI patients	957	64 (6.7%)	2,219	311 (14.0%)	3,176	375 (11.8%)
MSM/TGW	1,686	123 (7.3%)	1,502	252 (16.8%)	3,188	375 (11.8%)
New TB patients	658	32 (4.9%)	3,998	397 (9.9%)	4,656	429 (9.2%)
PWID	388	46 (11.9%)	1,298	272 (21.0%)	1,686	318 (18.9%)

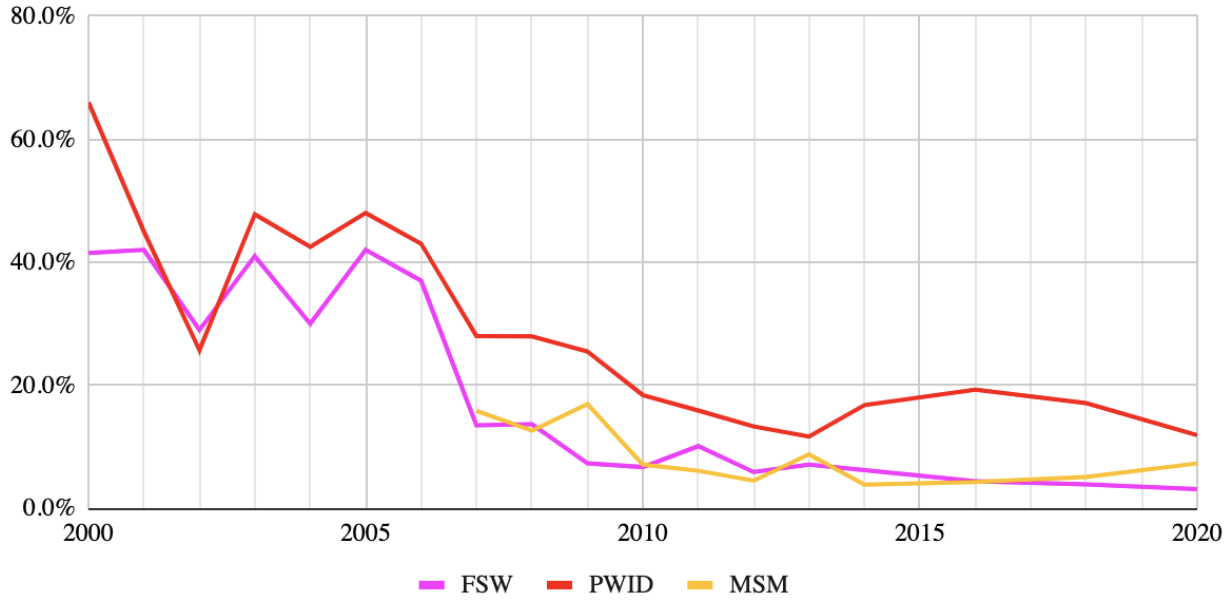
Trends of HIV prevalence

Trends of HIV prevalence have varied by sentinel population. HIV prevalence among FSW has been declining from 33.5% in 2006 to the lowest level of 5.4% in 2020 (**Figure 3**). For MSM/TGW, a declining trend has been observed from 29.3% in 2007 to 6% in 2016; however, the prevalence later increased to 7.1% in 2018 and again to 11.8% in 2020. HIV prevalence among PWID decreased from 37.5% in 2008 to 18.0% in 2012, which later increased to 26.1% in 2016. After 2016, the HIV prevalence among PWID declined each year and reached 18.9% in 2020. Since 1999, HIV prevalence has been declining among pregnant women which reached the lowest level in 2018-2020 at 0.5% (**Figure 3**). HIV prevalence among male STI patients was less than 5% between 2011 and 2016, then increased to 7.8% in 2018 and again to 11.8% in 2020. Among new TB patients, the lowest HIV prevalence was observed for 2014-2016 at 8.5%, which later increased to 9.4% in 2018.

Figure 3. Trend of HIV prevalence among sentinel populations in Myanmar (1992-2020)

HIV prevalence among young (15-24) FSW has been declining from 42.0% in 2005 to 3.1% in 2020. Among young MSM/TGW, HIV prevalence was the highest at 16.9% in 2009, which declined to 3.8% in 2014, but then increased to 7.3% in 2020. The highest HIV prevalence among young PWID was observed in 2000 at 66.0%, which decreased to its lowest level 11.7% in 2013. Between 2013 and 2016, HIV prevalence increased to 19.3% among young PWID, and then reduced to 11.9% in 2020.

Figure 4. Trends of HIV prevalence among sentinel key populations aged 15-24 years, HIV sentinel surveillance, Myanmar 2000-2020



HIV status awareness

Overall, 28.3% of pregnant women, 19.5% of male STI patients, and 18.8% of new TB patients knew their HIV status (**Table 5**). All of these rates are lower than those observed in the key populations. In contrast, 56.0% of MSM/TGW, 66.2% of FSW, and 70.8% of PWID knew their HIV status.

HIV status awareness was also lower in younger age groups than the older groups in all populations except for male STI patients (20.7% vs. 18.9%). Among the younger (< 25 years) sentinel population, only 23.0% of pregnant women, and 15.2% of new TB patients knew their HIV status. Also, younger FSW (61.6%), MSM/TGW (53.8%), and PWID (49.5%) were less likely to know their HIV status than those aged 25 years and above.

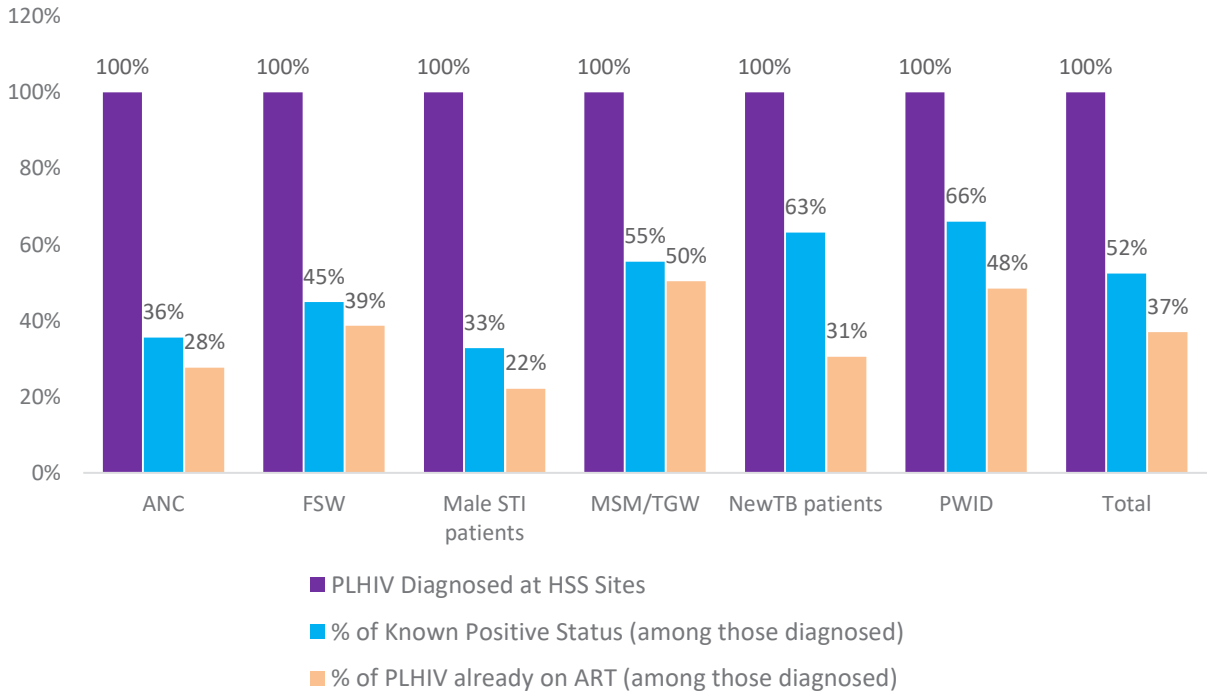
Table 5. Proportion of participants with known HIV status by age & sentinel groups (HSS 2020)

Sentinel Group	< 25 yr		≥ 25 yr		Total	
	Tested, N	Known Status, n (%)	Tested, N	Known Status, n (%)	Tested, N	Known Status, n (%)
ANC	4,553	1047 (23.0%)	9,286	2865 (30.9%)	13,839	3912 (28.3%)
FSW	1,394	859 (61.6%)	2,420	1667 (68.9%)	3,814	2526 (66.2%)
Male STI patients	957	198 (20.7%)	2,219	420 (18.9%)	3,176	618 (19.5%)
MSM/TGW	1,686	907 (53.8%)	1,502	879 (58.5%)	3,188	1786 (56.0%)
New TB patients	658	100 (15.2%)	3,998	777 (19.4%)	4,656	877 (18.8%)
PWID	388	192 (49.5%)	1,298	1001 (77.1%)	1,686	1193 (70.8%)

HIV continuum of care

HIV diagnosis and treatment varies among sentinel groups. About 36% of pregnant women with HIV infection, 33% of male STI patients with HIV infection, and 63% of new TB patients with HIV infection were diagnosed and aware of their HIV positive status . Among key populations who were HIV positive, 45% of FSW, 55% of MSM/TGW, and 66% of PWID knew about their positive HIV infection. About 78% of pregnant women with diagnosed HIV infection, 67% of male STI patients with diagnosed HIV infection, and 48% of new TB patients with diagnosed HIV infection were on HIV treatment. Among key populations who were diagnosed with HIV, 86% of FSW, 91% of MSM/TGW, and 73% of PWID were on HIV treatment.

Figure 5. HIV continuum of care among people living with HIV by sentinel groups, HIV sentinel surveillance (fixed denominator of PLHIV diagnosed at sentinel sites), Myanmar HSS 2020



Risk behaviours for HIV

Table 6. Risk behaviours for HIV among key populations (HSS 2020)

Indicator	< 25 yr		≥ 25 yr		Total	
	Total N	%	Total N	%	Total N	%
FSW % of condom use at last sex with client	1,392	79.5%	2,419	82.2%	3,811	81.2%
MSM/TGW % of condom use at last anal sex	1,685	61.7%	1,502	67.2%	3,187	64.3%
PWID % of needle sharing at last injection	387	6.7%	1,296	6.6%	1,683	6.7%

HSS 2020 collected the information on risk behaviours (condom use and needle sharing) among key populations for the first time in HSS history. **Table 6** showed that percentage of condom use at last sex with a client among FSW was around 81.2%. This percentage was lower than the results from IBBS 2019 which was 90%. Condom use at last ananl sex among MSM/TGW was 64.3%. The result of this indicator from IBBS 2019 was 57%. The last time condom use was lower in younger populations of FSW and MSM/TGW. Both IBBS and HSS showed that condom use was lower in MSM/TGW population than FSW population. Needle sharing among PWID was around 6.7%.

Syphilis prevalence

Table 7 shows syphilis sero-positivity prevalence among the five sentinel groups. The Venereal Disease Research Labrartory (VDRL) Syphillis screening tool was used. Generally, the Male STI patients had the highest sero-positivity rate at 22.7%, followed by the second highest sero-positivity rate at 8.3% among MSM/TGW, and third highest level at 6.7% for FSW. PWID (0.7%) and pregnant women (0.7%) recorded the lowest syphilis sero-positivity rates.

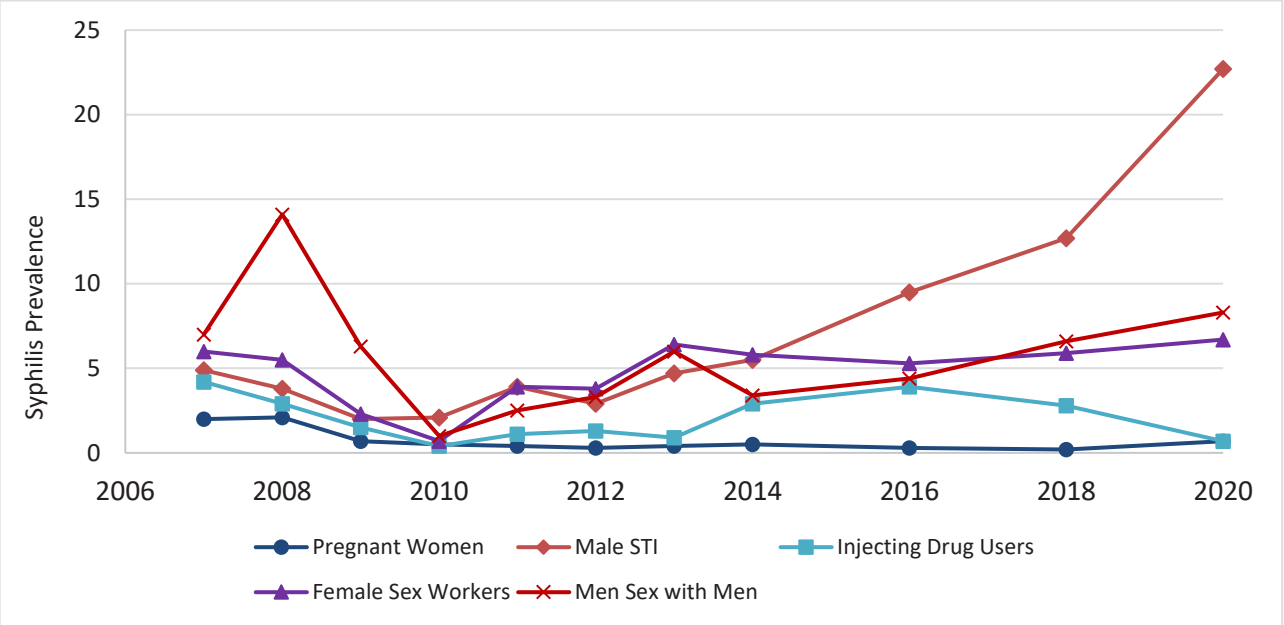
Table 7. Syphilis sero-positivity prevalence results by age and sentinel groups (HSS 2020)

Sentinel Group	< 25 yr		≥ 25 yr		Total	
	Tested, N	Reactive*, n (%)	Tested, N	Reactive, n (%)	Tested, N	Reactive, n (%)
ANC	4,553	28 (0.6%)	9,286	62 (0.7%)	13,839	90 (0.7%)
FSW	1,394	88 (6.3%)	2,418	167 (6.9%)	3,812	255 (6.7%)
Male STI patients	956	210 (22.0%)	2,215	510 (23.0%)	3,171	720 (22.7%)
MSM/TGW	1,686	113 (6.7%)	1,499	152 (10.1%)	3,185	265 (8.3%)
New TB patients	----	----	----	----	----	----
PWID	388	1 (0.3%)	1,298	11 (0.8%)	1,686	12 (0.7%)

* VDRL test results

Among all populations, the syphilis sero-positivity prevalence was slightly higher among respondents who were aged 25 years and older than those who were below 25 years of age, except for MSM/TGW (6.7% vs. 10.1%) among whom the older group had a higher prevalence.

Figure 6. Trends of Syphilis Prevalence among Sentinel Populations in Myanmar, 2007-2020



Since 2010, there has been an increase in syphilis prevalence among several sentinel groups. Syphilis prevalence among FSWs increased from 0.7% in 2010 to 6.7% in 2020. Similarly, syphilis prevalence among MSM/TGW has also increased; in 2010 the prevalence was 1%, which increased to 8.3% in 2020. Most dramatically, syphilis prevalence has been increasing among male STI patients. In 2009, the syphilis prevalence was 2% among male STI patients. However, in 2020, the prevalence increased by over 20% to 22.7%. Pregnant women have consistently had syphilis prevalence below 1% since 2007. PWID have had some variability in prevalence but decreased from 3.9% in 2016 to 0.7% in 2020.

Discussion and recommendations

Overall:

1. The target sample was reached for most of the townships for ANC, FSW, MSM/TGW, and PWID populations. However, for Male STI and TB patients, NAP should evaluate why testing numbers were low for these populations at the AIDS/STD team sites, and confirm whether the number of patients/clients is actually declining.
2. NAP should be aware of the high prevalence of syphilis among male STI patients, MSM/TGW and FSW and that the early diagnosis and treatment of STIs should be the first priority in preventing transmission of HIV.
3. HSS was conducted as a facility-based survey so HIV prevalence would be overestimated, given that those at risk, those with known status, and those on

treatment are more likely to participate.Population-based surveys may have advantages over facility-based surveys because they represent a much wider proportion of the population, and include both women and men. We suggest to triangulate behavioral surveillance survey data in parallel with these results to strengthen interpretation of trends in HIV prevalence.

Key Populations:

4. **MSM/TGW:** The upward trend of HIV prevalence among young MSM/TGW and low rate of awareness of their status requires scale-up of screening and diagnosis programs available to this particular group. Furthermore, given the barriers to accessing services, community-based outreach programs can also be considered. The actual incidence of HIV infection is difficult to measure, so the trends in HIV prevalence among youth may indicate trends in incidence of HIV infection. Recent trends in HIV incidence might in turn reflect the risky behaviors of young people, who are likely to only recently have initiated sexual or drug injection behaviors. In addition, young people who have recently been infected with HIV are not likely to have started antiretroviral therapy. Thus, reductions in HIV incidence associated with behavior change will first become detectable in trends in HIV prevalence figures for 15–24 years old.
5. **TB:** Many of new patients with TB were not aware of their HIV status, and the majority of those who were diagnosed with HIV were not on HIV treatment. Better coordination and integration of TB/HIV screening programs may improve the HIV outcomes of TB patients.
6. **PWID:** HIV prevalence among PWID is the highest of all key population groups. More targeted outreach, linkage to care and treatment services is critical to reduce the burden of HIV among this population. Only 73% of PWID who know their HIV positive status are on treatment, which is lower compared to FSW and MSM/TGW. Overall, 6.7% of participants reported needle sharing at last injection, with the highest rate of needle sharing seeing in Muse at 27% (see Table 24). It should be noted that average age of first injection is around age 24, so prevention in younger adults is critical.
7. **FSWs:** While HIV prevelance is at its lowest rate at 5.4%, there are still areas where prevalence is above 10% among FSWs, such as Myitkyina at 25.7%, Taunggyi at 18.3%, and Pakokku at 12.8%. Even though 84% of FSWs are in urban areas, residing in a rural area remains a risk factor, so outreach should continue in both rural and urban settings. Notably, Myitkyina had the lowest rate of condom use at 34%, compared to the 81% average. Likewise, some areas have high rates of syphilis, such as Lashio at 27%, Taunggyi at 17%, and Yangon at 17%. In this regard, NAP should take special attention to support all participating townships in the implementation of prevention, treatment and care of both HIV and syphilis infections, particularly in areas where such co-infection is high, such as Taunggyi.

8. **Male STI:** Overall HIV prevalence is higher in older male STI patients, representing overall prevention improvements in the younger age group; however, there is still more work to be done. For example, in six townships, HIV prevalence was higher in the younger age group than the older age group among Male STI patients. Syphilis prevalence is also high; early diagnosis and treatment of STI remains a key strategy in HIV prevention.
9. **Pregnant Women:** Despite overall low prevalence, ANC testing must continue to be strengthened as it is a key strategy for care and treatment of PMTCT.

Annex I: Sentinel Group specific Results

Female Sex Worker

Table 8 below presents the basic profile of FSW respondents at the national level. More than half (59%) of FSW were direct sex workers; 84% of them were residing in urban areas and 81% had practiced a risk behavior of selling sex for more than one year. Forty percent (40%) of younger FSW report recently starting sex work in the past year. The highest proportion (73%) of younger FSW were single, whereas about half (51%) of older aged FSW were married. The majority of FSW (66%) had worked in only one township in the past year. Most FSW (69%) knew their HIV status.

Table 8. Basic Characteristics of Female Sex Worker (N= 3,814; HSS 2020)

Characteristic		< 25 yr		≥ 25 yr		Total	
		N	%	N	%	N	%
Type of FSW	Direct	754	54%	1,502	62%	2,256	59%
	Indirect	640	46%	918	38%	1,558	41%
Resident	Urban	1,177	84%	2,008	83%	3,185	84%
	Rural	217	16%	412	17%	629	16%
Duration of Risk Behavior	≤1 yr	562	40%	175	7%	737	19%
	>1 yr	832	60%	2,245	93%	3,077	81%
Current Marital status	Currently married	383	27%	1,178	49%	1,561	41%
	Not currently married	1,011	73%	1,242	51%	2,253	59%
Number of townships worked in the past year	1 township	984	71%	1,516	63%	2,500	66%
	≥ 2 townships	410	29%	904	37%	1,314	34%
Previous HIV status	Known Status	859	62%	1,667	69%	2,526	69%
	Unknown Status	535	38%	753	31%	1,288	31%

Table 9 depicts that the median age of the respondents was 27 years. The median age at initiating risk behavior was 20 years and the median duration of sex work was four years. Mean ages of FSW, initiated sex work and duration of sex work were higher than median ages. It is noted that FSW did not frequently shift from one township to another in the last year, as the median data (50% of FSW) shows one township (95% CI: 1.5;1.5).

Table 9. Distribution of characteristics among Female Sex Workers (HSS 2020)

Characteristic	Mean (95%CI)	Median	Minimum	Maximum
Age (years)	28.6 (28.3, 28.9)	27	15	64
Age of starting sex work (years)	22.4 (22.2, 22.6)	20	12	48
Duration of risk behavior (years)	6.2 (6, 6.4)	4	0	37
Number of tsp worked in the past year	1.5 (1.5, 1.5)	1	1	9

A total of 32 townships participated in the FSW survey, of which 22 townships achieved the minimum sample size of 120 (**Table 10**). Table 10 shows township-wide HIV prevalence comparing two age groups: < 25 years and ≥ 25 years – among female sex worker clinic attendees. More than 63% were in the age group of ≥ 25 years.

The HIV prevalence rates differ across different geographical regions and age groups. In the younger age group (<25), the range of HIV prevalence varies from 0% to 12.5% (in Pyinmana, and Taunggyi). Among all sentinel sites, the four with the highest HIV prevalence were Myitkyina (25.7%), Taunggyi (18.3%), Pakokku (12.8%), and Taungoo (9.2%).

The youth HIV prevalence was higher than that of the ≥ 25 years of age group in six townships: Lashio (6.4% vs 6.0%), Magway (3.7% vs 3.5%), Myeik (3.7% vs 3.0%), Pathein (7.4% vs 5.4%), Pakokku (12.5% vs 0%), and Tachileik (5.9% vs. 1.9%).

Above all, the overall HIV prevalence among FSW was 5.4%, with 207 FSW found HIV positive, and 144 newly diagnosed with HIV, out of 3,814 FSW (note 93 of the 207 were already known positive).

Table 10. HIV prevalence among female sex workers by sentinel sites and age (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total			Number of FSW who are already known to be HIV positive		
										<25 yr	≥25 yr	Total
	N	HIV+	%	N	HIV+	%	N	HIV+	%	N	N	N
Bago	41	0	0	79	5	6.3	120	5	4.2	0	0	0
Bhamo	72	0	0	48	1	2.1	120	1	0.8	0	0	0
Dawei	34	1	2.9	40	2	5	74	3	4.1	0	0	0
Hakha	-	-	-	-	-	-	-	-	-	-	-	-
Hinthada	47	1	2.1	73	5	6.8	120	6	5	0	0	0
Hpa-An	44	0	0	76	1	1.3	120	1	0.8	0	0	0

Kale	29	0	0	60	1	1.7	89	1	1.1	0	0	0
Kawthoung	31	0	0	57	1	1.8	88	1	1.1	0	0	0
Kengtung	62	0	0	64	6	9.4	126	6	4.8	0	0	0
Lashio	47	3	6.4	84	5	6	131	8	6.1	1	4	5
Loikaw	-	-	-	-	-	-	-	-	-	-	-	-
Magway	27	1	3.7	86	3	3.5	113	4	3.5	0	0	0
Mandalay	74	0	0	166	3	1.8	240	3	1.3	0	0	0
Maubin	31	0	0	89	9	10.1	120	9	7.5	0	0	0
Mawlamyine	-	-	-	-	-	-	-	-	-	-	-	-
Meiktila	40	3	7.5	80	6	7.5	120	9	7.5	3	6	9
Monywa	48	0	0	73	6	8.2	121	6	5	0	1	1
Muse	38	0	0	77	2	2.6	115	2	1.7	0	0	0
Myaungmya	23	0	0	57	2	3.5	80	2	2.5	0	0	0
Myawaddy	48	2	4.2	72	7	9.7	120	9	7.5	2	5	7
Myeik	54	2	3.7	66	2	3	120	4	3.3	0	0	0
Myingyan	35	0	0	85	3	3.5	120	3	2.5	0	2	2
Myitkyina	46	5	10.9	59	22	37.3	105	27	25.7	3	18	21
Nyaung-U	18	0	0	32	0	0	50	-	0	0	0	0
Pakokku	80	8	10	100	15	15	180	23	12.8	7	9	16
Pathein	27	2	7.4	93	5	5.4	120	7	5.8	0	0	0
Pyay	37	0	0	83	3	3.6	120	3	2.5	0	0	0
Pyinmana	8	1	12.5	35	0	0	43	1	2.3	0	0	0
Pyinoolwin	36	0	0	84	4	4.8	120	4	3.3	0	2	2
Shwebo	47	0	0	73	2	2.7	120	2	1.7	0	0	0
Sittwe	33	1	3	67	4	6	100	5	5	0	0	0
Tachileik	68	4	5.9	52	1	1.9	120	5	4.2	0	0	0
Taunggyi	40	5	12.5	80	17	21.3	120	22	18.3	2	12	14
Taungoo	34	1	2.9	85	10	11.8	119	11	9.2	1	9	10
Yangon	95	3	3.2	145	11	7.6	240	14	5.8	1	5	6
Total	1,394	43	3.1	2,420	164	6.8	3,814	207	5.4	20	73	93

Table 11 displays the Odds Ratios for various characteristics associated with HIV prevalence. The HIV prevalence of FSW at least 25 years old was 6.8% and that of youth was 3.1%. In adjusted analysis, being at least 25 years (AOR 1.8), having risk behavior for more than a year (AOR 2.4), living in rural area (AOR 2.1) and no condom use in sex with last client (AOR 1.6) significantly increased the odds of HIV infection.

Table 11. HIV prevalence, crude and adjusted odds ratios for having HIV positive test result among FSW (HSS 2020)

Characteristic		HIV Result			Crude OR (95% CI)	Adjusted OR* (95% CI)
		Positive (N)	Negative (N)	Prevalence (%)		
Age	≥25 yr	164	2,256	6.8%	2.3 (1.6, 3.2)	1.8 (1.3, 2.6)
	<25 yr	43	1,351	3.1%	Ref	Ref
Duration of Risk Behavior	>1 yr	192	2,885	6.2%	3.2 (1.9, 5.5)	2.4 (1.3, 4.1)
	<1 yr	15	722	2.0%	Ref	Ref
Type of Sex Work	Indirect	88	1,470	5.6%	1.1 (0.8, 1.4)	1.1 (0.8, 1.5)
	Direct	119	2,137	5.3%	Ref	Ref
Resident	Rural	59	570	9.4%	2.1 (1.6, 2.9)	2.1 (1.5, 2.8)
	Urban	148	3,037	4.6%	Ref	Ref
Condom Use with Last Client	No	55	660	7.7%	1.6 (1.2, 2.2)	1.6 (1.2, 2.3)
	Yes	152	2,944	4.9%	Ref	Ref

* The adjusted model included Age, Duration of Risk Behavior, Type of Sex Work, Resident, and Condom Use with Last Client.

Table 12 shows the Syphilis prevalence (measured as VDRL positive) of 32 townships comparing the less than 25 year and 25 years and above age groups. The sites with highest Syphilis prevalence were from Lashio (27%), Taunggyi (17%), and Yangon (17%).

In the younger group, Syphilis prevalence ranged from 0% to 26% (Lashio). In Taunggyi, where HIV prevalence was among the highest (18.3%), the Syphilis prevalence was also high (17%).

Table 12. Syphilis (VDRL positive) prevalence among female sex workers by sentinel sites and age groups (HSS 2020)

	<25 yr			≥25 yr			Total		
Sentinel Site	N	Reactive	%	N	Reactive	%	N	Reactive	%
Bago	41	3	7	77	7	9	118	10	9
Bhamo	72	5	7	48	8	17	120	13	11
Dawei	34	0	0	40	0	0	74	0	0
Hakha	-	-	-	-	-	-	-	-	-
Hinthada	47	2	4	73	5	7	120	7	6
Hpa-An	44	1	2	76	3	4	120	4	3
Kale	29	0	0	60	5	8	89	5	6
Kawthoung	31	0	0	57	2	4	88	2	2
Kengtung	62	1	2	64	0	0	126	1	1
Lashio	47	12	26	84	23	27	131	35	27

Loikaw	-	-	-	-	-	-	-	-	-
Magway	27	2	7	86	1	1	113	3	3
Mandalay	74	9	12	166	15	9	240	24	10
Maubin	31	0	0	89	0	0	120	0	0
Mawlamyine	-	-	-	-	-	-	-	-	-
Meiktila	40	2	5	80	0	0	120	2	2
Monywa	48	2	4	73	11	15	121	13	11
Muse	38	0	0	77	4	5	115	4	4
Myaungmya	23	0	0	57	0	0	80	0	0
Myawaddy	48	6	13	72	5	7	120	11	9
Myeik	54	1	2	66	3	5	120	4	3
Myingyan	35	3	9	85	4	5	120	7	6
Myitkyina	46	1	2	59	1	2	105	2	2
Nyaung-U	18	0	0	32	0	0	50	0	0
Pakokku	80	9	11	100	3	3	180	12	7
Pathein	27	0	0	93	0	0	120	0	0
Pyay	37	0	0	83	2	2	120	2	2
Pyinmana	8	0	0	35	4	11	43	4	9
Pyinoolwin	36	1	3	84	4	5	120	5	4
Shwebo	47	1	2	73	4	6	120	5	4
Sittwe	33	1	3	67	8	12	100	9	9
Tachileik	68	3	4	52	4	8	120	7	6
Taunggyi	40	8	20	80	12	15	120	20	17
Taungoo	34	0	0	85	3	4	119	3	3
Yangon	95	15	16	145	26	18	240	41	17
Total	1394	88	6	2418	167	7	3812	255	7

The proportion of female sex workers who received free condoms in the past 3 months ranged from 8.3% in Pyay to 100.0% in nine townships, with an overall of 81.2% (**Table 13**). The proportion of FSW who reported condom use in last sex ranged from 34.3% in Myitkyina to 100.0% in 6 townships. Overall, 81.2% of participants reported condom use with last client.

Table 13. Proportion of female sex workers who received free condoms and used a condom in last sex by sentinel sites (HSS 2020)

Sentinel Site	Received free condoms in past 3 months	Condom use with last client
Bago	118 (98.3%)	115 (95.8%)
Bhamo	106 (88.3%)	50 (41.7%)
Dawei	74 (100.0%)	74 (100.0%)
Hakha	-	-
Hinthada	118 (98.3%)	114 (95.0%)
Hpa-An	101 (84.2%)	46 (38.3%)
Kale	59 (66.3%)	47 (52.8%)

Kawthoung	88 (100.0%)	88 (100.0%)
Kengtung	126 (100.0%)	126 (100.0%)
Lashio	127 (96.9%)	128 (97.7%)
Loikaw	-	-
Magway	112 (99.1%)	112 (99.1%)
Mandalay	173 (72.1%)	169 (70.4%)
Maubin	120 (100.0%)	120 (100.0%)
Mawlamyine	-	-
Meiktila	13 (10.8%)	116 (98.3%)
Monywa	119 (98.3%)	115 (95.0%)
Muse	115 (100.0%)	81 (70.4%)
Myaungmya	80 (100.0%)	80 (100.0%)
Myawaddy	120 (100.0%)	118 (98.3%)
Myeik	117 (97.5%)	110 (91.7%)
Myingyan	108 (90.0%)	59 (49.2%)
Myitkyina	50 (47.6%)	36 (34.3%)
Nyaung-U	40 (80.0%)	25 (50.0%)
Pakokku	86 (47.8%)	94 (52.2%)
Pathein	118 (98.3%)	100 (83.3%)
Pyay	10 (8.3%)	110 (91.7%)
Pyinmana	22 (51.2%)	23 (53.5%)
Pyinoolwin	118 (99.2%)	117 (97.5%)
Shwebo	112 (93.3%)	117 (97.5%)
Sittwe	100 (100.0%)	98 (98.0%)
Tachileik	98 (81.7%)	87 (73.1%)
Taunggyi	120 (100.0%)	116 (96.7%)
Taungoo	100 (84.0%)	119 (100.0%)
Yangon	128 (53.3%)	186 (77.5%)
Total	3096 (81.2%)	3096 (81.2%)

Men who have Sex with Men/ Transger Women

Table 14 below presents the basic profile of MSM/TGW respondents at the national level. Seventy-eight percent (78%) of MSM/TGW were from urban areas, 23% had started anal sex (i.e., key risk behavior) within one year, and 22% were married at the time of survey. A higher proportion (36%) of older MSM/TGW were married. 56% of respondents knew their HIV status. Overall, 13% self-identified themselves as female and 6% as transgender. Using country specific classification of MSM/TGW types, 20% and 29% identified themselves as Awpint[1] and Apone[2] respectively, and 52% as Tha Nge[3].

Table 14. Basic Characteristics of MSM/TGW (N=3,188; HSS 2020)

Characteristic		<25 yr		≥25 yr		Total	
		N	%	N	%	N	%
Resident	Urban	1,373	81%	1,118	74%	2,491	78%
	Rural	313	19%	384	26%	697	22%
Duration of Risk Behavior	≤1 yr	652	39%	85	6%	737	23%
	>1 yr	1,034	61%	1,417	94%	2,451	77%
Current marital status	Currently Married	156	9%	533	36%	689	22%
	Not Currently Married	1530	91%	969	65%	2499	78%
Previous HIV status	Known Status	907	54%	879	59%	1786	56%
	Unknown Status	779	46%	623	41%	1402	44%
Self-Determined Gender	Male	1,375	82%	1,213	81%	2,588	81%
	Female	212	13%	197	13%	409	13%
	Transgender	99	6%	92	6%	191	6%
MSM/TGW type	Apwint	307	18%	314	21%	621	20%
	Apone	470	28%	451	30%	921	29%
	Tha Nge	909	54%	737	49%	1,646	52%

Table 15 shows distribution of age, age at initiating risk behavior (i.e., anal sex) and duration practicing risk behavior. The median age of respondents was 22 years. The median age at initiating risk behavior was 18 years and that of duration of risk behavior was 3 years. Mean ages of MSM/TGW, initiated and duration of risk behavior were higher than median ages, which is positively skewed; the mean age of MSM/TGW was 26.1 years, that of age at initiating risk behavior was 19.6 years and mean duration was 6.5 years. The minimum age at initiating risk behavior was 6 years and maximum age was 47 years.

[1] **Apwint** are biological males whose public and private gender identity is generally feminine, but they may dress as men or dress and act as females. Apwint are generally more 'open' MSM/TGW and some could be considered 'transgender', but this term is not widely used in Myanmar.

[2] **Apone** are biological males whose gender identity may be either masculine or feminine and may or may not express themselves femininely. Apone can be 'open' or 'hidden' MSM/TGW.

[3] **Tha nge** are biological males whose gender identity is masculine with a sexual preference for apwint and apone as well as for women, however they are often 'hidden' MSM.

Table 15. Distribution of characteristics among MSM/TGW (HSS 2020)

Characteristic	Mean (95% CI)	Median	Minimum	Maximum
Age (year)	26.1 (25.8, 26.4)	22	16	65
Age at initiating risk behavior (year)	19.6 (19.5, 19.8)	18	6	47
Duration practicing risk behaviors (year)	6.5 (6.2, 6.7)	3	0	44

Data was collected from the AIDS/STD teams and INGOs sites in 32 out of 35 townships. **Table 16** shows township HIV prevalence comparing two age groups: less than 25 years of age and 25 years and above among MSM/TGW clinic attendees. More than 47% of them were in the age group of 25 years and above in that survey.

The HIV prevalence rates differ across different geographical regions and age groups. The range of HIV prevalence varies from 0% to 46.5%. The states with highest HIV prevalence were Myawaddy (46.5%), Yangon (43.0%) and Myitkyina (41.0%), followed by Tachileik (20.2%), and Sittwe (20.0%). Among young MSM/TGW (<25y), the highest prevalence states were Myawaddy (32.2%), Myitkyina (31.8%) and Yangon (28.9%).

The total estimated HIV prevalence was 11.8% , where 375 MSM/TGW, of whom 208 already known to be HIV positive, were found positive from 3,188 MSM/TGW participants.

Table 16. HIV prevalence among MSM/TGW by sentinel sites and age groups (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total			Number of MSM/TGW who are already known to be HIV positive		
	N	HIV+	%	N	HIV+	%	N	HIV+	%	<25 yr	≥25 yr	Total
Bago	52	1	1.9	52	4	7.7	104	5	4.8	0	1	1
Bhamo	85	0	0	15	1	6.7	100	1	1	0	0	0
Dawei	47	2	4.3	57	8	14	104	10	9.6	0	0	0
Hakha	-	-	-	-	-	-	-	-	-	-	-	-
Hinthada	54	1	1.9	46	2	4.3	100	3	3	0	0	0
Hpa-An	74	0	0	26	3	11.5	100	3	3	0	1	1
Kale	31	1	3.2	69	2	2.9	100	3	3	0	0	0
Kawthoung	45	0	0	59	0	0	104	0	0	0	0	0
Kengtung	23	0	0	17	0	0	40	0	0	0	0	0
Lashio	42	3	7.1	58	8	13.8	100	11	11	3	7	10
Loikaw	-	-	-	-	-	-	-	-	-	-	-	-
Magway	51	4	7.8	45	7	15.6	96	11	11.5	0	0	0
Mandalay	111	7	6.3	89	16	18	200	23	11.5	0	2	2
Maubin	46	0	0	54	9	16.7	100	9	9	0	0	0
Mawlamyine	-	-	-	-	-	-	-	-	-	-	-	-

Meiktila	54	4	7.4	46	5	10.9	100	9	9	4	4	8
Monywa	53	2	3.8	47	3	6.4	100	5	5	0	0	0
Muse	20	1	5	11	0	0	31	1	3.2	0	0	0
Myaungmya	23	0	0	49	1	2	72	1	1.4	0	0	0
Myawaddy	25	8	32	46	25	54.3	71	33	46.5	6	22	28
Myeik	76	0	0	24	0	0	100	0	0	0	0	0
Myingyan	64	2	3.1	36	5	13.9	100	7	7	2	5	7
Myitkyina	44	14	31.8	56	27	48.2	100	41	41	12	24	36
Nyaung-U	8	1	12.5	15	0	0	23	1	4.3	1	0	1
Pakokku	61	9	14.8	89	15	16.9	150	24	16	8	14	22
Pathein	59	2	3.4	41	4	9.8	100	6	6	0	0	0
Pyay	33	3	9.1	67	6	9	100	9	9	0	0	0
Pyinmana	68	2	2.9	34	2	5.9	102	4	3.9	0	0	0
Pyinoolwin	53	1	1.9	47	0	0	100	1	1	1	0	1
Shwebo	75	0	0	25	3	12	100	3	3	0	0	0
Sittwe	45	6	13.3	55	14	25.5	100	20	20	2	1	3
Tachileik	56	10	17.9	38	9	23.7	94	19	20.2	3	2	5
Taunggyi	63	6	9.5	37	7	18.9	100	13	13	6	4	10
Taungoo	48	5	10.4	49	8	16.3	97	13	13.4	2	5	7
Yangon	97	28	28.9	103	58	56.3	200	86	43	19	47	66
Total	1686	123	7.3	1502	252	16.8	3188	375	11.8	69	139	208

In **Table 17** the data demonstrates the association between HIV infection and the following basic characteristics of MSM/TGW: age, duration of risk behavior, type of MSM/TGW, residency and condom use at last anal sex. The older age group of 25 years and above was a significant predictor of HIV infection after controlling for such variables (aOR=2.0; 95%CI: 1.5;2.5). The adjusted odds of having HIV infection by practicing more than one year of risk behavior was 3.2 (95%CI: 2.1;5.0) times higher than MSM/TGW who practiced less than one year of risk behavior. The adjusted odds of Apwint+Apone type for having HIV infection was 2.2 (95%CI: 1.8; 2.8) times higher than those who identified themselves as Tha Nge. Not using a condom at last anal sex was a positive predictor of HIV infection aOR=1.3 (95%CI: 1.0;1.6).

Table 17. HIV prevalence, odds ratios and 95% CI for having HIV positive test result among MSM/TGW (HSS 2020)

Characteristic		**HIV Result**			**Crude OR (95%CI)**	**Adjusted OR* (95%CI)**
		Positive (N)	Negative (N)	Prevalence (%)		
Age	≥25 yr	252	1250	16.8%	2.6 (2.0, 3.2)	2.0 (1.5, 2.5)
	<25 yr	123	1563	7.3%	Ref	Ref
Duration of Risk Behaviour	>1 yr	350	2101	14.3%	4.7 (3.1, 7.2)	3.2 (2.1, 5.0)
	<1 yr	25	712	3.4%	Ref	Ref
Type of MSM/TGW	Apwint + Apone	251	1291	16.3%	2.4 (1.9, 3.0)	2.2 (1.8, 2.8)

	Tha Nge	124	1522	7.5%	Ref	Ref
Resident	Rural	98	599	14.1%	1.3 (1.0, 1.7)	1.1 (0.9, 1.4)
	Urban	277	2214	11.1%	Ref	Ref
Condom Use at Last Anal Sex	No	136	1003	11.9%	1.0 (0.8, 1.3)	1.3 (1.0, 1.6)
	Yes	239	1809	11.7%	Ref	Ref

* The adjusted model included Age, Duration of Risk Behavior, Type of MSM/TGW, Resident, and Condom Use at Last Anal Sex.

Table 18 shows the Syphilis prevalence (measured as VDRL positive) of 32 townships between less than 25 year and 25 years and above age groups. The highest Syphilis prevalence was from Yangon (32.0%), and Sittwe (21.0%). In the younger group, syphilis prevalence ranged from 0% to 21.6% (Yangon). In the older group, the highest prevalence was seen for Yangon (41.7%) and Sittwe (25.5%).

The total estimated Syphilis prevalence was 8.3%, where 265 MSM/TGW were found positive among 3,185 MSM/TGW participants.

Table 18. Syphilis (VDRL positive) prevalence among men who have sex with men/transgender women by sentinel sites and age groups (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total		
	N	Reactive	%	N	Reactive	%	N	Reactive	%
Bago	52	9	17.3	50	9	18	102	18	17.6
Bhamo	85	4	4.7	15	1	6.7	100	5	5
Dawei	47	4	8.5	57	5	8.8	104	9	8.7
Hakha	-	-	-	-	-	-	-	-	-
Hinthada	54	2	3.7	46	5	10.9	100	7	7
Hpa-An	74	2	2.7	26	5	19.2	100	7	7
Kale	31	1	3.2	69	0	0	100	1	1
Kawthoung	45	0	0	59	3	5.1	104	3	2.9
Kengtung	23	0	0	17	0	0	40	0	0
Lashio	42	4	9.5	58	11	19	100	15	15
Loikaw	-	-	-	-	-	-	-	-	-
Magway	51	0	0	45	2	4.4	96	2	2.1
Mandalay	111	19	17.1	89	17	19.1	200	36	18
Maubin	46	0	0	54	0	0	100	0	0
Mawlamyine	-	-	-	-	-	-	-	-	-
Meiktila	54	6	11.1	46	2	4.3	100	8	8
Monywa	53	0	0	47	0	0	100	0	0
Muse	20	2	10	11	0	0	31	2	6.5
Myaungmya	23	0	0	49	0	0	72	0	0
Myawaddy	25	5	20	46	8	17.4	71	13	18.3
Myeik	76	0	0	24	0	0	100	0	0
Myingyan	64	2	3.1	36	3	8.3	100	5	5

Myitkyina	44	4	9.1	56	3	5.4	100	7	7
Nyaung-U	8	0	0	15	0	0	23	0	0
Pakokku	61	1	1.6	89	2	2.2	150	3	2
Pathein	59	1	1.7	40	3	7.5	99	4	4
Pyay	33	0	0	67	0	0	100	0	0
Pyinmana	68	2	2.9	34	0	0	102	2	2
Pyinoolwin	53	1	1.9	47	2	4.3	100	3	3
Shwebo	75	3	4	25	3	12	100	6	6
Sittwe	45	7	15.6	55	14	25.5	100	21	21
Tachileik	56	9	16.1	38	4	10.5	94	13	13.8
Taunggyi	63	1	1.6	37	3	8.1	100	4	4
Taungoo	48	3	6.3	49	4	8.2	97	7	7.2
Yangon	97	21	21.6	103	43	41.7	200	64	32
Total	1,686	113	6.7	1,499	152	10.1	3,185	265	8.3

The proportion of MSM/TGW who received free condoms in last 3 months ranged from 7% (in Pyinoolwin) to 100.0% in 5 townships, with an overall of 65.7% (**Table 19**). The proportion of MSM/TGW who reported condom use in last anal sex ranged from 6.0% (in Pyinoolwin) to 100.0% in 5 townships. Overall, 64.3% of participants reported condom use at last anal sex.

Table 19. Proportion of MSM/TGW who received free condom and used condom at last sex by sentinel sites (HSS 2020)

Sentinel Site	Received free condoms in past 3 months	Condom use at last sex
Bago	97 (93.3%)	99 (95.2%)
Bhamo	28 (28.0%)	39 (39.0%)
Dawei	99 (95.2%)	84 (80.8%)
Hakha	-	-
Hinthada	99 (99.0%)	87 (87.0%)
Hpa-An	92 (92.0%)	49 (49.0%)
Kale	21 (21.0%)	26 (26.0%)
Kawthoung	17 (16.3%)	15 (14.4%)
Kengtung	38 (95.0%)	37 (92.5%)
Lashio	84 (84.0%)	84 (84.0%)
Loikaw	-	-
Magway	89 (92.7%)	90 (93.8%)
Mandalay	99 (49.5%)	66 (33.0%)
Maubin	100 (100.0%)	100 (100.0%)
Mawlamyine	-	-
Meiktila	33 (33.0%)	88 (88.0%)
Monywa	91 (91.0%)	74 (74.0%)
Muse	25 (80.6%)	27 (87.1%)
Myaungmya	72 (100.0%)	72 (100.0%)

Myawaddy	71 (100.0%)	71 (100.0%)
Myeik	93 (93.0%)	78 (78.0%)
Myingyan	92 (92.0%)	44 (44.0%)
Myitkyina	58 (58.0%)	20 (20.0%)
Nyaung-U	23 (100.0%)	23 (100.0%)
Pakokku	45 (30.0%)	87 (58.0%)
Pathein	63 (63.0%)	64 (64.0%)
Pyay	31 (31.0%)	83 (83.0%)
Pyinmana	33 (32.4%)	25 (24.8%)
Pyinoolwin	7 (7.0%)	6 (6.0%)
Shwebo	97 (97.0%)	97 (97.0%)
Sittwe	47 (47.0%)	78 (78.0%)
Tachileik	45 (47.9%)	44 (46.8%)
Taunggyi	96 (97.0%)	100 (100.0%)
Taungoo	76 (78.4%)	76 (78.4%)
Yangon	133 (66.5%)	115 (57.5%)
Total	2,094 (65.7%)	2,048 (64.3%)

People Who Inject Drugs

Table 20 below presents the basic profile of PWID respondents at the national level. A total of (1,686) PWID participated; most (78%) were from urban areas, 87% engaged in risk behaviors for more than one year, 55% were not married, 71% self-reported as known of their HIV status, 97% were male. Among younger PWID, 67% were from urban areas, 75% engaged in risk behaviors for more than one year, 75% were not married, 49% self-reported as known HIV status, and 5% were female respondents.

Table 20. Basic Characteristics of People Who Inject Drugs (N= 1,686; HSS 2020)

Characteristic		**< 25 yr**		**≥ 25 yr**		**Total**	
		N	%	N	%	N	%
Resident	Urban	260	67%	1,059	82%	1,319	78%
	Rural	128	33%	239	18%	367	22%
Duration of Risk Behaviors	≤1 yr	97	25%	124	10%	221	13%
	>1 yr	291	75%	1,174	90%	1,465	87%
Current marital status	Currently Married	97	25%	669	52%	766	45%
	Not Currently Married	291	75%	629	49%	920	55%
Previous HIV status	Known Status	192	49%	1001	77%	1193	71%
	Unknown Status	196	51%	297	23%	493	29%
Sex	Female	21	5%	32	3%	53	3%
	Male	367	95%	1,266	98%	1,633	97%

Table 21 shows the mean and median age of the PWID respondents. The mean and median ages of PWID were similar, that is, (31.4) years and (30.0) years respectively. The median age at initiating risk behavior was 24 years and mean duration of risk behavior was 6.7 years. Mean age of initiating risk behavior was higher than median age of initiating risk behavior (distribution is skewed to the right). The minimum age and maximum age that PWID initiated risk behavior were 10 years and 67 years respectively.

Table 21. Distribution of characteristics among PWID (HSS 2020)

Characteristic	Mean	Median	95%CI	(Min, Max)
Age (year)	31.4	30	(30.9, 31.8)	(15, 67)
Age at initiating risk behavior (year)	24.7	24	(24.4, 25)	(10, 67)
Duration practicing risk behavior (year)	6.7	5	(6.4, 7)	(0, 43)

The target sample size to collect was a maximum of 160 per township. A total of 1,686 blood samples were collected; 78% of them were at least 25 years of age and 23% were less than 25 years (**Table 22**). 318 samples were found to be HIV positive. The overall HIV prevalence of PWID was (18.9%; 318/1,686). The range of HIV prevalence varied geographically from 1.3% in Pyinoolwin to 38.9% in Bhamo. The second highest HIV prevalence of PWID was in Lashio (36.9%) followed by Myitkyina (31.3%).

In the younger age group of PWID, the HIV prevalence was 11.9% whereas in the older age the HIV prevalence was 21%. It should be noted that the HIV prevalence is much higher among young PWID in Muse (40.0% vs 24.0%), and Yangon (33.3% vs 17.6%) compared to older PWID.

Table 22. HIV prevalence among PWID by sentinel sites and age groups (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total			Number of PWID who are already known to be HIV positive		
	N	HIV+	%	N	HIV+	%	N	HIV+	%	<25 yr	≥25 yr	Total
Bhamo	41	11	26.8	85	38	44.7	126	49	38.9	3	15	18
Kale	21	6	28.6	99	29	29.3	120	35	29.2	3	17	20
Lashio	16	4	25.0	144	55	38.2	160	59	36.9	4	53	57
Mandalay	52	1	1.9	108	2	1.9	160	3	1.9	-	-	-
Monywa	28	1	3.6	132	22	16.7	160	23	14.4	1	22	23
Muse	10	4	40.0	150	36	24.0	160	40	25.0	4	36	40
Myitkyina	32	8	25.0	128	42	32.8	160	50	31.3	1	18	19
Pyinoolwin	124	1	0.8	36	1	2.8	160	2	1.3	-	-	-

Tachileik	18	0	0	142	6	4.2	160	6	3.8	-	2	2
Taunggyi	22	2	9.1	138	17	12.3	160	19	11.9	2	17	19
Yangon	24	8	33.3	136	24	17.6	160	32	20.0	1	11	12
Total	388	46	11.9	1,298	272	21.0	1,686	318	18.9	19	191	210

Table 23 shows the multivariate model between HIV prevalence and the age, duration of risk behavior, marital status, needle sharing, and residency. Variables that remained in the adjusted model after controlling for covariates were: being at least 25 years (aOR=2.6; 95% CI=1.8-3.8), having rural residency (aOR=2.1; 95% CI=1.6-2.9), being single (aOR=1.9; 95% CI=1.4-2.4), and reported needle sharing at last injection (aOR=7.0; 95% CI=4.7-10.7) were all significantly associated with HIV infection.

Table 23. Odds Ratios and 95%CI for having HIV positive test result among PWID (HSS 2020)

Characteristic		**HIV Result**			**Crude OR (95%CI)**	**Adjusted OR* (95%CI)**
		Positive (N)	Negative (N)	Prevalence (%)		
Age	≥25 yr	272	1,026	21.0%	2.0 (1.4, 2.8)	2.6 (1.8, 3.8)
	<25 yr	46	342	11.9%	Ref	Ref
Duration of Risk Behavior	>1 yr	286	1,179	19.5%	1.4 (1.0, 2.1)	1.5 (1.0, 2.4)
	<1 yr	32	189	14.5%	Ref	Ref
Resident	Rural	98	269	26.7%	1.8 (1.4, 2.4)	2.1 (1.6, 2.9)
	Urban	220	1,099	16.7%	Ref	Ref
Marital Status	Not Currently Married	203	717	22.1%	1.6 (1.2, 2.1)	1.9 (1.4, 2.4)
	Currently Married	115	651	15.0%	Ref	Ref
Needle Sharing at last injection	Yes	64	48	57.1%	6.9 (4.7, 10.3)	7.0 (4.7, 10.7)
	No	253	1,318	16.1%	Ref	Ref

* The adjusted model included Age, Duration of Risk Behavior, Marital status, Resident, and Needle Sharing.

Among the participating townships, Yangon had the highest VDRL positivity rate of 5.0%, followed by Taunggyi (1.3%). Seven of the remaining townships showed no syphilitic infection among PWID participants (**Table 24**).

Table 24. VDRL positive rate among PWID by sentinel sites and age groups (HSS 2020)

Sentinel sites	<25 yr			≥25 yr			Total		
	N	Reactive	%	N	Reactive	%	N	Reactive	%
Bhamo	41	0	0.0	85	1	1.2	126	1	0.8
Kale	21	0	0.0	99	0	0.0	120	0	0.0
Lashio	16	0	0.0	144	0	0.0	160	0	0.0
Mandalay	52	0	0.0	108	0	0.0	160	0	0.0
Monywa	28	0	0.0	132	0	0.0	160	0	0.0
Muse	10	0	0.0	150	0	0.0	160	0	0.0
Myitkyina	32	0	0.0	128	0	0.0	160	0	0.0
Pyinoolwin	124	0	0.0	36	0	0.0	160	0	0.0
Tachileik	18	0	0.0	142	1	0.7	160	1	0.6
Taunggyi	22	0	0.0	138	2	1.4	160	2	1.3
Yangon	24	1	4.2	136	7	5.1	160	8	5.0
Total	388	1	0.3	1298	11	0.8	1686	12	0.7

The proportion of PWID who received free clean needles and syringes in the past 3 months ranged from 3% (in Yangon) to 98.8% (in Monywa), with an overall of 69.7% (**Table 25**). The proportion of PWID who reported needle sharing at last injection ranged from 0.0% (in Monywa) to 27.0% (in Muse, which had the highest HIV prevalence among young PWID). Overall, 6.7 % of participants reported needle sharing at last injection.

Table 25. Proportion of PWID who received free clean needles and syringes in past 3 months and shared needle at last injection by sentinel sites (HSS 2020)

Sentinel sites	Received free clean needles and syringes in past 3 months	Needle sharing at last injection
Bhamo	117 (92.9%)	8 (6.3%)
Kale	100 (83.3%)	16 (13.4%)
Lashio	131 (81.9%)	7 (4.4%)
Mandalay	157 (98.1%)	2 (1.3%)
Monywa	158 (98.8%)	0 (0.0%)
Muse	114 (71.7%)	43 (27.0%)
Myitkyina	91 (56.9%)	13 (8.1%)
Pyinoolwin	10 (6.3%)	9 (5.6%)
Tachileik	132 (82.5%)	1 (0.6%)
Taunggyi	156 (97.5%)	6 (3.8%)
Yangon	5 (3.2%)	7 (4.4%)
Total	1171 (69.7%)	112 (6.7%)

Male STI Patients

Table 26 below presents the basic profile of male STI patients. A total of 3,176 male STI patient participated. Seventy-four percent (74%) of them from urban areas and 26% were from rural areas. The majority (66%) of sera came from NAP, some from GPs, NGOs and others. Twenty percent (20%) were currently married and 80% were not currently married.

Characteristic		Age				Total*	
		< 25 yr		≥ 25			
		N	%	N	%	N	%
Resident	Urban	704	74%	1,495	67%	2,199	69%
	Rural	253	26%	724	33%	977	31%
Source of serum	Aids STD Public	631	66%	1,559	70%	2,190	69%
	GP	193	20%	445	20%	638	20%
	NGOs	106	11%	166	8%	272	9%
	Other Source	27	3%	49	2%	76	2%
Current Marital Status	Currently married	189	20%	1,467	66%	1,656	52%
	Not currently married	768	80%	752	34%	1,520	48%

*numbers does not add up to total due to missing data

Table 27 shows the age of male STI patients. Mean age was 30.7 years and median age was 29 years. The minimum age was 15 years old and the maximum age was 86 years.

Table 27. Age Distribution among Male STI patients (HSS 2020)

Characteristic	Mean	Median	95%CI for mean	(Min, Max)
Age (years)	30.7	29	(30.3;31.0)	(15;86)

Table 28 lists the HIV prevalence by sentinel sites and age groups. Pyinoolwin had the highest rate of (44%) followed by Myaungmya (39%), Monywa (33%), Meiktila (29%), Mawlamyine (26%) and Myitkyina (22%). Ten townships had HIV prevalence less than 5%.

By comparing two age groups, we draw attention to the HIV prevalence of the younger age group. In six townships, HIV prevalence was higher in the younger age group than the older age group; these townships are Loikaw (14.3% vs 7.9%), Muse (3.2% vs 0%), Pyinmana (9.1% vs 5.9%), Shwebo (2.8% vs 1.6%), Taunggyi (9.7% vs. 4.3%), and Taungoo (11.5% vs. 8.1%).

Overall HIV prevalence among male STI patients was 11.8%. In the younger age group, it was 6.7%, whereas in the older age group it was 14.0%.

Table 28. HIV prevalence among Male STI patients by sentinel sites and age groups (HSS 2020)

Sentinel Site	< 25 yr			≥ 25 yr			Total			Number of male STI patients who are already known to be HIV positive		
										< 25 yr	≥ 25 yr	Total
	N	Positive	%	N	Positive	%	N	Positive	%	N	N	N
Bago	43	1	2.3	38	7	18.4	81	8	9.9	0	1	1
Bhamo	55	4	7.3	45	11	24.4	100	15	15	0	0	0
Dawei	33	5	15.2	67	16	23.9	100	21	21	1	1	2
Hakha	20	-	0	79	-	0	99	-	0	0	0	0
Hinthada	21	3	14.3	79	15	19	100	18	18	3	13	16
Hpa-An	26	-	0	74	8	10.8	100	8	8	0	0	0
Kale	9	-	0	14	3	21.4	23	3	13	0	2	2
Kawthoung	41	-	0	60	2	3.3	101	2	2	0	0	0
Kengtung	3	-	0	7	1	14.3	10	1	10	0	1	1
Lashio	28	2	7.1	72	9	12.5	100	11	11	2	8	10
Loikaw	14	2	14.3	76	6	7.9	90	8	8.9	1	0	1
Magway	36	1	2.8	64	8	12.5	100	9	9	1	6	7
Mandalay	29	4	13.8	71	15	21.1	100	19	19	4	12	16
Maubin	27	-	0	73	3	4.1	100	3	3	0	0	0
Mawlamyine	34	5	14.7	66	21	31.8	100	26	26	3	4	7
Meiktila	16	4	25	84	25	29.8	100	29	29	1	3	4
Monywa	32	5	15.6	70	29	41.4	102	34	33.3	0	0	0
Muse	31	1	3.2	64	-	0	95	1	1.1	0	0	0
Myaungmya	20	2	10	62	30	48.4	82	32	39	0	0	0
Myawaddy	39	-	0	47	-	0	86	-	0	0	0	0
Myeik	12	-	0	34	-	0	46	-	0	0	0	0
Myingyan	31	-	0	69	2	2.9	100	2	2	0	0	0
Myitkyina	22	4	18.2	74	17	23	96	21	21.9	0	0	0
Nyaung-U	8	-	0	36	3	8.3	44	3	6.8	0	1	1
Pakokku	22	-	0	78	-	0	100	-	0	0	0	0
Pathein	25	1	4	75	5	6.7	100	6	6	0	0	0
Pyay	31	-	0	88	2	2.3	119	2	1.7	0	0	0
Pyinmana	22	2	9.1	51	3	5.9	73	5	6.8	1	2	3
Pyinoolwin	31	7	22.6	69	37	53.6	100	44	44	7	37	44
Shwebo	36	1	2.8	64	1	1.6	100	2	2	0	0	0
Sittwe	51	1	2	97	9	9.3	148	10	6.8	0	0	0
Tachileik	26	2	7.7	55	11	20	81	13	16	0	1	1
Taunggyi	31	3	9.7	69	3	4.3	100	6	6	0	1	1
Taungoo	26	3	11.5	74	6	8.1	100	9	9	2	4	6
Yangon	26	1	3.8	74	3	4.1	100	4	4	0	0	0
Total	957	64	6.7	2219	311	14.0	3176	375	11.8	26	97	123

Table 29 shows the VDRL positivity rate among male STI patients. Among the participating townships, Pyay, Mandalay, Mawlamyine and Pyinmana showed the highest rate at 68.1%, 58%, 54%, and 52.1%, respectively. Regarding sample size, in Kale, Myeik, and Nyaung-U the sample size was low (i.e., less than 45 patients).

Table 29. VDRL positive rate among Male STI patients by sentinel sites and age groups (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total		
	N	Positive	%	N	Positive	%	N	Positive	%
Bago	43	4	9.3	38	4	10.5	81	8	9.9
Bhamo	55	5	9.1	45	5	11.1	100	10	10
Dawei	33	16	48.5	67	25	37.3	100	41	41
Hakha	20	-	0	79	3	3.8	99	3	3
Hinthada	21	10	47.6	79	36	45.6	100	46	46
Hpa-An	26	2	7.7	74	16	21.6	100	18	18
Kale	9	2	22.2	14	3	21.4	23	5	21.7
Kawthoung	41	-	0	60	2	3.3	101	2	2
Kengtung	3	1	33.3	7	2	28.6	10	3	30
Lashio	28	6	21.4	72	23	31.9	100	29	29
Loikaw	14	1	7.1	76	3	3.9	90	4	4.4
Magway	36	10	27.8	64	15	23.4	100	25	25
Mandalay	29	19	65.5	71	39	54.9	100	58	58
Maubin	27	2	7.4	73	3	4.1	100	5	5
Mawlamyine	34	19	55.9	66	35	53	100	54	54
Meiktila	16	1	6.3	84	13	15.5	100	14	14
Monywa	32	8	25	70	20	28.6	102	28	27.5
Muse	31	1	3.2	64	2	3.1	95	3	3.2
Myaungmya	20	1	5	62	16	25.8	82	17	20.7
Myawaddy	39	4	10.3	47	11	23.4	86	15	17.4
Myeik	11	3	27.3	30	-	0	41	3	7.3
Myingyan	31	11	35.5	69	14	20.3	100	25	25
Myitkyina	22	4	18.2	74	16	21.6	96	20	20.8
Nyaung-U	8	3	37.5	36	13	36.1	44	16	36.4
Pakokku	22	9	40.9	78	11	14.1	100	20	20
Pathein	25	2	8	75	4	5.3	100	6	6
Pyay	31	21	67.7	88	60	68.2	119	81	68.1
Pyinmana	22	15	68.2	51	23	45.1	73	38	52.1
Pyinoolwin	31	1	3.2	69	11	15.9	100	12	12
Shwebo	36	5	13.9	64	3	4.7	100	8	8
Sittwe	51	1	2	97	14	14.4	148	15	10.1
Tachileik	26	8	30.8	55	19	34.5	81	27	33.3
Taunggyi	31	10	32.3	69	18	26.1	100	28	28
Taungoo	26	-	0	74	1	1.4	100	1	1
Yangon	26	5	19.2	74	27	36.5	100	32	32
Total	956	210	22.0	2215	510	23.0	3171	720	22.7

Table 30 examines the relationship between HIV infection and the following basic characteristics of male STI patients: age, VDRL positive and their residency. The older age group of 25 years and above was a significant predictor of HIV infection after controlling for such variables (aOR=2.2; 95%CI; (1.7;3.0)). The adjusted odds of having HIV infection by VDRL positivity was 1.5 times higher than those who were negative to VDRL (aOR=1.5, 95%CI; (1.2;1.9)). The adjusted odds of male STI patients from rural areas for being infected with HIV was 1.4 times higher than those from urban areas (aOR=1.4, 95%CI; (1.1;1.7)).

Table 30. Odds Ratios and 95% CI for having HIV positive test result among Male STI patients (HSS 2020)

Characteristic		HIV test result			Crude OR (95% CI)	Adjusted OR* (95% CI)
		Positive (n)	Negative (n)	Prevalence		
Age (years)	≥25	311	1,908	16.3%	2.27 (1.71, 3.01)	2.23 (1.69, 2.96)
	<25	64	893	7.2%	Ref	Ref
Syphilis VDRL Test	Reactive	111	609	18.2%	1.51 (1.19, 1.92)	1.49 (1.17, 1.89)
	Non-Reactive	264	2,187	12.1%	Ref	Ref
Resident	Rural	142	835	17.0%	1.44 (1.15, 1.80)	1.36 (1.09, 1.71)
	Urban	233	1,966	11.9%	Ref	Ref

* The adjusted model included Age, VDRL test result and Resident.

Pregnant Women

The total number of pregnant women who participated was 13,839 from 35 townships. The target sample size identified for each township was 400, so 94% of the sample size was achieved. Table 30 describes the basic characteristics of pregnant women participating in the survey. Sixty-six percent (66%) of urban residents were recruited. Fifty-seven percent (57%) were multipara pregnant women and the majority (98%) were currently married.

Table 31. Basic Characteristics of Pregnant Women (N= 13,839; HSS 2020)

Characteristic		<25 yr		≥25 yr		Total	
		N	%	N	%	N	%
Resident	Urban	2,864	63%	6,285	68%	9,149	66%
	Rural	1,689	37%	3,001	32%	4,690	34%
Gravida	Primipara	3,292	72%	2,653	29%	5,945	43%
	Multipara	1,261	28%	6,633	71%	7,894	57%
Current Marital Status	Currently married	4,447	98%	9,104	98%	13,551	98%
	Not currently married	106	2%	182	2%	288	2%
Previous HIV Status	Known	1,047	23%	2,865	31%	3,912	28%
	Unknown	3,506	77%	6,421	69%	9,927	72%

Table 32 demonstrates the mean and median age were almost the same; the mean age of pregnant women was 27.9 years and median age was 27 years. The minimum age was 15 and maximum age was 49 years.

Table 32. Distribution of age among Pregnant Women (HSS 2020)

Characteristic	Mean	Median	95%CI for mean	(Min, Max)
Age (years)	27.9	27	(27.8; 28.0)	(15;49)

Table 33 shows the overall HIV prevalence was 0.5%; 0.3% in the younger age group and 0.7% in the older age group. Sittwe, Pyinmana, and Meiktila had the highest HIV prevalence of 2.3%, 2.2%, and 2.0%, respectively. Mandalay had 1.3% HIV prevalence while Mawlawmyine, Myingyan, and Tachileik each had 1% prevalence. The remaining townships had HIV prevalence ranging from 0% to 0.8%.

By comparing age groups less than 25 year and 25 years of age and older, the HIV prevalence was higher in ≥25 years of age in most of the townships except Bago, Hakha, Hinthada, Muse, Shwebo, and Taunggyi, where the youth HIV prevalence was higher than the 25 years and above age group.

Table 33. HIV prevalence among Pregnant Women by sentinel sites and age groups (HSS 2020)

Sentinel site	< 25			≥ 25			Total		
	N	Reactive	Prevalence	N	Reactive	Prevalence	N	Reactive	Prevalence
Bago	121	1	0.8	279	-	0	400	1	0.3
Bhamo	136	-	0	264	2	0.8	400	2	0.5
Dawei	135	-	0	298	1	0.3	433	1	0.2
Hakha	105	1	1	294	-	0	399	1	0.3
Hinthada	120	1	0.8	284	2	0.7	404	3	0.7
Hpa-An	134	-	0	266	1	0.4	400	1	0.3
Kale	106	-	0	294	-	0	400	-	0
Kawthoung	123	-	0	175	1	0.6	298	1	0.3
Kengtung	198	-	0	202	1	0.5	400	1	0.3
Lashio	124	-	0	196	2	1	320	2	0.6
Loikaw	109	-	0	291	2	0.7	400	2	0.5
Magway	102	-	0	298	2	0.7	400	2	0.5
Mandalay	121	-	0	279	5	1.8	400	5	1.3
Maubin	168	-	0	232	3	1.3	400	3	0.8
Mawlamyine	133	1	0.8	267	3	1.1	400	4	1.0
Meiktila	137	1	0.7	263	7	2.7	400	8	2.0
Monywa	104	-	0	296	-	0	400	-	0
Muse	139	1	0.7	261	1	0.4	400	2	0.5
Myaungmya	137	-	0	263	3	1.1	400	3	0.8
Myawaddy	142	-	0	277	3	1.1	419	3	0.7
Myeik	124	-	0	276	-	0	400	-	0
Myingyan	107	-	0	293	4	1.4	400	4	1.0
Myitkyina	116	-	0	284	-	0	400	-	0
Nyaung-U	106	-	0	294	1	0.3	400	1	0.3
Pakokku	105	-	0	295	1	0.3	400	1	0.3
Pathein	162	-	0	287	-	0	449	-	0
Pyay	132	-	0	268	1	0.4	400	1	0.3
Pyinmana	146	2	1.4	265	7	2.6	411	9	2.2
Pyinoolwin	149	-	0	251	-	0	400	-	0
Shwebo	118	1	0.8	282	2	0.7	400	3	0.8
Sittwe	119	2	1.7	181	5	2.8	300	7	2.3
Tachileik	197	1	0.5	205	3	1.5	402	4	1.0
Taunggyi	110	1	0.9	290	-	0	400	1	0.3
Taungoo	145	-	0	255	-	0	400	-	0
Yangon	123	-	0	281	-	0	404	-	0
Total	4553	13	0.3%	9286	63	0.7%	13839	76	0.5%

Table 34 shows the VDRL positivity rate by sentinel sites and age group. The total positivity rate of VDRL was 0.7%; 0.6% in younger age and 0.7% in older age. The townships Meiktila, Sittwe, Myaungmya, and Hpa-An had the highest VDRL positivity rates: 3.3%, 2.3%, 1.8% and 1.5% respectively. Four townships – Bhamo, Mawlamyine, Muse, and Pyinoolwin – had a 1.3% VDRL positive rate.

Focusing on age groups, the VDRL positive rate was higher in the younger age group compared to the older age group. For instance, the VDRL positive rate was higher in younger age groups in Yangon (3.3% vs. 1.4%), in Mandalay (0.8% vs 0%), in Bago (1.7% vs 1.1%), in Hakha (1.0% vs 0%), in Hpa-An (2.2% vs 1.1%), and in Myaungmya (2.2% to 1.5%).

Table 34. VDRL positive rate among Pregnant Women by sentinel sites & age groups (N=13,839; HSS 2020)

Sentinel Site	< 25			≥ 25			Total		
	N	Reactive	%	N	Reactive	%	N	Reactive	%
Bago	121	2	1.7	279	3	1.1	400	5	1.3
Bhamo	136	-	0	264	-	0	400	-	0
Dawei	135	-	0	298	1	0.3	433	1	0.2
Hakha	105	1	1	294	-	0	399	1	0.3
Hinthada	120	-	0	284	2	0.7	404	2	0.5
Hpa-An	134	3	2.2	266	3	1.1	400	6	1.5
Kale	106	-	0	294	-	0	400	-	0
Kawthoung	123	-	0	175	-	0	298	-	0
Kengtung	198	-	0	202	-	0	400	-	0
Lashio	124	-	0	196	-	0	320	-	0
Loikaw	109	-	0	291	1	0.3	400	1	0.3
Magway	102	1	1	298	-	0	400	1	0.3
Mandalay	121	1	0.8	279	-	0	400	1	0.3
Maubin	168	2	1.2	232	-	0	400	2	0.5
Mawlamyine	133	2	1.5	267	3	1.1	400	5	1.3
Meiktila	137	1	0.7	263	12	4.6	400	13	3.3
Monywa	104	-	0	296	-	0	400	-	0
Muse	139	1	0.7	261	4	1.5	400	5	1.3
Myaungmya	137	3	2.2	263	4	1.5	400	7	1.8
Myawaddy	142	2	1.4	277	3	1.1	419	5	1.2
Myeik	124	-	0	276	-	0	400	-	0
Myingyan	107	-	0	293	4	1.4	400	4	1
Myitkyina	116	-	0	284	-	0	400	-	0
Nyaung-U	106	-	0	294	-	0	400	-	0
Pakokku	105	-	0	295	2	0.7	400	2	0.5
Pathein	162	-	0	287	-	0	449	-	0
Pyay	132	-	0	268	4	1.5	400	4	1
Pyinmana	146	1	0.7	265	4	1.5	411	5	1.2
Pyinoolwin	149	2	1.3	251	3	1.2	400	5	1.3
Shwebo	118	-	0	282	-	0	400	-	0
Sittwe	119	2	1.7	181	5	2.8	300	7	2.3
Tachileik	197	-	0	205	-	0	402	-	0
Taunggyi	110	-	0	290	-	0	400	-	0
Taungoo	145	-	0	255	-	0	400	-	0
Yangon	123	4	3.3	281	4	1.4	404	8	2
Total	4,553	28	0.6%	9,286	62	0.7%	13,839	90	0.7%

The data also shows that age was a significant predictor of HIV infection. The odds of being older (25 years and above) were 2.4 times higher than women under 25 years (aOR = 2.4 (95% CI= 1.2-4.5). Though not significant, the odds of multipara pregnant women were 1.1 times higher than the primipara pregnant women (aOR = 1.1 (95% CI= 0.7-1.8); the odds of pregnant women from rural residences were 1.6 times higher than women from urban areas (aOR = 1.6 (95% CI = 0.98-2.5) (see **Table 35**).

Table 35. Odds Ratios and 95% CI for having HIV positive test result among Pregnant Women (HSS 2020)

Characteristic		HIV Result			Crude OR (95% CI)	Adjusted OR (95% CI)*
		Positive	Negative	Prevalence		
Age (yrs)	≥ 25	63	9,223	0.68%	2.39 (1.31, 4.34)	2.36 (1.24, 4.46)
	<25	13	4,540	0.29%	(Ref)	(Ref)
Gravida	Multipara	50	7,844	0.64%	1.45 (0.90, 2.33)	1.08 (0.65, 1.80)
	Primipara	26	5,919	0.44%	(Ref)	(Ref)
Resident	Rural	33	4,657	0.71%	1.50 (0.95, 2.37)	1.55 (0.98, 2.45)
	Urban	43	9,106	0.47%	(Ref)	(Ref)

* The adjusted model included Age, Gravida and Resident.

New TB patients

The total number of new TB patients that participated in this round were 4,656 (**Table 36**). 51% of participants were form urban areas, 65% were married, and 65% were male. Fourty-three percent (43%) of patients were AFB smear negative, 49% were AFB smear positive, and 8% had extra-pulmonary TB. 19% of patients had known HIV status.

Table 36. Basic Characteristics of New TB patients (N= 4,656; HSS 2020)

Characteristic		<25 yr		≥25 yr		Total	
		N	%	N	%	N	%
Resident	Urban	358	54%	2,022	51%	2,380	51%
	Rural	300	46%	1,976	49%	2,276	49%
Current Marital Status	Currently married	137	21%	2,884	72%	3,021	65%
	Not currently married	521	79%	1,114	28%	1,635	35%
Sex	Female	295	45%	1,316	33%	1,611	35%
	Male	363	55%	2,682	67%	3,045	65%
TB status	*AFB Negative	270	41%	1,743	44%	2,013	43%
	*AFB Positive	318	48%	1,972	49%	2,290	49%
	Extrapulmonary	70	11%	283	7%	353	8%
Previous HIV Status	Known	100	15%	777	19%	877	19%
	Unknown	558	85%	3,221	81%	3,779	81%

* AFB: Acid-Fast Bacillus Test

The mean age of new TB patients was 43.1 years and median age was 42 years. As mean age was higher than median age of new TB patients, the age distribution showed right skewed. Age of the participants ranged from 15 to 94 years (see **Table 37**).

Table 37. Distribution of age new TB patients (HSS 2020)

Characteristic	Mean	Median	95%CI for mean	(Min, Max)
Age (years)	43.1	42	(42.6; 43.6)	(15; 94)

According to WHO, the risk of developing TB is estimated to be between 16-27 times greater in PLHIV than among those without HIV infection[4]. Here in **Table 38**, the estimated HIV prevalence among new TB patients was (9.2%). The HIV prevalence found was higher in older age than in the younger age group (9.9% vs 4.9%).

Among the sentinel sites, Mykitkyina stood highest at 31.3% of HIV prevalence; Muse (25.7%), Kawthoung (20.3%), Pyinmana (20.0%), Bhamo (18.7%), Maubin (14.7%), Lashio (14.7%), and Myawaddy (14%) all had higher prevalence as well.

When comparing age groups, the older age group (≥25 years old) had higher prevalence than the younger age group (<25 years old). However, the HIV prevalence in the younger age group was higher than the older age group in Bhamo (20.0% vs 18.5%), Loikaw (5.0% vs 3.0%), Myaungmya (9.1% vs 7.2%), Myingyan (12.5% vs 5.2%), Nyaung-U (11.1% vs 4.3%) and Shwebo (8.3% vs 8.1%). Similarly, HIV transmission is still ongoing in the younger age group, and it is important to advocate that HIV testing, diagnosis and care need to be provided.

Prevention efforts should be strengthened in both TB and HIV programs, as if patients are immunodeficient, opportunistic infections are prone to be contracted.

[4] Global tuberculosis report 2015. WHO https://www.who.int/tb/publications/global_report/gtbr15_main_text.pdf

Table 38. HIV prevalence among New TB patients by sentinel sites and age groups (HSS 2020)

Sentinel Site	<25 yr			≥25 yr			Total			Number of TB patients who are already known to be HIV positive		
	N	HIV+	%	N	HIV+	%	N	HIV+	%	<25 yr	≥25 yr	Total
Bago	33	1	3.0	117	10	8.5	150	11	7.3	0	8	8
Bhamo	15	3	20.0	135	25	18.5	150	28	18.7	3	25	28
Dawei	22	1	4.5	128	11	8.6	150	12	8	1	11	12
Hakha	8	0	0.0	30	2	6.7	38	2	5.3	0	2	2
Hinthada	18	0	0.0	132	3	2.3	150	3	2	0	2	2
Hpa-An	24	0	0.0	126	1	0.8	150	1	0.7	0	0	0
Kale	33	2	6.1	117	13	11.1	150	15	10	0	9	9
Kawthoung	6	0	0.0	53	12	22.6	59	12	20.3	0	0	0
Kengtung	26	1	3.8	124	7	5.6	150	8	5.3	1	4	5
Lashio	26	1	3.8	124	21	16.9	150	22	14.7	0	1	1
Loikaw	20	1	5.0	106	3	2.8	126	4	3.2	0	2	2
Magway	8	0	0.0	142	6	4.2	150	6	4	0	6	6
Mandalay	21	1	4.8	129	10	7.8	150	11	7.3	1	8	9
Maubin	15	1	6.7	135	21	15.6	150	22	14.7	0	3	3
Mawlamyine	18	1	5.6	132	10	7.6	150	11	7.3	1	10	11
Meiktila	11	1	9.1	94	10	10.6	105	11	10.5	0	10	10
Monywa	16	0	0.0	134	8	6	150	8	5.3	0	5	5
Muse	17	1	5.9	84	25	29.8	101	26	25.7	1	16	17
Myaungmya	22	2	9.1	125	9	7.2	147	11	7.5	0	0	0
Myawaddy	29	3	10.3	121	18	14.9	150	21	14	3	17	20
Myeik	26	0	0.0	124	7	5.6	150	7	4.7	0	2	2
Myingyan	16	2	12.5	134	7	5.2	150	9	6	0	2	2
Myitkyina	23	4	17.4	127	43	33.9	150	47	31.3	4	41	45
Nyaung-U	9	1	11.1	141	6	4.3	150	7	4.7	0	0	0
Pakokku	16	0	0.0	134	9	6.7	150	9	6	0	4	4
Pathein	23	0	0.0	127	18	14.2	150	18	12	0	13	13
Pyay	10	0	0.0	38	0	0	48	0	0	0	0	0
Pyinmana	15	1	6.7	75	17	22.7	90	18	20	1	16	17
Pyinoolwin	25	0	0.0	125	15	12	150	15	10	0	15	15
Shwebo	12	1	8.3	136	11	8.1	148	12	8.1	1	7	8
Sittwe	24	0	0.0	93	2	2.2	117	2	1.7	0	2	2
Tachileik	20	1	5.0	88	7	8	108	8	7.4	0	0	0
Taunggyi	17	0	0.0	103	7	6.8	120	7	5.8	0	1	1
Taungoo	10	0	0.0	140	11	7.9	150	11	7.3	0	8	8
Yangon	24	2	8.3	125	12	9.6	149	14	9.4	0	4	4
Total	658	32	4.9	3998	397	9.9	4656	429	9.2	17	254	271

Table 39 shows that while similar, rural residing TB patients had slightly higher HIV prevalence than urban residents (9.4% vs 9.1%). HIV prevalence among male patients was 9.5% and that of female patients was 8.7%.

The odds of having TB/HIV co-infection was 2.2 times higher in new TB patients 25 years and older as compared to those with <25 years of age (aOR = 2.2; 95 %CI: 1.5, 3.2) even after adjusted for other factors in multivariate model (see footnote of Table 39). Relations between having TB/HIV co-infection and sex, resident, maritale status were not statistically significant. Assoiciation with type of TB was also not significant when adjusted for other factors.

Table 39. Odds Ratios and 95% CI for having HIV positive test result among New TB patients (HSS 2020)

Variables		HIV Result			Crude OR (95%CI)	Adjusted OR* (95%CI)
		Positive	Negative	% Prevalence		
Age (years)	**≥25**	397	3,601	9.9%	2.2 (1.5, 3.1)	2.2 (1.5,3.2)
	<25	32	626	4.9%	Ref	Ref
Sex	**Male**	289	2,756	9.5%	1.1 (0.9, 1.4)	1.0 (0.8,1.3)
	Female	140	1,471	8.7%	Ref	Ref
Resident	**Rural**	223	2,157	9.4%	1.0 (0.8, 1.2)	0.9 (0.8,1.2)
	Urban	206	2,070	9.1%	Ref	Ref
Marital Status	**Not Currently Married**	281	2,740	9.3%	1.0 (0.8, 1.2)	1.0 (0.9,1.1)
	Currently Married	148	1,487	9.1%	Ref	Ref
Type of TB	**Extrapulmonary**	21	332	5.9%	0.6 (0.38,0.95)	0.6 (0.4,1.0)
	Pulmonary (AFB + and AFB -)	408	3895	9.5%	Ref	Ref

* The adjusted model included Age, Sex, Resident, and Marital status.

Annex II: Sentinel site specific results (by Region & State)

Region: Ayeyarwaddy Region

Sentinel Site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Pathein	√	√		√	√	√
Hinthada	√	√		√	√	√
Myaungmya	√	√		√	√	√
Maubin	√	√		√	√	√

Sentinel Site: Pathein

Table 40. Basic characteristics of sentinel groups (Pathein, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	162	36%	27	23%	25	25%	59	59%	23	15%
	≥25 yr	287	64%	93	78%	75	75%	41	41%	127	85%
Urban/ Rural	Urban	448	100 %	104	87%	89	89%	96	96%	57	38%
	Rural	1	0%	16	13%	11	11%	4	4%	93	62%
Marital Status	Currently married	329	73%	68	57%	60	60%	37	37%	103	69%
	Not currently married	120	27%	52	43%	40	40%	63	63%	47	31%
Sex	Female	449	100 %	120	100 %	0	0%	0	0%	56	37%
	Male	0	0%	0	0%	100	100 %	100	100 %	94	63%
FSW type	Direct			59	49%						
	Indirect			61	51%						
MSM type	Apwint							5	5%		
	Apone							2	2%		
	Tha Nge							93	93%		
TB status	AFB Negative									53	35%
	AFB Positive									96	64%
	Extrapulmonary									1	1%
Gravida	Primipara	220	49%								
	Multipara	229	51%								
Source of serum	Aids STD Public					18	18%				
	GP					44	44%				
	NGOs					38	38%				
	Other Source					0	0%				

Table 41. Distribution of age by sentinel groups (Pathein, HSS 2020)

Sentinel Groups	Mean (95% CI)	Median	Minimum	Maximum
ANC	27.6 (27, 28.2)	27	15	45
FSW	32.7 (31.1, 34.3)	33	17	50
Male STI patients	30.9 (29.2, 32.5)	30	18	49
MSM/TGW	25.3 (23.4, 27.1)	23	16	58
New TB patients	40.2 (38, 42.4)	39	15	70

Table 42. Distribution of age at initiating risk behaviours by sentinel groups (Pathein, HSS 2020)

Sentinel Groups	Mean (95% CI)	Median	Minimum	Maximum
FSW	25.1 (24.1, 26.2)	25	14	40
MSM/TGW	18.7(18.3, 19)	18	15	23

Table 43. Duration with at risk behavior by sentinel groups (Pathein, HSS 2020)

Sentinel Groups	Mean (95% CI)	Median	Minimum	Maximum
FSW	7.6 (6.6, 8.6)	6.5	0	22
MSM/TGW	6.6 (5, 8.2)	3	0	36

Table 44. HIV test results by sentinel groups and age groups (Pathein, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	162	0	0	287	0	0	449	0	0
FSW	27	2	7.4	93	5	5.4	120	7	5.8
Male STI patients	25	1	4	75	5	6.7	100	6	6
MSM/TGW	59	2	3.4	41	4	9.8	100	6	6
New TB patients	23	0	0	127	18	14.2	150	18	12

Table 45. VDRL test results by sentinel groups and age groups (Pathein, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	162	0	0	287	0	0	449	0	0
FSW	27	0	0	93	0	0	120	0	0
Male STI patients	25	2	8	75	4	5.3	100	6	6
MSM/ TGW	59	1	1.7	40	3	7.5	99	4	4

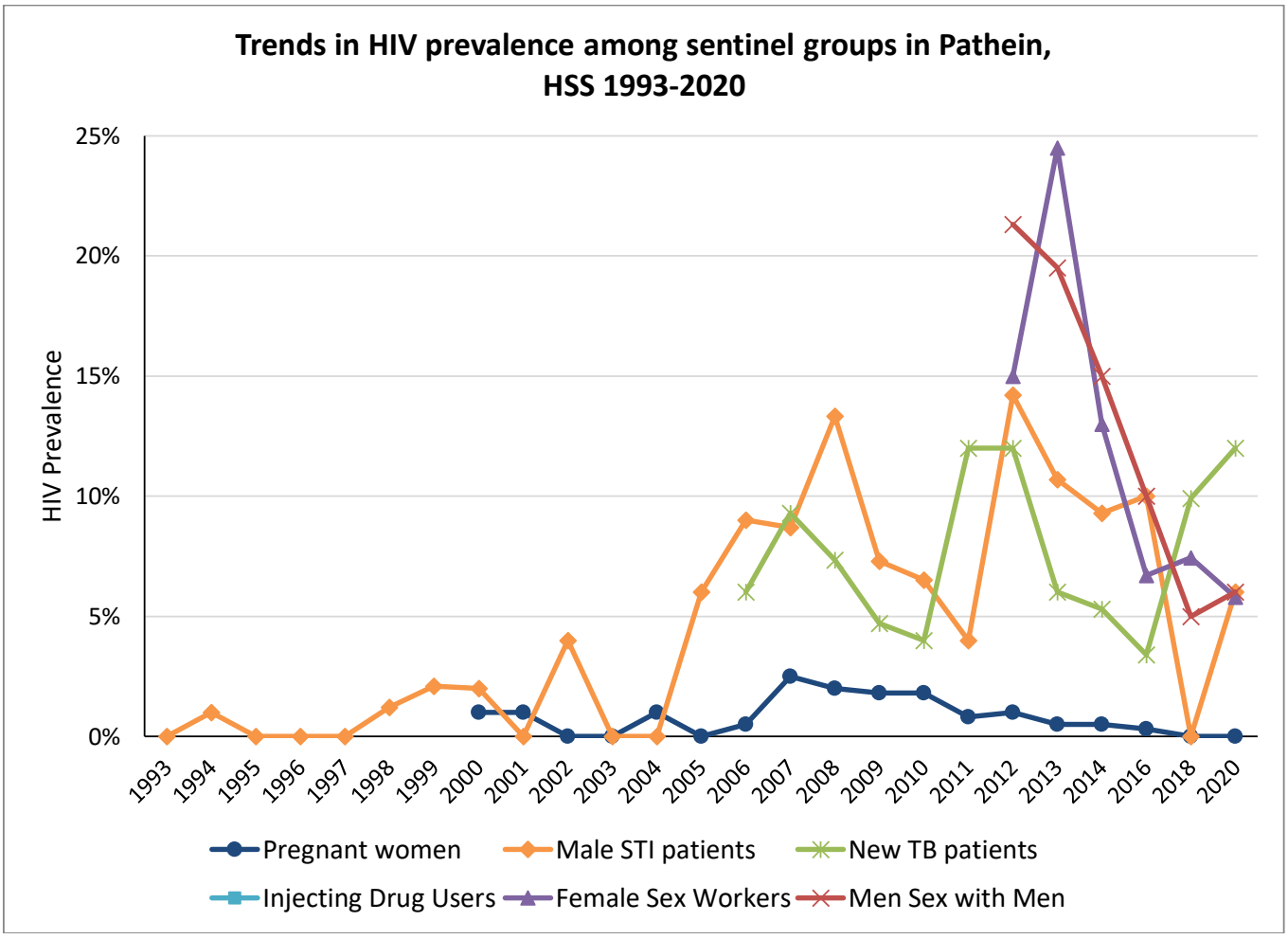


Figure 7. Trends of HIV prevalence by sentinel groups, Pathein (HSS, 1992-2016)

Sentinel Site: Hinthada

Table 46. Basic characteristics of sentinel groups (Hinthada, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	120	30%	47	39%	21	21%	54	54%	18	12%
	≥25 yr	284	70%	73	61%	79	79%	46	46%	132	88%
Urban/ Rural	Urban	200	50%	103	86%	13	13%	78	78%	45	30%
	Rural	204	50%	17	14%	87	87%	22	22%	105	70%
Marital Status	Currently married	404	100%	92	77%	78	78%	46	46%	103	69%
	Not currently married			28	23%	22	22%	54	54%	47	31%
Sex	Female	404	100%	120	100%					48	32%
	Male					100	100%	100	100%	102	68%
FSW type	Direct			100	83%						
	Indirect			20	17%						
MSM type	Apwint										
	Apone							14	14%		
	Tha Nge							80	80%		
TB status	AFB Negative									61	41%
	AFB Positive									84	56%
	Extrapulmonary									5	3%
Gravida	Primipara	174	43%								
	Multipara	230	57%								
Source of serum	Aids STD Public					80	80%				
	GP					0	0%				
	NGOs					20	20%				
	Other Source					0	0%				

Table 47. Distribution of age by sentinel groups (Hinthada, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	28	27.5	28.7	17	46
FSW	29.4	27	27.8	31.1	17	52
Male STI patients	33	30	30.9	35.1	18	61
MSM/TGW	27.1	23	25.1	29.1	18	65
New TB patients	46.2	47	43.5	49	16	94

Table 48. Distribution of age at initiating risk behaviours by sentinel groups (Hinthada, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.6	20	20.1	21.1	16	30
MSM/TGW	19.2	18	18.7	19.6	16	27

Table 49. Duration with at risk behavior by sentinel groups (Hinthada, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	8.8	7	7.6	10.1	1	27
MSM/TGW	8	4	6.3	9.7	0	42

Table 50. HIV test results by sentinel groups and age groups (Hinthada, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	120	1	0.8	284	2	0.7	404	3	0.7
FSW	47	1	2.1	73	5	6.8	120	6	5
Male STI patients	21	3	14.3	79	15	19	100	18	18
MSM/TGW	54	1	1.9	46	2	4.3	100	3	3
New TB patients	18	0	0	132	3	2.3	150	3	2

Table 50. VDRL test results by sentinel groups and age groups (Hinthada, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	120	0	0	284	2	0.7	404	2	0.5
FSW	47	2	4.3	73	5	6.8	120	7	5.8
Male STI patients	21	10	47.6	79	36	45.6	100	46	46
MSM/TGW	54	2	3.7	46	5	10.9	100	7	7

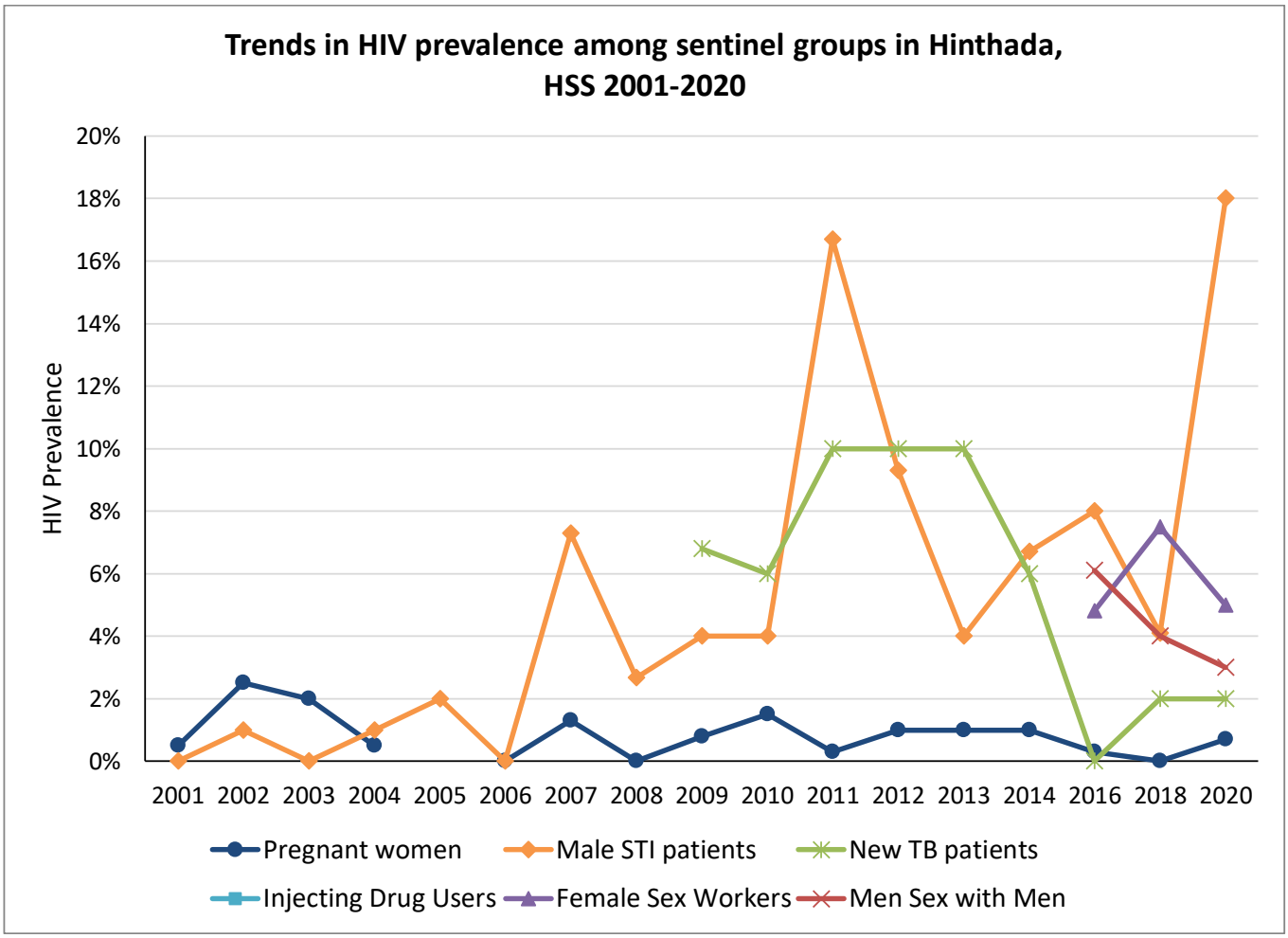


Figure 8. Trends of HIV prevalence by sentinel groups, Hinthada (HSS 2001-2020)

Sentinel Site: Myaungmya

Table 51. Basic characteristics of sentinel groups (Myaungmya, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	137	34%	23	29%	20	24%	23	32%	22	15%
	≥25 yr	263	66%	57	71%	62	76%	49	68%	125	85%
Urban/Rural	Urban	179	45%	1	1%	40	49%	1	1%	40	27%
	Rural	221	55%	79	99%	42	51%	71	99%	107	73%
Marital Status	Currently married	399	100%	74	93%	52	63%	38	53%	98	67%
	Not currently married	1	0%	6	8%	30	37%	34	47%	49	33%
Sex	Female	400	100%	80	100%	0	0%	0	0%	43	29%
	Male	0	0%	0	0%	82	100%	72	100%	104	71%
FSW type	Direct			44	55%						
	Indirect			36	45%						
MSM type	Apwint							26	36%		
	Apone							29	40%		
	Tha Nge							17	24%		
TB status	AFB Negative									47	32%
	AFB Positive									100	68%
	Extrapulmonary									0	0%
Gravida	Primipara	164	41%								
	Multipara	236	59%								
Source of serum	Aids STD Public					82	100%				
	GP					0	0%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 52. Distribution of age by sentinel groups (Myaungmya, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28	27	27.3	28.6	15	45
FSW	31.5	32	29.5	33.6	19	50
Male STI patients	32.2	30	30	34.4	19	60
MSM/TGW	30.2	30	28.2	32.3	19	54
New TB patients	42.8	41	40.2	45.4	15	86

Table 53. Distribution of age at initiating risk behaviours by sentinel groups (Myaungmya, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	22.3	20	21.4	23.1	18	32
MSM/TGW	23.4	21	22.3	24.6	18	35

Table 54. Duration with at risk behavior by sentinel groups (Myaungmya, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	9.3	9	7.7	10.8	0	27
MSM/TGW	6.8	5	5.4	8.2	0	22

Table 55. HIV test results by sentinel groups and age groups (Myaungmya, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	137	0	0	263	3	1.1	400	3	0.8
FSW	23	0	0	57	2	3.5	80	2	2.5
Male STI patients	20	2	10	62	30	48.4	82	32	39
MSM/TGW	23	0	0	49	1	2	72	1	1.4
New TB patients	22	2	9.1	125	9	7.2	147	11	7.5

Table 56. VDRL test results by sentinel groups and age groups (Myaungmya, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	137	3	2.2	263	4	1.5	400	7	1.8
FSW	23	0	0	57	0	0	80	0	0
Male STI patients	20	1	5	62	16	25.8	82	17	20.7
MSM/TGW	23	0	0	49	0	0	72	0	0

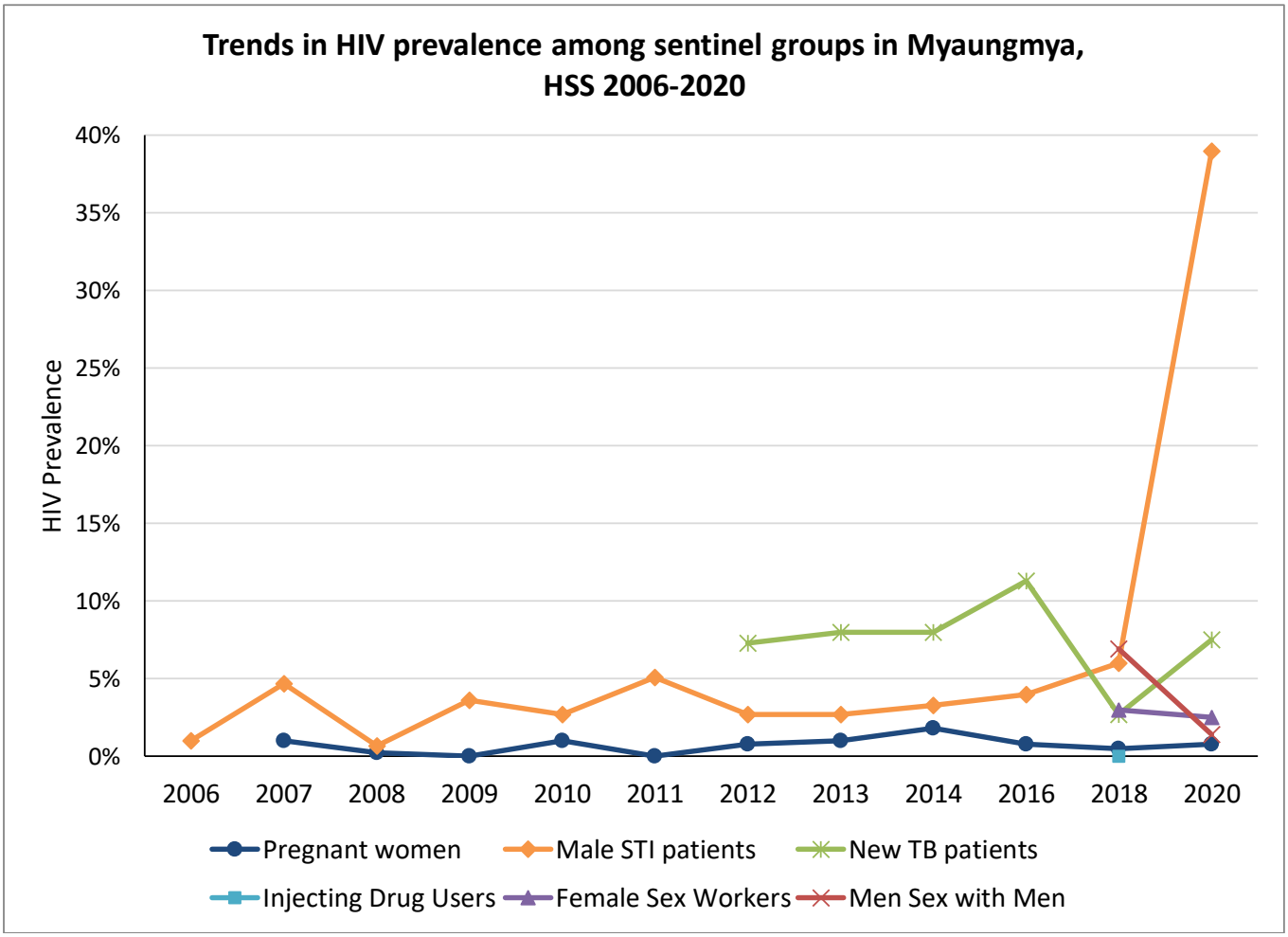


Figure 9. Trends of HIV prevalence among sentinel groups in Myaungmya, HSS 2006-2020

Sentinel Site: Maubin

Table 57. Basic characteristics of sentinel groups (Maubin, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	168	42%	31	26%	27	27%	46	46%	15	10%
	≥25 yr	232	58%	89	74%	73	73%	54	54%	135	90%
Urban/Rural	Urban	200	50%	79	66%	43	43%	64	64%	29	19%
	Rural	200	50%	41	34%	57	57%	36	36%	121	81%
Marital Status	Currently married	400	100%	41	34%	71	71%	23	23%	120	80%
	Not currently married	0	0%	79	66%	29	29%	77	77%	30	20%
Sex	Female	400	100%	120	100%	0	0%	0	0%	59	39%
	Male	0	0%	0	0%	100	100%	100	100%	91	61%
FSW type	Direct			66	55%						
	Indirect			54	45%						
MSM type	Apwint							49	49%		
	Apone							31	31%		
	Tha Nge							20	20%		
TB status	AFB Negative									74	49%
	AFB Positive									75	50%
	Extrapulmonary									1	1%
Gravida	Primipara	174	44%								
	Multipara	226	56%								
Source of serum	Public	0	0%			64	64%				
	GP					21	21%				
	NGOs					2	2%				
	Other Source					13	13%				

Table 58. Distribution of age by sentinel groups (Maubin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.2	26	26.5	27.8	16	48
FSW	29.5	29	28.3	30.8	19	46
Male STI patients	31.4	30	29.7	33.1	18	50
MSM/TGW	27.9	25	26.3	29.6	19	57
New TB patients	45.2	45	42.7	47.7	17	78

Table 59. Distribution of age at initiating risk behaviours by sentinel groups (Maubin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	24.2	23	23.4	25.1	18	36
MSM/TGW	21.7	20	21	22.3	18	30

Table 60. Duration with at risk behavior by sentinel groups (Maubin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.3	5	4.7	5.8	0	17
MSM/TGW	6.3	4.5	5	7.6	0	31

Table 61. HIV test results by sentinel groups and age groups (Maubin, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	168	0	0	232	3	1.3	400	3	0.8
FSW	31	0	0	89	9	10.1	120	9	7.5
Male STI patients	27	0	0	73	3	4.1	100	3	3
MSM/TGW	46	0	0	54	9	16.7	100	9	9
New TB patients	15	1	6.7	135	21	15.6	150	22	14.7

Table 62. VDRL test results by sentinel groups and age groups (Maubin, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	168	2	1.2	232	0	0	400	2	0.5
FSW	31	0	0	89	0	0	120	0	0
Male STI patients	27	2	7.4	73	3	4.1	100	5	5
MSM/TGW	46	0	0	54	0	0	100	0	0

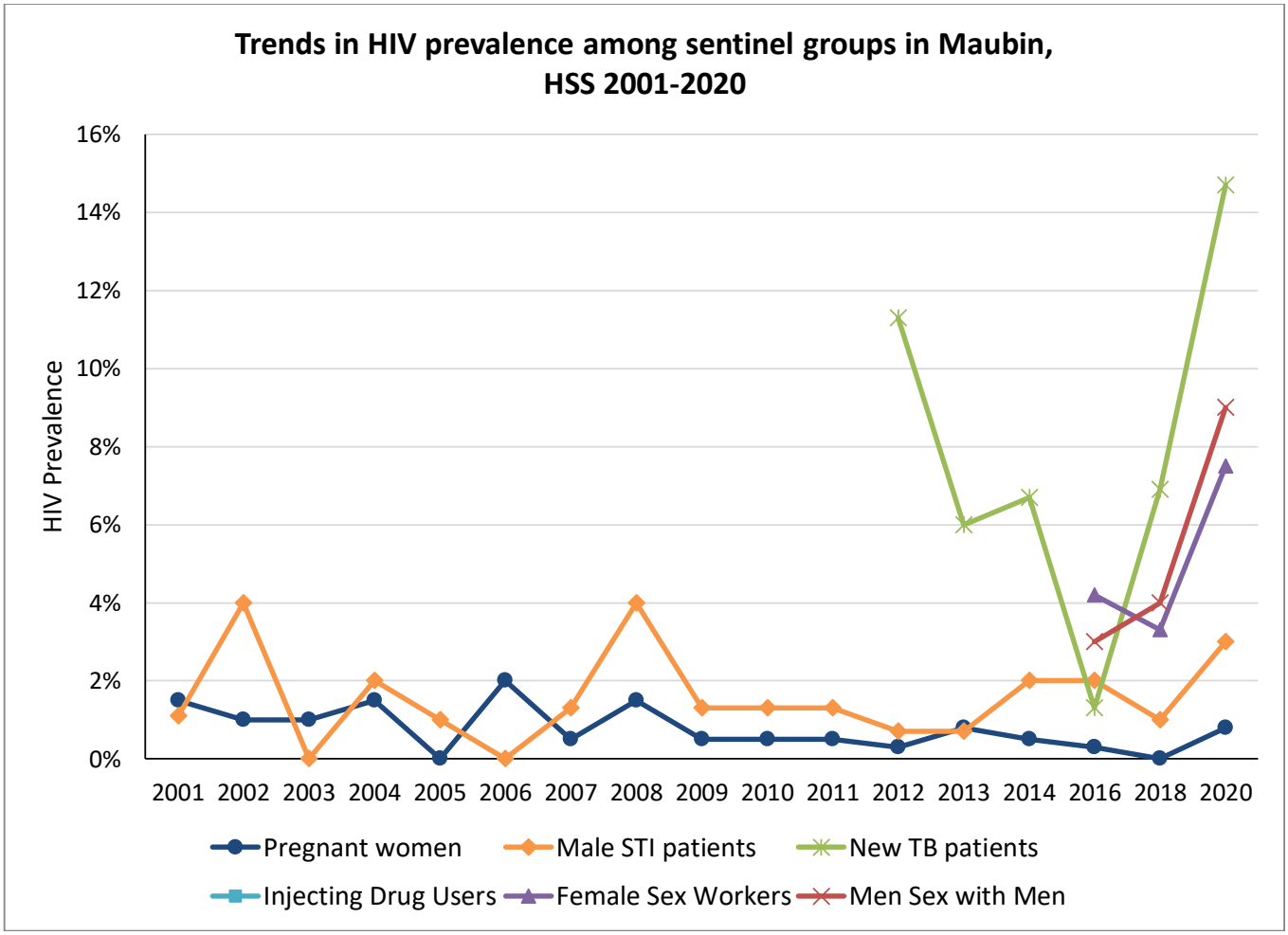


Figure 10. Trends of HIV prevalence by sentinel groups, Maubin (HSS 2000-2016)

Region: Bago Region

Sentinel site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Bago	√	√		√	√	√
Pyay	√	√		√	√	√
Taungoo	√	√		√	√	√

Sentinel Site: Bago

Table 63. Basic characteristics of sentinel groups (Bago, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	121	30%	41	34%	43	53%	52	50%	33	22%
	≥25 yr	279	70%	79	66%	38	47%	52	50%	117	78%
Urban/Rural	Urban	354	89%	113	94%	75	93%	95	91%	84	56%
	Rural	46	12%	7	6%	6	7%	9	9%	66	44%
Marital Status	Currently married	400	100%	11	9%	16	20%	13	13%	92	61%
	Not currently married	0	0%	109	91%	65	80%	91	88%	58	39%
Sex	Female	400	100%	120	100%					60	40%
	Male					81	100%	104	100%	90	60%
FSW type	Direct			103							
	Indirect			17							
MSM type	Apwint							64	62%		
	Apone							11	11%		
	Tha Nge							29	28%		
TB status	AFB Negative									49	33%
	AFB Positive									86	57%
	Extrapulmonary									15	10%
Gravida	Primipara	193	48%								
	Multipara	207	52%								
Source of serum	Aids STD Public					20	25%				
	GP					0	0%				
	NGOs					61	75%				
	Other Source					0	0%				

Table 64. Distribution of age by sentinel groups (Bago, HSS 2020)

Characteristic	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	28	27.5	28.6	17	43
FSW	29	28	27.5	30.5	17	50
Male STI patients	27.4	24	25.4	29.4	18	50
MSM/TGW	26.5	25	24.9	28.1	17	50
New TB patients	39.9	38	37.4	42.4	16	81

Table 65. Distribution of age at initiating risk behaviours by sentinel groups (Bago, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	18.2	18	17.6	18.8	14	37
MSM/TGW	17	17	16.3	17.7	6	31

Table 66. Duration with at risk behavior by sentinel groups (Bago, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	10.8	10	9.3	12.3	0	33
MSM/TGW	9.5	7	8	11	0	35

Table 67. HIV test results by sentinel groups and age groups (Bago, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	121	1	0.8	279	0	0	400	1	0.3
FSW	41	0	0	79	5	6.3	120	5	4.2
Male STI patients	43	1	2.3	38	7	18.4	81	8	9.9
MSM/TGW	52	1	1.9	52	4	7.7	104	5	4.8
New TB patients	33	1	3	117	10	8.5	150	11	7.3

Table 68. VDRL test results by sentinel groups and age groups (Bago, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	121	2	1.7	279	3	1.1	400	5	1.3
FSW	41	3	7.3	77	7	9.1	118	10	8.5
Male STI patients	43	4	9.3	38	4	10.5	81	8	9.9
MSM/TGW	52	9	17.3	50	9	18	102	18	17.6

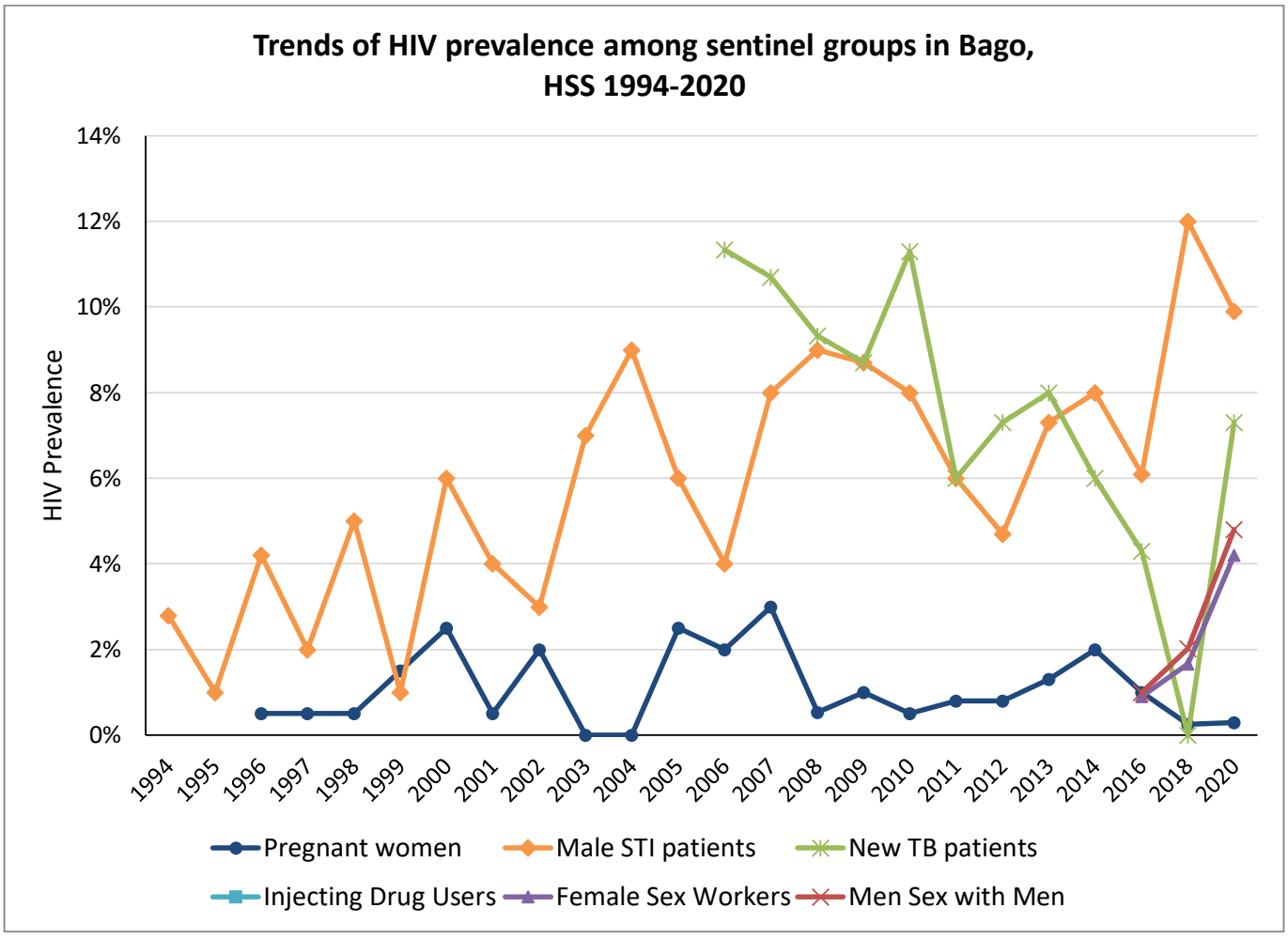


Figure 11. Trends of HIV prevalence by sentinel groups, Bago (HSS 1994-2020)

Sentinel Site: Pyay

Table 69. Basic characteristics of sentinel groups (HSS 2020, Pyay)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	132	33%	37	31%	31	26%	33	33%	10	21%
	≥25 yr	268	67%	83	69%	88	74%	67	67%	38	79%
Urban/ Rural	Urban	318	80%	114	95%	65	55%	94	94%	31	65%
	Rural	82	21%	6	5%	54	45%	6	6%	17	35%
Marital Status	Currently married	399	100%	91	76%	79	66%	51	51%	34	71%
	Not currently married	1	0%	29	24%	40	34%	49	49%	14	29%
Sex	Female	400	100%	120	100 %	0	0%	0	0%	13	27%
	Male	0	0%	0	0%	119	100%	100	100%	35	73%
FSW type	Direct			89	74%						
	Indirect			31	26%						
MSM type	Apwint							9	9%		
	Apone							10	10%		
	Tha Nge							81	81%		
TB status	AFB Negative									20	42%
	AFB Positive									28	58%
	Extrapulmonary									0	0%
Gravida	Primipara	203	51%								
	Multipara	197	49%								
Source of serum	Aids STD Public					119	100%				
	GP					0	0%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 70. Distribution of age by sentinel groups (Pyay, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	28	27.5	28.7	17	43
FSW	32.4	32	30.5	34.3	18	57
Male STI patients	30.6	30	29.2	32	18	53
MSM/TGW	32.8	33	30.6	35	18	65
New TB patients	31.9	32	29.6	34.3	17	48

Table 71. Distribution of age at initiating risk behaviours by sentinel groups (Pyay, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21.6	20	20.5	22.7	15	40
MSM/TGW	19	19	18.4	19.5	15	30

Table 72. Duration with at risk behavior by sentinel groups (Pyay, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	10.8	10	9.5	12.1	1	37
MSM/TGW	13.9	12	11.9	15.8	0	40

Table 73. HIV test results by sentinel groups and age groups (Pyay, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	132	0	0	268	1	0.4	400	1	0.3
FSW	37	0	0	83	3	3.6	120	3	2.5
Male STI patients	31	0	0	88	2	2.3	119	2	1.7
MSM/TGW	33	3	9.1	67	6	9	100	9	9
New TB patients	10	0	0	38	0	0	48	0	0

Table 74. VDRL test results by sentinel groups and age groups (Pyay, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	132	0	0	268	4	1.5	400	4	1
FSW	37	0	0	83	2	2.4	120	2	1.7
Male STI patients	31	21	67.7	88	60	68.2	119	81	68.1
MSM/TGW	33	0	0	67	0	0	100	0	0

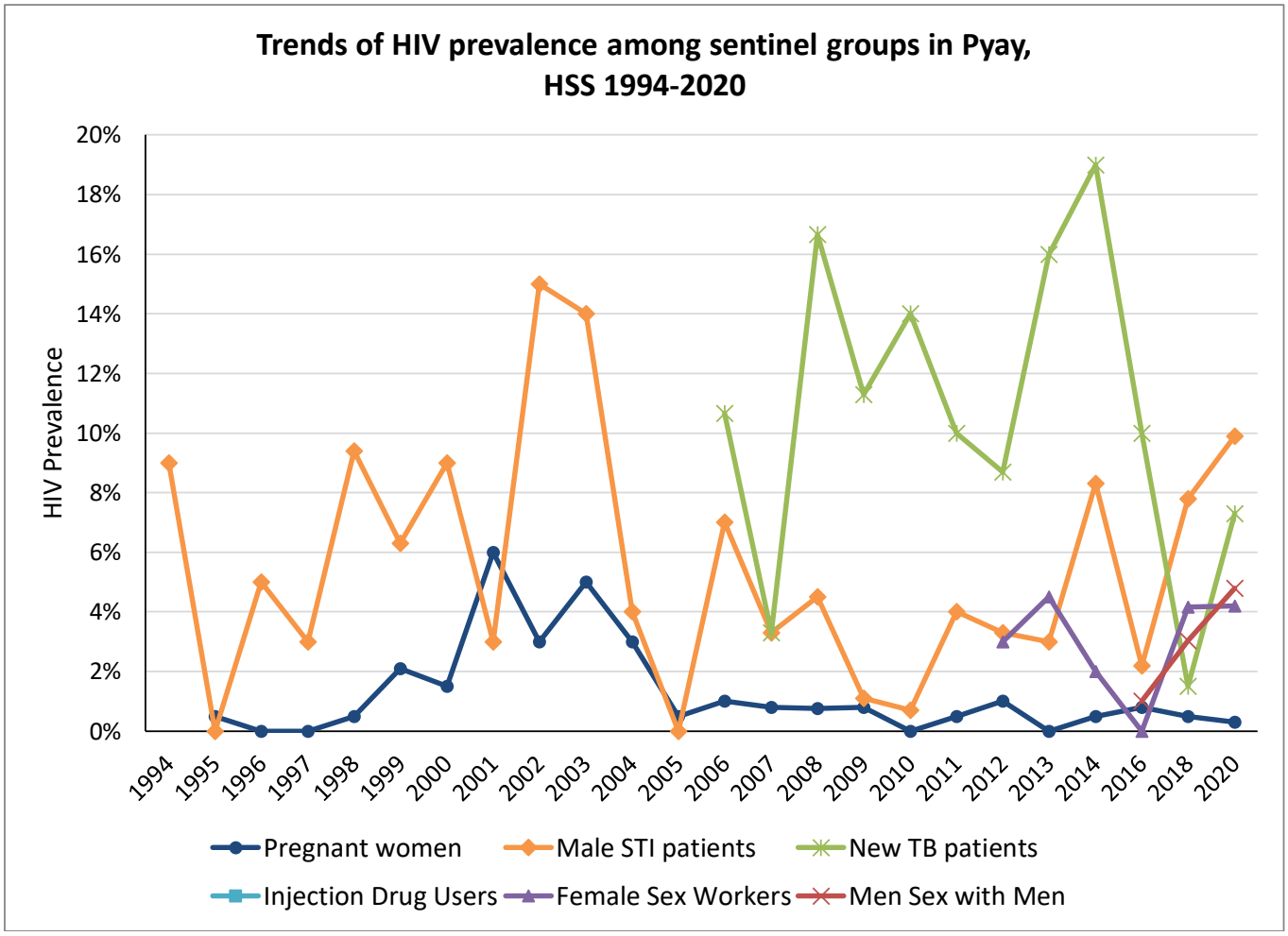


Figure 12. Trends of HIV prevalence by sentinel groups, Pyay (HSS 1994-2020)

Sentinel Site: Taungoo

Table 75. Basic characteristics of sentinel groups (Taungoo, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	145	36%	34	29%	26	26%	48	49%	10	7%
	≥25 yr	255	64%	85	71%	74	74%	49	51%	140	93%
Urban/ Rural	Urban	294	74%	89	75%	50	50%	54	56%	76	51%
	Rural	106	27%	30	25%	50	50%	43	44%	74	49%
Marital Status	Currently married	398	100%	42	35%	39	39%	11	11%	140	93%
	Not currently married	2	1%	77	65%	61	61%	86	89%	10	7%
Sex	Female	400	100%	119	100%	0	0%	0	0%	40	27%
	Male	0	0%	0	0%	100	100%	97	100%	110	73%
FSW type	Direct			37	31%						
	Indirect			82	69%						
MSM type	Apwint							11	11%		
	Apone							31	32%		
	Tha Nge							55	57%		
TB status	AFB Negative									94	63%
	AFB Positive									54	36%
	Extrapulmonary									2	1%
Gravida	Primipara	194	49%								
	Multipara	206	52%								
Source of serum	Aids STD Public					60	60%				
	GP					28	28%				
	NGOs					10	10%				
	Other Source					2	2%				

Table 76. Distribution of age by sentinel groups (Taungoo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.8	27	27.2	28.4	17	45
FSW	29.9	29	28.5	31.3	18	49
Male STI patients	32.1	29	29.8	34.3	17	77
MSM/TGW	26.2	25	24.6	27.8	18	51
New TB patients	44.5	44	42.3	46.8	17	84

Table 77. Distribution of age at initiating risk behaviours by sentinel groups (Taungoo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	24	22	22.9	25.1	17	39
MSM/TGW	20.4	19	19.6	21.3	16	38

Table 78. Duration with at risk behavior by sentinel groups (Taungoo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.9	5	4.9	6.9	0	30
MSM/TGW	5.8	4	4.5	7	0	30

Table 79. HIV test results by sentinel groups and age groups (Taungoo, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	145	0	0	255	0	0	400	0	0
FSW	34	1	2.9	85	10	11.8	119	11	9.2
Male STI patients	26	3	11.5	74	6	8.1	100	9	9
MSM/TGW	48	5	10.4	49	8	16.3	97	13	13.4
New TB patients	10	0	0	140	11	7.9	150	11	7.3

Table 80. VDRL test results by sentinel groups and age groups (Taungoo, HSS_2016)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	145	0	0	255	0	0	400	0	0
FSW	34	0	0	85	3	3.5	119	3	2.5
Male STI patients	26	0	0	74	1	1.4	100	1	1
MSM/TGW	48	3	6.3	49	4	8.2	97	7	7.2

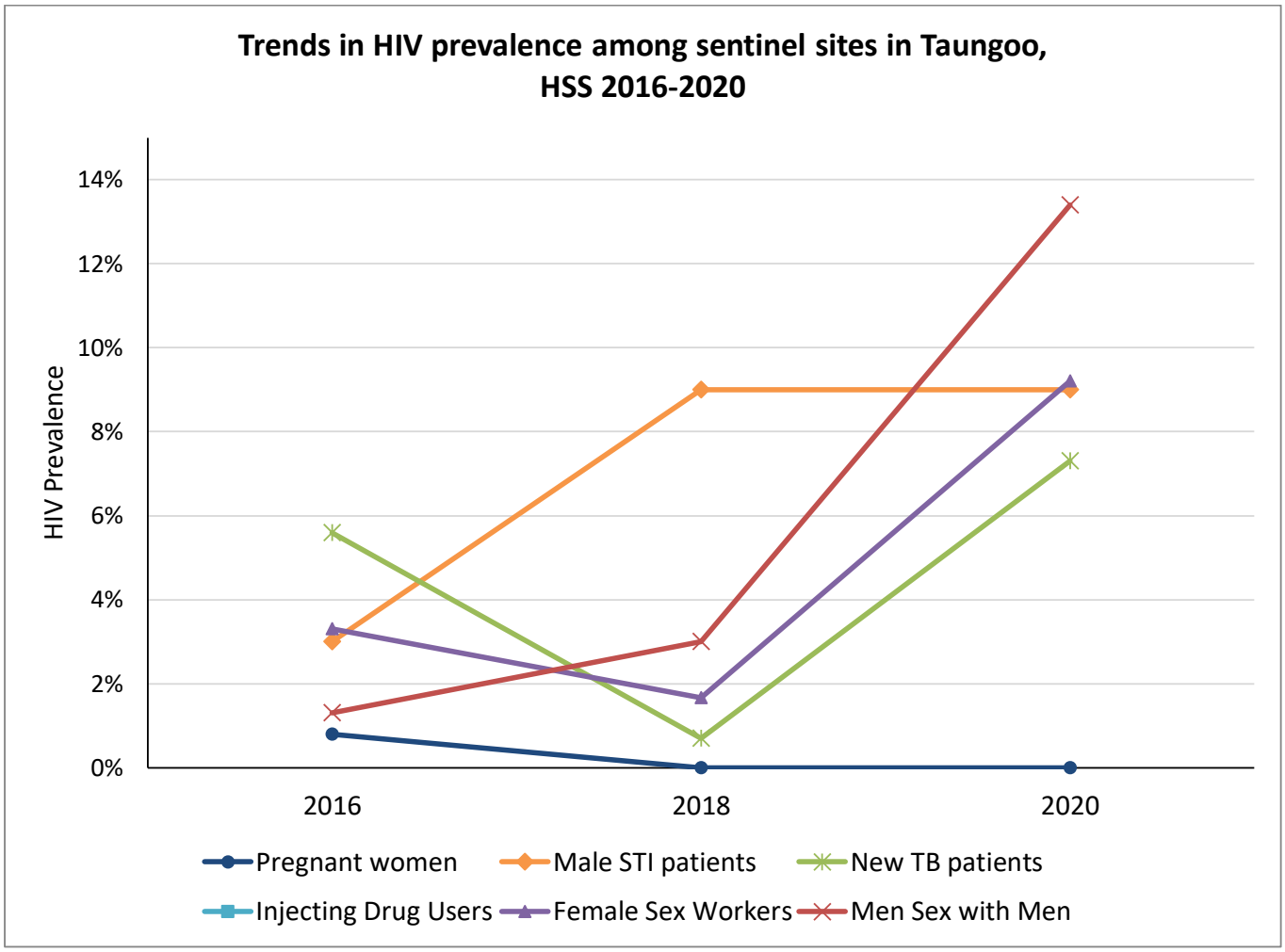


Figure 13. Trends of HIV prevalence by Sentinel Groups, Taungoo (HSS 2016-2020)

Region: Magway Region

Sentinel site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Magway	√	√		√	√	√
Pakokku	√	√		√	√	√

Sentinel site: Magway

Table 81. Basic characteristics of sentinel groups (Magway, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	102	26%	27	24%	36	36%	51	53%	8	5%
	≥25 yr	298	75%	86	76%	64	64%	45	47%	142	95%
Urban/Rural	Urban	399	100%	108	96%	47	47%	86	90%	48	32%
	Rural	1	0%	5	4%	53	53%	10	10%	102	68%
Marital Status	Currently married	399	100%	58	51%	49	49%	28	29%	88	59%
	Not currently married	1	0%	55	49%	51	51%	68	71%	62	41%
Sex	Female	400	100%	113	100%	0	0%	0	0%	61	41%
	Male	0	0%	0	0%	100	100%	96	100%	89	59%
FSW type	Direct			82	73%						
	Indirect			31	27%						
MSM type	Apwint							6	6%		
	Apone							12	13%		
	Tha Nge							78	81%		
TB status	AFB Negative									46	31%
	AFB Positive									87	58%
	Extrapulmonary									17	11%
Gravida	Primipara	172	43%								
	Multipara	228	57%								
Source of serum	Aids STD Public					92	92%				
	GP					1	1%				
	NGOs					7	7%				
	Other Source					0	0%				

Table 82. Distribution of age by sentinel groups (Magway, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.7	28	28.1	29.3	17	49
FSW	31	30	29.4	32.6	18	57
Male STI patients	28.8	26	27.1	30.5	16	52
MSM/TGW	25.2	24	23.8	26.7	16	46
New TB patients	48.8	49	46.3	51.2	18	86

Table 83. Distribution of age at initiating risk behaviours by sentinel groups (Magway, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23.2	22	22.5	23.9	17	31
MSM/TGW	21.7	21	21	22.5	16	34

Table 84. Duration with at risk behavior by sentinel groups (Magway, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	7.8	7	6.6	8.9	0	29
MSM/TGW	3.5	2	2.4	4.5	0	22

Table 85. HIV test results by sentinel groups and age groups (Magway, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	102r	0	0	298	2	0.7	400	2	0.5
FSW	27	1	3.7	86	3	3.5	113	4	3.5
Male STI patients	36	1	2.8	64	8	12.5	100	9	9
MSM/TGW	51	4	7.8	45	7	15.6	96	11	11.5
New TB patients	8	0	0	142	6	4.2	150	6	4

Table 86. VDRL test results by sentinel groups and age groups (Magway, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	102	1	1	298	0	0	400	1	0.3
FSW	27	2	7.4	86	1	1.2	113	3	2.7
Male STI patients	36	10	27.8	64	15	23.4	100	25	25
MSM/TGW	51	0	0	45	2	4.4	96	2	2.1

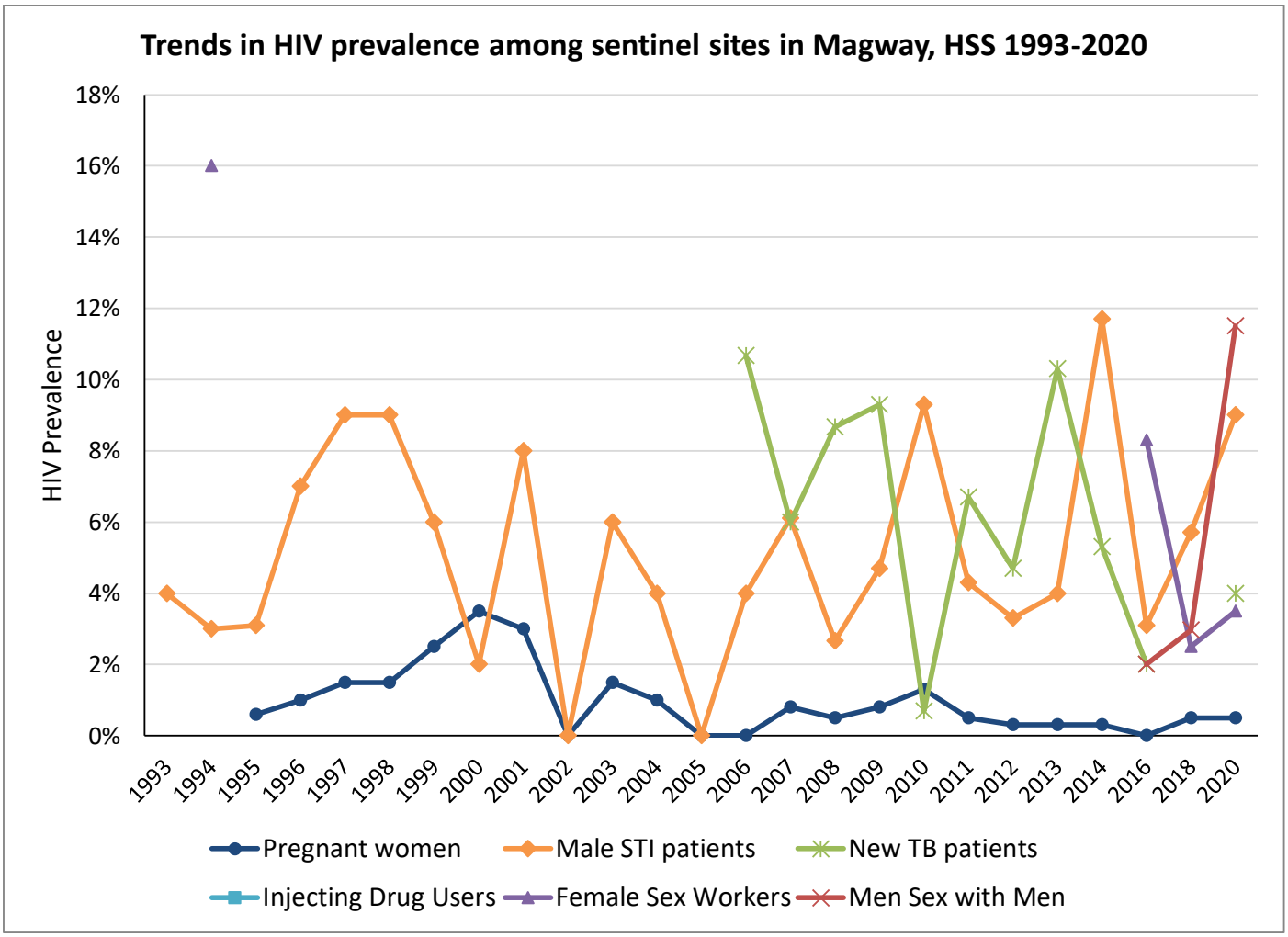


Figure 14. Trends of HIV prevalence by Sentinel Groups, Magway (HSS 1993-2020)

Sentinel Site: Pakokku

Table 87. Basic characteristics of sentinel groups (Pakokku, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	105	26%	80	44%	22	22%	61	41%	16	11%
	≥25 yr	295	74%	100	56%	78	78%	89	59%	134	89%
Urban/Rural	Urban	397	99%	178	99%	66	66%	134	89%	73	49%
	Rural	3	1%	2	1%	34	34%	16	11%	77	51%
Marital Status	Currently married	399	100%	87	48%	48	48%	81	54%	18	12%
	Not currently married	1	0%	93	52%	52	52%	69	46%	132	88%
Sex	Female	400	100%	180	100%	0	0%	0	0%	52	35%
	Male	0	0%	0	0%	100	100%	150	100%	98	65%
FSW type	Direct			179	99%						
	Indirect			1	1%						
MSM type	Apwint							4	3%		
	Apone							3	2%		
	Tha Nge							143	95%		
TB status	AFB Negative									5	3%
	AFB Positive									87	58%
	Extrapulmonary									58	39%
Gravida	Primipara	150	38%								
	Multipara	250	63%								
Source of serum	Aids STD Public					27	27%				
	GP					73	73%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 88. Distribution of age by sentinel groups (Pakokku, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	29.2	29	28.6	29.8	16	43
FSW	27.4	25	26.2	28.7	18	53
Male STI patients	31.4	29	29.5	33.3	18	60
MSM/TGW	29.3	28	27.7	30.8	18	62
New TB patients	49.4	51	46.6	52.2	16	89

Table 89. Distribution of age at initiating risk behaviours by sentinel groups (Pakokku, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.6	19	19.8	21.3	14	45
MSM/TGW	21.8	20	20.9	22.7	13	43

Table 90. Duration with at risk behavior by sentinel groups (Pakokku, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.9	5	6	7.8	0	28
MSM/TGW	7.4	5	6.2	8.6	0	42

Table 91. HIV test results by sentinel groups and age groups (Pakokku, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	105	0	0	295	1	0.3	400	1	0.3
FSW	80	8	10	100	15	15	180	23	12.8
Male STI patients	22	0	0	78	0	0	100	0	0
MSM/TGW	61	9	14.8	89	15	16.9	150	24	16
New TB patients	16	0	0	134	9	6.7	150	9	6

Table 92. VDRL test results by sentinel groups and age groups (Pakokku, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	105	0	0	295	2	0.7	400	2	0.5
FSW	80	9	11.3	100	3	3	180	12	6.7
Male STI patients	22	9	40.9	78	11	14.1	100	20	20
MSM/TGW	61	1	1.6	89	2	2.2	150	3	2

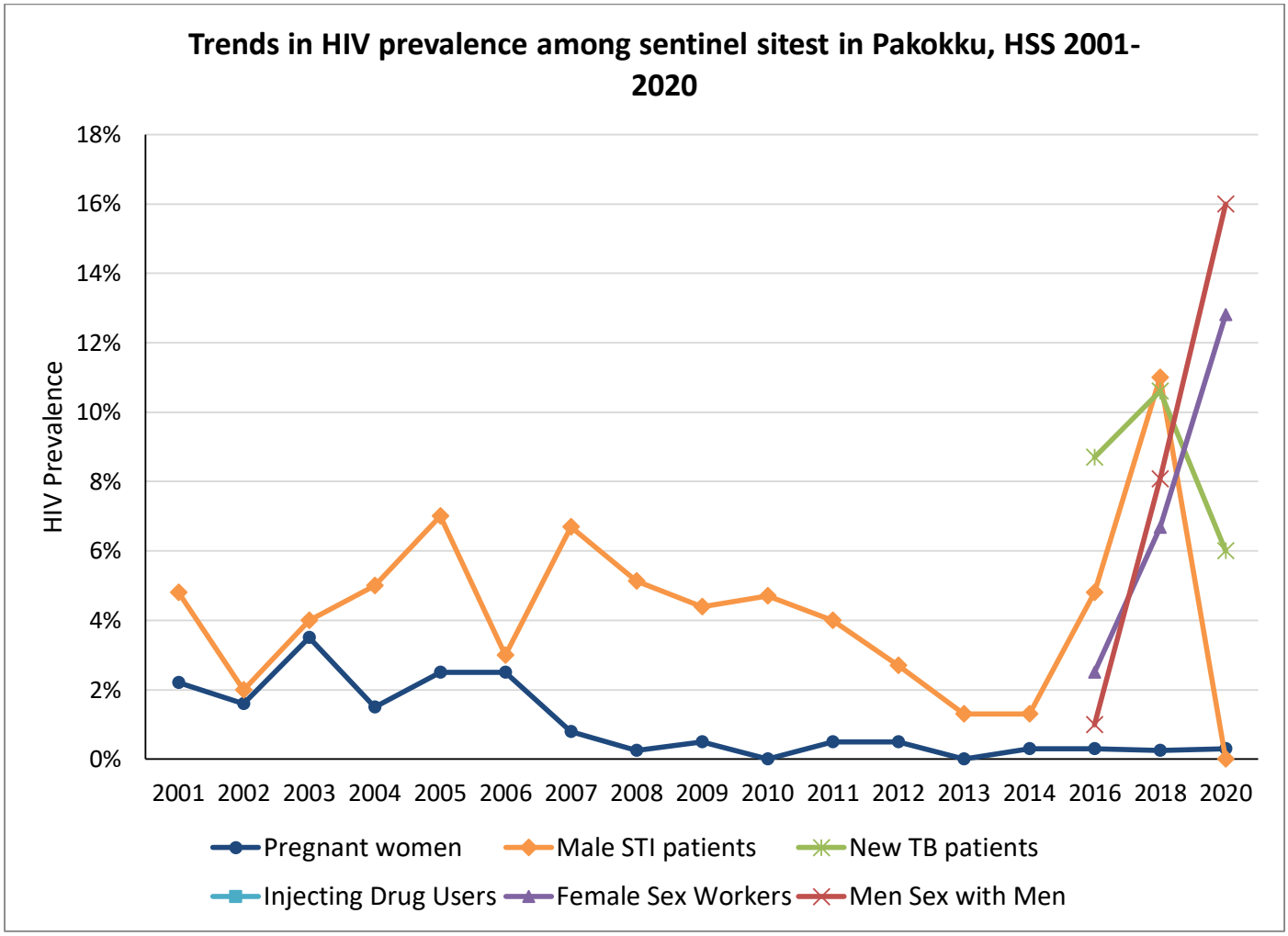


Figure 15. Trends of HIV prevalence by Sentinel Groups, Pakokku (HSS 2001-2016)

Region: Mandalay Region

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Mandalay	√	√	√	√	√	√
Meiktila	√	√		√	√	√
Myingyan	√	√		√	√	√
Nyaung-U	√	√		√	√	√
Pyinoolwin	√	√	√	√	√	√

Sentinel Site: Mandalay

Table 93. Basic characteristics of sentinel groups (Mandalay, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	121	30%	74	31%	29	29%	111	56%	21	14%	52	33%
	≥25 yr	279	70%	166	69%	71	71%	89	45%	129	86%	108	68%
Urban/ Rural	Urban	287	72%	187	78%	77	77%	184	92%	145	97%	153	96%
	Rural	113	28%	53	22%	23	23%	16	8%	5	3%	7	4%
Marital Status	Currently married	400	100%	115	48%	51	51%	24	12%	93	62%	72	45%
	Not currently married	0	0%	125	52%	49	49%	176	88%	57	38%	88	55%
Sex	Female	400	100%	240	100%	0	0%	0	0%	55	37%	2	1%
	Male	0	0%	0	0%	100	100%	200	100%	95	63%	158	99%
FSW type	Direct			138	57%								
	Indirect			102	43%								
MSM type	Apwint							11	6%				
	Apone							65	33%				
	Tha Nge							124	62%				
TB status	AFB Negative									36	24%		
	AFB Positive									73	49%		
	Extra-pulmonary									41	27%		
Gravida	Primipara	187	47%										
	Multipara	213	53%										
Source of serum	Aids STD Public					100	100%						
	GP					0	0%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 94. Distribution of age by sentinel groups (Mandalay, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.4	28	27.8	29	17	46
FSW	29.7	28	28.7	30.8	18	51
Male STI patients	29.9	28	28.1	31.8	16	66
MSM/TGW	25.6	24	24.6	26.5	18	49
New TB patients	41.6	40	39.3	44	15	76
PWID	28.5	27	27.4	29.6	18	52

Table 94. Distribution of age at initiating risk behaviours by sentinel groups (Mandalay, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	22.5	20	21.7	23.3	14	45
MSM/TGW	19	18	18.5	19.5	14	36
PWID	24.3	24	23.5	25.1	15	40

Table 95. Duration with at risk behavior by sentinel groups (Mandalay, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	7.2	6	6.5	8	0	27
MSM/TGW	6.5	4	5.7	7.4	0	30
PWID	4.2	3	3.7	4.6	0	16

Table 96. HIV test results by sentinel groups and age groups (Mandalay, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	121	0	0	279	5	1.8	400	5	1.3
FSW	74	0	0	166	3	1.8	240	3	1.3
Male STI patients	29	4	13.8	71	15	21.1	100	19	19
MSM/TGW	111	7	6.3	89	16	18	200	23	11.5
New TB patients	21	1	4.8	129	10	7.8	150	11	7.3
PWID	52	1	1.9	108	2	1.9	160	3	1.9

Table 97. VDRL test results by sentinel groups and age groups (Mandalay, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	121	1	0.8	279	0	0	400	1	0.3
FSW	74	9	12.2	166	15	9	240	24	10
Male STI patients	29	19	65.5	71	39	54.9	100	58	58
MSM/TGW	111	19	17.1	89	17	19.1	200	36	18
PWID	52	0	0	108	0	0	160	0	0

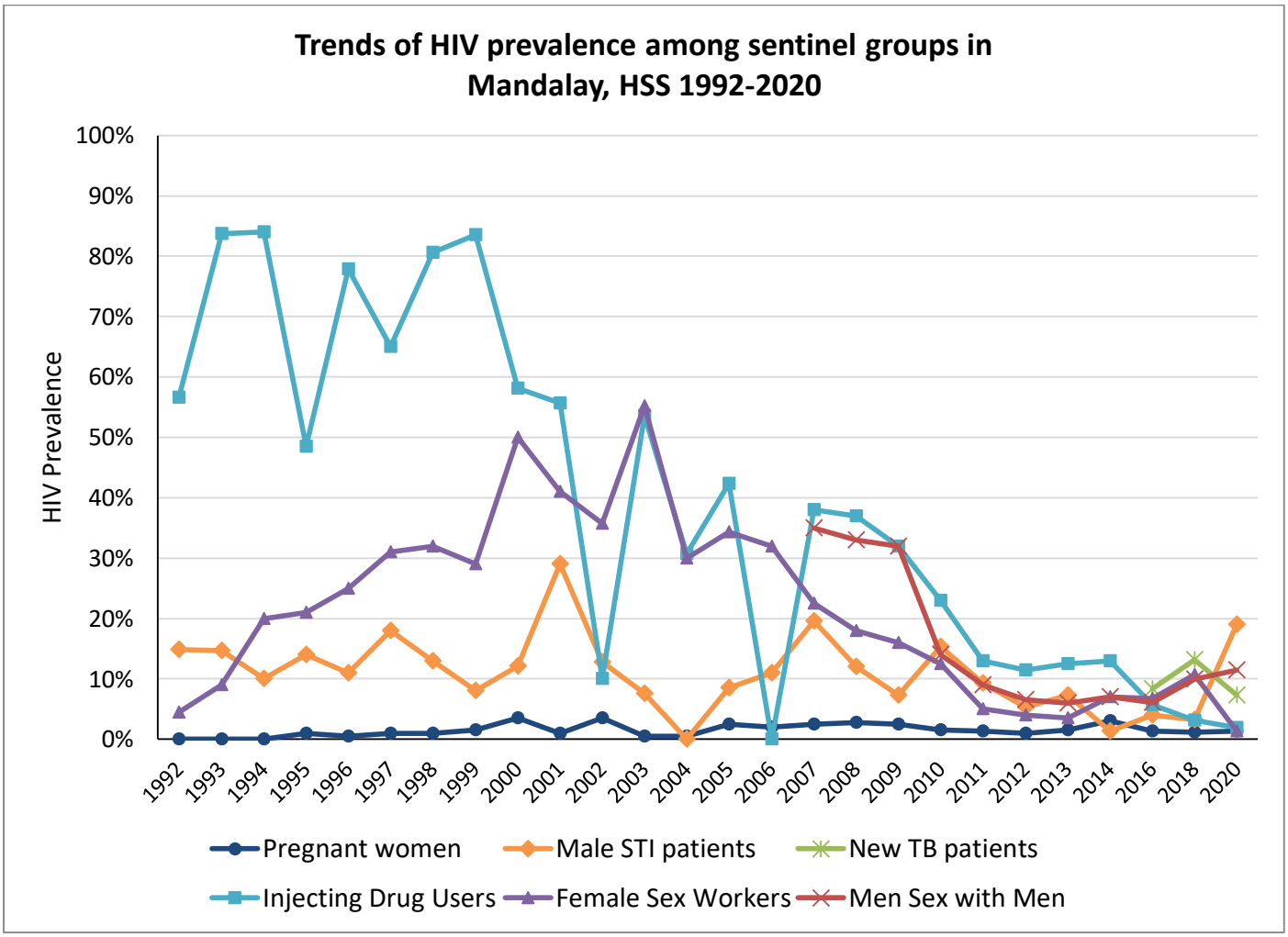


Figure 16. Trends of HIV prevalence by Sentinel Groups, Mandalay (HSS 1992-2020)

Sentinel Site: Meiktila

Table 98. Basic characteristics of sentinel groups (Meiktila, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	137	34%	40	33%	16	16%	54	54%	11	10%
	≥25 yr	263	66%	80	67%	84	84%	46	46%	94	90%
Urban/ Rural	Urban	147	37%	86	72%	77	77%	72	72%	59	56%
	Rural	253	63%	34	28%	23	23%	28	28%	46	44%
Marital Status	Currently married	399	100%	67	56%	65	65%	15	15%	53	50%
	Not currently married	1	0%	53	44%	35	35%	85	85%	52	50%
Sex	Female	400	100%	120	100%	0	0%	0	0%	35	33%
	Male	0	0%	0	0%	100	0%	100	100%	70	67%
FSW type	Direct			22	18%						
	Indirect			98	82%						
MSM type	Apwint							20	20%		
	Apone							31	31%		
	Tha Nge							49	49%		
TB status	AFB Negative									36	34%
	AFB Positive									68	65%
	Extrapulmonary									1	1%
Gravida	Primipara	208	52%								
	Multipara	192	48%								
Source of serum	Aids STD Public					74	74%				
	GP					14	14%				
	NGOs					1	1%				
	Other Source					11	11%				

Table 99. Distribution of age by sentinel groups (Meiktila, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.9	28	27.3	28.5	15	48
FSW	28.9	29	27.6	30.2	18	46
Male STI patients	32.8	32	31.2	34.4	18	50
MSM/TGW	25.6	24	24.1	27	17	49
New TB patients	42.6	41	39.4	45.8	15	83

Table 100. Distribution of age at initiating risk behaviours by sentinel groups (Meiktila, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23	21	22.2	23.7	17	34
MSM/TGW	20.5	20	19.8	21.2	16	35

Table 101. Duration with at risk behavior by sentinel groups (Meiktila, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.9	5	5	6.8	0	25
MSM/TGW	5	4	4	6.1	0	27

Table 102. HIV test results by sentinel groups and age groups (Meiktila, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	137	1	0.7	263	7	2.7	400	8	2
FSW	40	3	7.5	80	6	7.5	120	9	7.5
Male STI patients	16	4	25	84	25	29.8	100	29	29
MSM/TGW	54	4	7.4	46	5	10.9	100	9	9
New TB patients	11	1	9.1	94	10	10.6	105	11	10.5

Table 103. VDRL test results by sentinel groups and age groups (Meiktila, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	137	1	0.7	263	12	4.6	400	13	3.3
FSW	40	2	5	80	0	0	120	2	1.7
Male STI patients	16	1	6.3	84	13	15.5	100	14	14
MSM/TGW	54	6	11.1	46	2	4.3	100	8	8

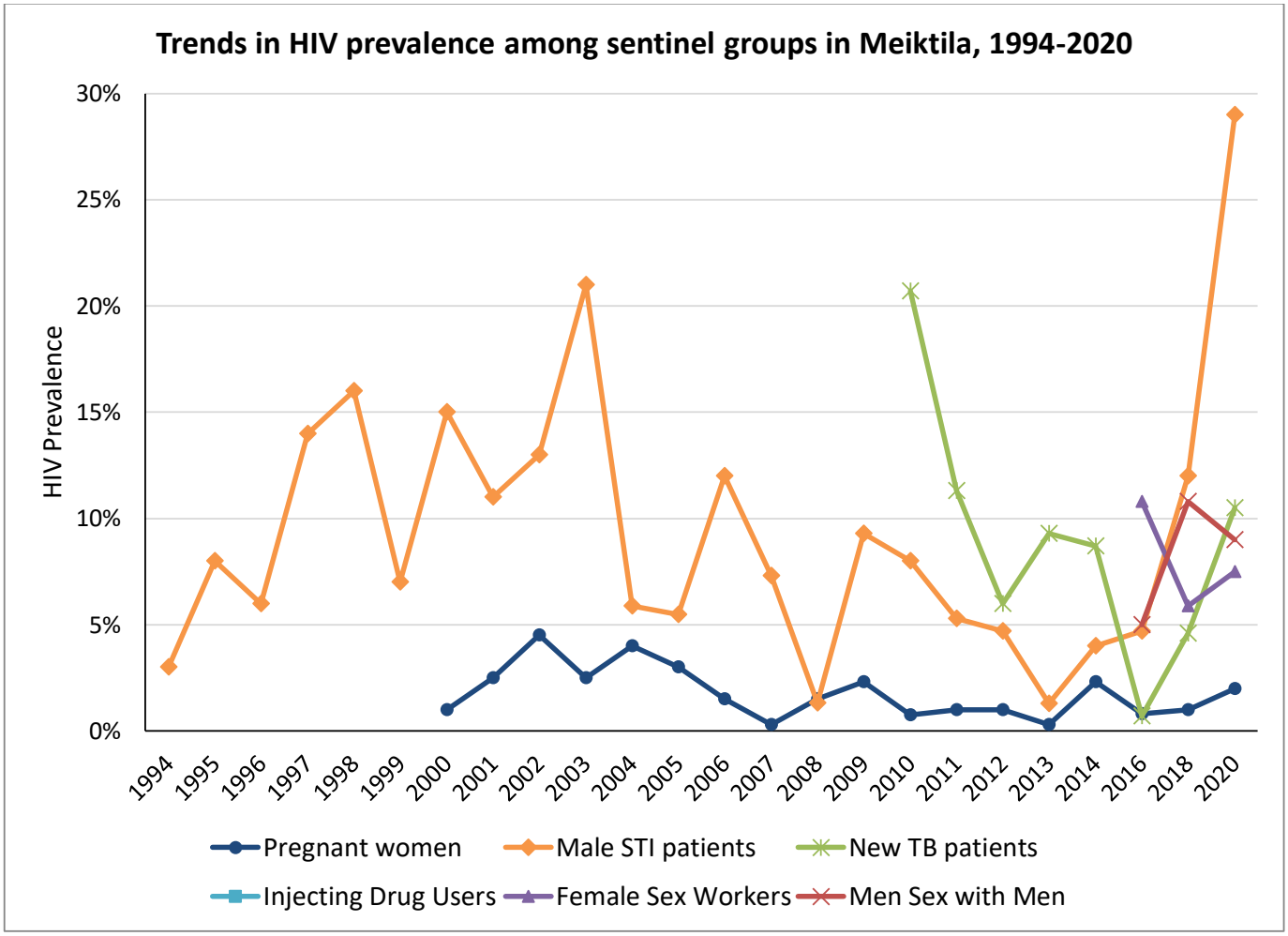


Figure 17. Trends of HIV prevalence by Sentinel Groups, Meiktila (HSS 1994-2020)

Sentinel Site: Myingyan

Table 104. Basic characteristics of sentinel groups (Myingyan, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	107	27%	35	29%	31	31%	64	64%	16	11%
	≥25 yr	293	73%	85	71%	69	69%	36	36%	134	89%
Urban/ Rural	Urban	236	59%	120	100%	67	67%	88	88%	81	54%
	Rural	164	41%	0	0%	33	33%	12	12%	69	46%
Marital Status	Currently married	400	100%	81	68%	52	52%	20	20%	86	57%
	Not currently married	0	0%	39	33%	48	48%	80	80%	64	43%
Sex	Female		100%	120	100%	0	0%	0	0%	46	31%
	Male	0	0%	0	0%	100	100%	100	100%	104	69%
FSW type	Direct			64	53%						
	Indirect			56	47%						
MSM type	Apwint							30	30%		
	Apone							6	6%		
	Tha Nge							64	64%		
TB status	AFB Negative							0	0%	84	56%
	AFB Positive									53	35%
	Extrapulmonary									13	9%
Gravida	Primipara	159	40%								
	Multipara	241	60%								
Source of serum	Aids STD Public					100	100%				
	GP					0	0%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 105. Distribution of age by sentinel groups (Myingyan, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	29.3	29	28.6	29.9	16	47
FSW	28.5	27	27.1	29.8	17	52
Male STI patients	30	28	28.2	31.8	16	57
MSM/TGW	24.1	23	22.8	25.4	16	49
New TB patients	46.1	45	43.2	49	16	87

Table 106. Distribution of age at initiating risk behaviours by sentinel groups (Myingyan, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.1	19	19.2	21	13	45
MSM/TGW	17.9	17	17.1	18.7	12	32

Table 107. Duration with at risk behavior by sentinel groups (Myingyan, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	8.3	7	7.1	9.5	0	29
MSM/TGW	6.3	5	5	7.5	0	31

Table 108. HIV test results by sentinel groups and age groups (Myingyan, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	107	0	0	293	4	1.4	400	4	1
FSW	35	0	0	85	3	3.5	120	3	2.5
Male STI patients	31	0	0	69	2	2.9	100	2	2
MSM/TGW	64	2	3.1	36	5	13.9	100	7	7
New TB patients	16	2	12.5	134	7	5.2	150	9	6

Table 109. VDRL test results by sentinel groups and age groups (Myingyan, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	107	0	0	293	4	1.4	400	4	1
FSW	35	3	8.6	85	4	4.7	120	7	5.8
Male STI patients	31	11	35.5	69	14	20.3	100	25	25
MSM/TGW	64	2	3.1	36	3	8.3	100	5	5

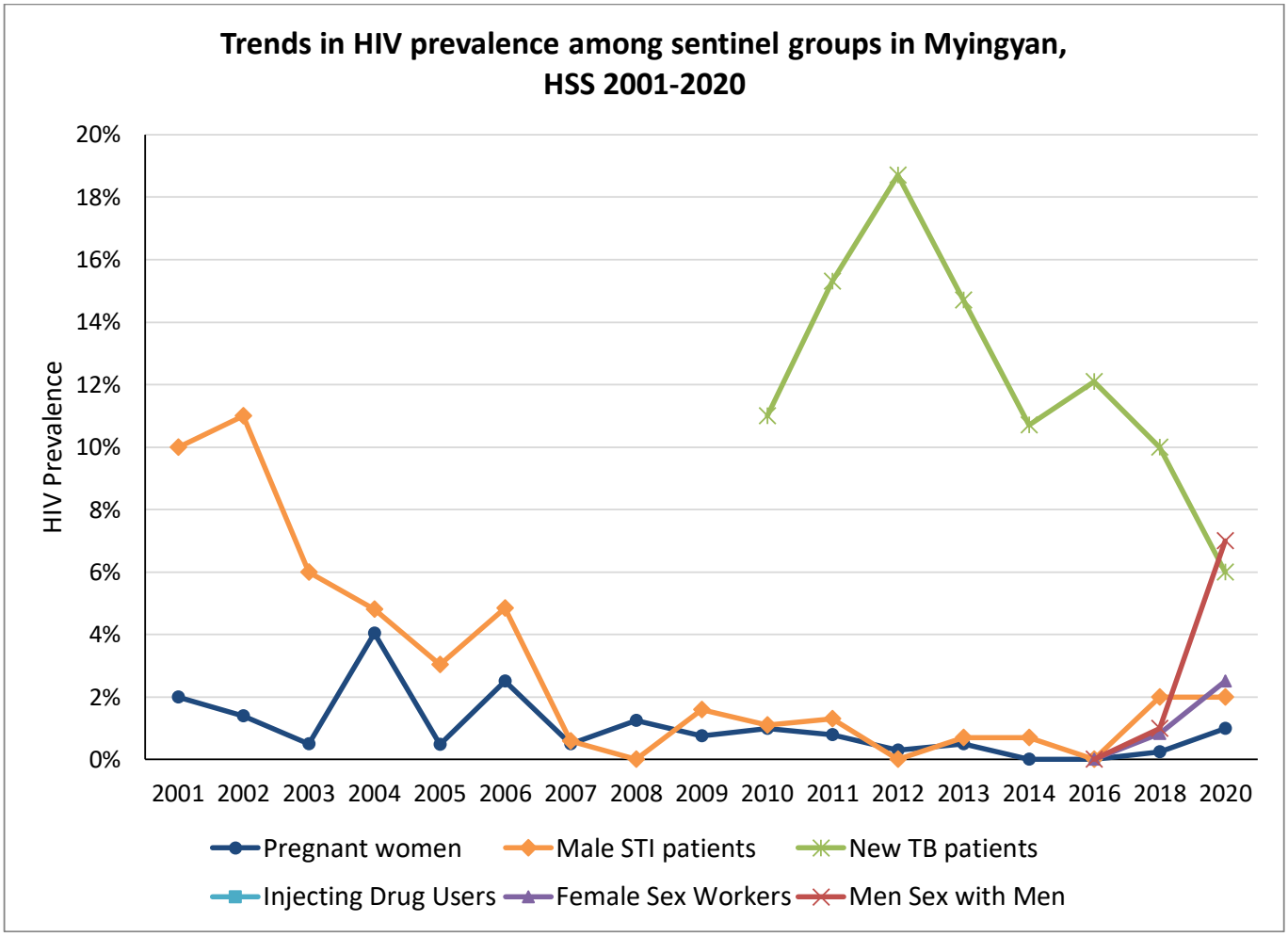


Figure 18. Trends in HIV prevalence by Sentinel Groups, Myingyan (HSS 2001-2020)

Sentinel Site: Nyaung-U

Table 110. Basic characteristics of sentinel groups (Nyaung-U, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	106	27%	18	36%	8	18%	8	35%	9	6%
	≥25 yr	294	74%	32	64%	36	82%	15	65%	141	94%
Urban/Rural	Urban	283	71%	46	92%	42	95%	22	96%	150	100%
	Rural	117	29%	4	8%	2	5%	1	4%	0	0%
Marital Status	Currently married	400	100%	43	86%	26	59%	2	9%	86	57%
	Not currently married	0	0%	7	14%	18	41%	21	91%	64	43%
Sex	Female	400	100%	50	100%	0	0%	0	0%	61	41%
	Male	0	0%	0	0%	44	100%	23	100%	89	59%
FSW type	Direct			3	6%						
	Indirect			47	94%						
MSM type	Apwint							14	61%		
	Apone							8	35%		
	Tha Nge							1	4%		
TB status	AFB Negative									36	24%
	AFB Positive									94	63%
	Extrapulmonary									20	13%
Gravida	Primipara	197	49%								
	Multipara	203	51%								
Source of serum	Aids STD Public					18	41%				
	GP					26	59%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 111. Distribution of age by sentinel groups (Nyaung-U, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.9	29	28.3	29.5	15	47
FSW	29.1	27	26.5	31.6	17	49
Male STI patients	32.8	31	29.5	36	17	75
MSM/TGW	30.4	30	27.1	33.7	20	49
New TB patients	48.4	50	46	50.8	15	86

Table 112. Distribution of age at initiating risk behaviours by sentinel groups (Nyaung-U, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.9	20	19.7	22.1	16	35
MSM/TGW	16.4	15	14.7	18	12	25

Table 113. Duration with at risk behavior by sentinel groups (Nyaung-U, HSS 2020)

Sentinel Group	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	8.2	8	6.6	9.8	0	21
MSM/TGW	14	10	10.4	17.6	1	35

Table 114. HIV test results by sentinel groups and age groups (Nyaung-U, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	106	0	0	294	1	0.3	400	1	0.3
FSW	18	0	0	32	0	0	50	0	0
Male STI patients	8	0	0	36	3	8.3	44	3	6.8
MSM/TGW	8	1	12.5	15	0	0	23	1	4.3
New TB patients	9	1	11.1	141	6	4.3	150	7	4.7

Table 115. VDRL test results by sentinel groups and age groups (Nyaung-U, HSS 2020)

Sentinel Group	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	106	0	0	294	0	0	400	0	0
FSW	18	0	0	32	0	0	50	0	0
Male STI patients	8	3	37.5	36	13	36.1	44	16	36.4
MSM/TGW	8	0	0	15	0	0	23	0	0

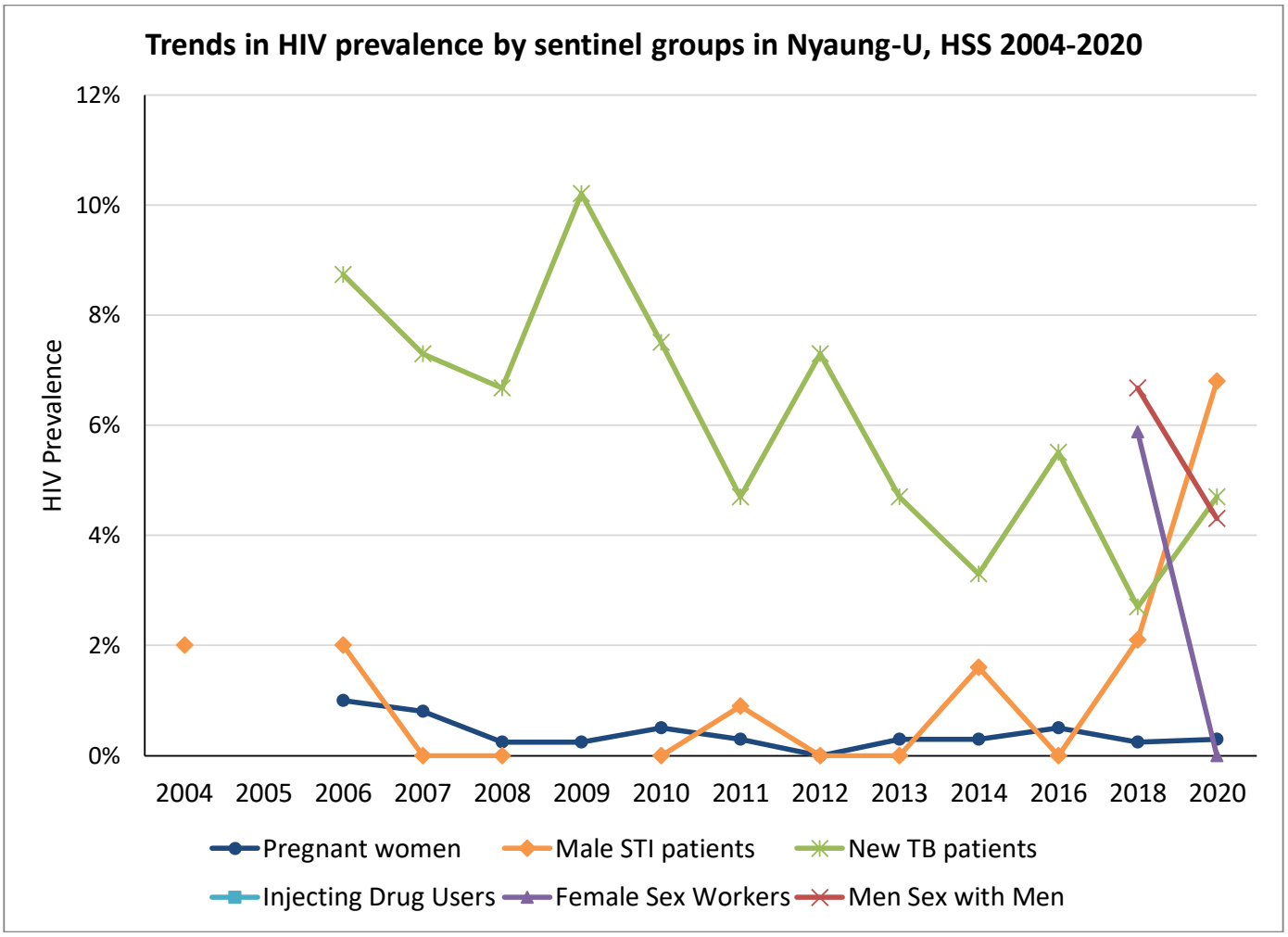


Figure 19. Trends of HIV prevalence by Sentinel Groups, Nyaung-U (HSS 2004-2020)

Sentinel Site: Pyinoolwin

Table 116. Basic characteristics of sentinel groups (Pyinoolwin, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/ TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	149	37%	36	30%	31	31%	53	53%	25	17%	124	78%
	≥25 yr	251	63%	84	70%	69	69%	47	47%	125	83%	36	23%
Urban/ Rural	Urban	217	54%	93	78%	87	87%	81	81%	74	49%	74	46%
	Rural	183	46%	27	23%	13	13%	19	19%	76	51%	86	54%
Marital Status	Currently married	397	99%	46	38%	56	56%	13	13%	77	51%	56	35%
	Not currently married	3	1%	74	62%	44	44%	87	87%	73	49%	104	65%
Sex	Female	400	100%	120	100%	0	0%	0	0%	76	51%	22	14%
	Male	0	0%	0	0%	100	100 %	100	100%	74	49%	138	86%
FSW type	Direct			67	56%								
	Indirect			53	44%								
MSM type	Apwint							40	40%				
	Apone							48	48%				
	Tha Nge							12	12%				
TB status	AFB Negative									50	33%		
	AFB Positive									69	46%		
	Extrapulmonary									31	21%		
Gravida	Primipara	204	51%										
	Multipara	196	49%										
Source of serum	Aids STD Public					90	90%						
	GP					4	4%						
	NGOs					4	4%						
	Other Source					2	2%						

Table 117. Distribution of age by sentinel groups (Pyinoolwin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.5	27	26.9	28.2	16	47
FSW	28.5	29	27.4	29.5	18	40
Male STI patients	31.5	30	29.5	33.6	16	58
MSM/TGW	24.5	23	23.1	25.8	16	55
New TB patients	38.4	35	36.1	40.8	16	85
PWID	20.9	19	19.9	21.8	15	48

Table 118. Distribution of age at initiating risk behaviours by sentinel groups (Pyinoolwin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	24.2	24	23.1	25.3	15	38
MSM/TGW	18.9	17	18	19.8	14	36
PWID	17.3	16	16.6	18	10	32

Table 119. Duration with at risk behavior by sentinel groups (Pyinoolwin, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4.2	4	3.8	4.7	1	12
MSM/TGW	5.6	5	4.8	6.4	0	28
PWID	3.5	3	3.1	4	0	18

Table 120. HIV test results by sentinel groups and age groups (Pyinoolwin, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	149	0	0	251	0	0	400	0	0
FSW	36	0	0	84	4	4.8	120	4	3.3
Male STI patients	31	7	22.6	69	37	53.6	100	44	44
MSM/TGW	53	1	1.9	47	0	0	100	1	1
New TB patients	25	0	0	125	15	12	150	15	10
PWID	124	1	0.8	36	1	2.8	160	2	1.3

Table 121. VDRL test results by sentinel groups and age groups (Pyinoolwin, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	149	2	1.3	251	3	1.2	400	5	1.3
FSW	36	1	2.8	84	4	4.8	120	5	4.2
Male STI patients	31	1	3.2	69	11	15.9	100	12	12
MSM/TGW	53	1	1.9	47	2	4.3	100	3	3
PWID	124	0	0	36	0	0	160	0	0

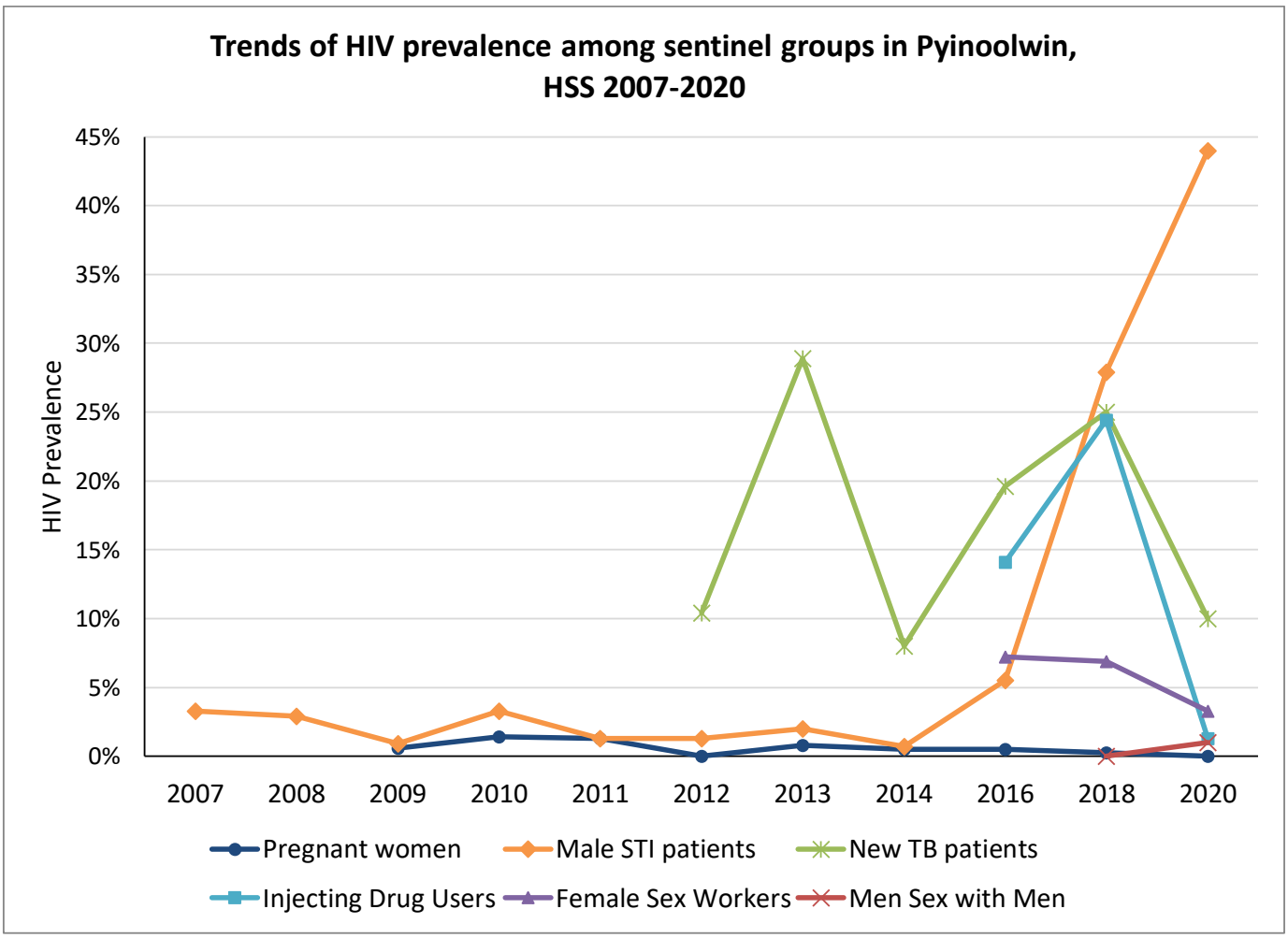


Figure 20. Trends of HIV prevalence by Sentinel Groups, Pyinoolwin (HSS 2007-2020)

Region: Tanintharyi Region

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Myeik	√	√		√	√	√
Dawei	√	√		√	√	√
Kawthoung	√	√		√	√	√

Sentinel site: Myeik

Table 122. Basic characteristics of sentinel groups (Myeik, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	124	31%	54	45%	12	26%	76	76%	26	17%
	≥25 yr	276	69%	66	55%	34	74%	24	24%	124	83%
Urban/ Rural	Urban	5	1%	106	88%	38	83%	83	83%	55	37%
	Rural	395	99%	14	12%	8	17%	17	17%	95	63%
Marital Status	Currently married	398	100%	41	34%	21	46%	11	11%	100	67%
	Not currently married	2	1%	79	66%	25	54%	89	89%	50	33%
Sex	Female	400	100%	120	100%	0	0%	0	0%	62	41%
	Male	0	0%	0	0%	46	100%	100	100%	88	59%
FSW type	Direct			52	43%						
	Indirect			68	57%						
MSM type	Apwint							37	37%		
	Apone							43	43%		
	Tha Nge							20	20%		
TB status	AFB Negative									45	30%
	AFB Positive									89	59%
	Extrapulmonary									16	11%
Gravida	Primipara	164	41%								
	Multipara	236	59%								
Source of serum	Aids STD Public					11	24%				
	GP					35	76%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 123. Distribution of age by sentinel groups (Myeik, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.9	27	27.3	28.5	18	46
FSW	27.2	26	25.8	28.5	18	53
Male STI patients	30.7	28	28	33.3	18	50
MSM/TGW	22.4	20	21.2	23.5	18	52
New TB patients	40.4	39	38	42.9	16	86

Table 124. Distribution of age at initiating risk behaviours by sentinel groups (Myeik, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21.4	20	20.5	22.2	15	44
MSM/TGW	19.3	19	18.5	20.1	14	40

Table 125. Duration with at risk behavior by sentinel groups (Myeik, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.8	4	4.9	6.7	0	28
MSM/TGW	3.1	2	2.3	3.8	0	27

Table 126. HIV test results by sentinel groups and age groups (Myeik, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	124	0	0	276	0	0	400	0	0
FSW	54	2	3.7	66	2	3	120	4	3.3
Male STI patients	12	0	0	34	0	0	46	0	0
MSM/TGW	76	0	0	24	0	0	100	0	0
New TB patients	26	0	0	124	7	5.6	150	7	4.7

Table 127. VDRL test results by sentinel groups and age groups (Myeik, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	124	0	0	276	0	0	400	0	0
FSW	54	1	1.9	66	3	4.5	120	4	3.3
Male STI patients	11	3	27.3	30	0	0	41	3	7.3
MSM/TGW	76	0	0	24	0	0	100	0	0

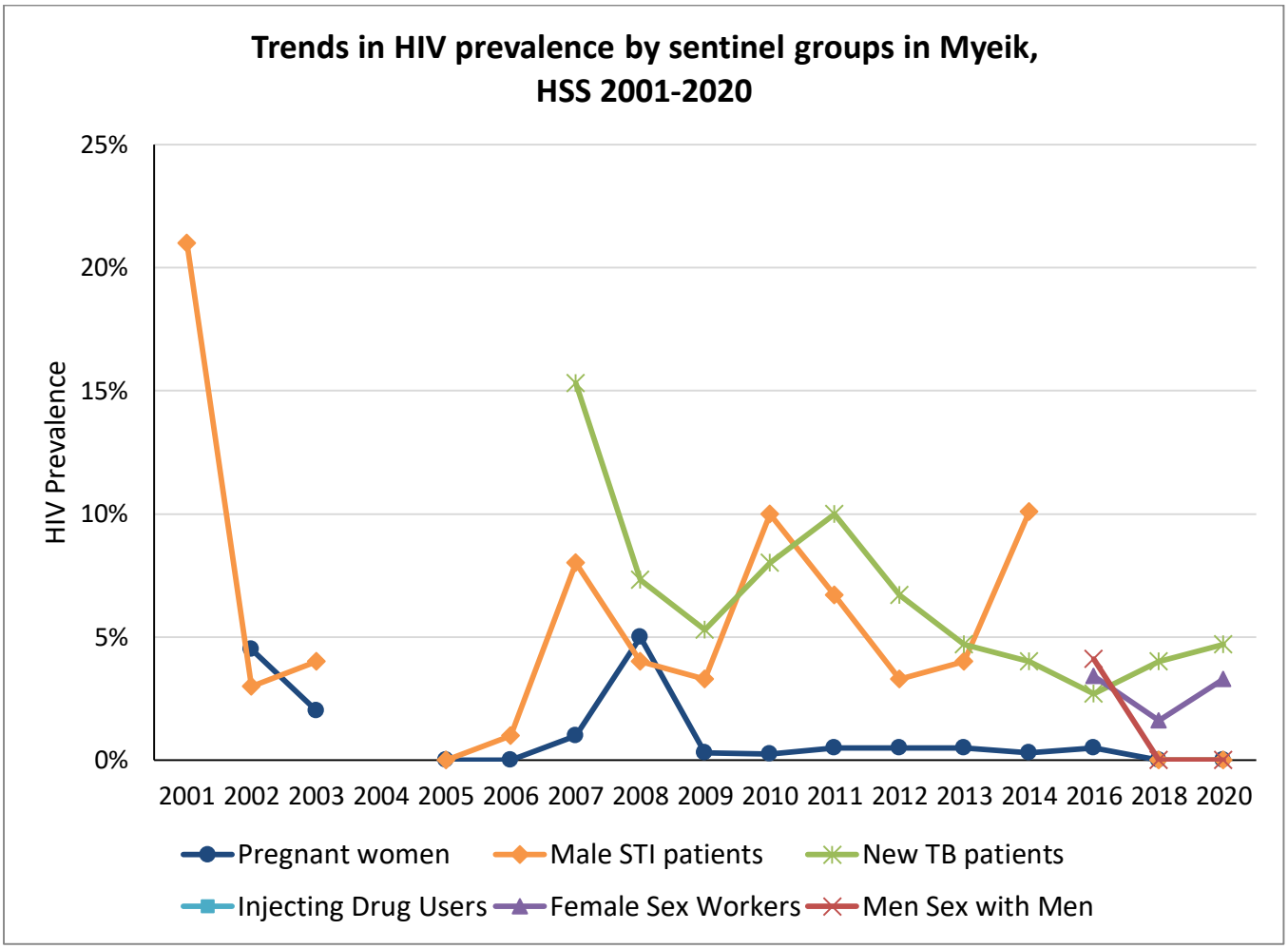


Figure 21. Trends of HIV prevalence by Sentinel Groups, Myeik (HSS 2001-2020)

Sentinel Site: Dawei

Table 128. Basic characteristics of sentinel groups (Dawei, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	135	31%	34	46%	33	33%	47	45%	22	15%
	≥25 yr	298	69%	40	54%	67	67%	57	55%	128	85%
Urban/Rural	Urban	198	46%	74	100%	56	56%	53	51%	67	45%
	Rural	235	54%	0	0%	44	44%	51	49%	83	55%
Marital Status	Currently married	433	100%	29	39%	43	43%	15	14%	112	75%
	Not currently married			45	61%	57	57%	89	86%	38	25%
Sex	Female	433	100%	74	100%					51	34%
	Male					100	100%	104	100%	99	66%
FSW type	Direct			18	24%						
	Indirect			56	76%						
MSM type	Apwint							14	13%		
	Apone							5	5%		
	Tha Nge							85	82%		
TB status	AFB Negative									71	47%
	AFB Positive									77	51%
	Extrapulmonary									2	1%
Gravida	Primipara	153	35%								
	Multipara	280	65%								
Source of serum	Aids STD Public					100	100%				
	GP										
	NGOs										
	Other Source										

Table 129. Distribution of age by sentinel groups (Dawei, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	28	27.5	28.6	16	45
FSW	27.3	25	25.8	28.8	18	43
Male STI patients	30.4	29	28.6	32.2	16	56
MSM/TGW	26.7	26	25.3	28	16	41
New TB patients	46.4	46	43.6	49.1	18	85

Table 130. Distribution of age at initiating risk behaviours by sentinel groups (Dawei, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23.3	21	22.1	24.5	16	36
MSM/TGW	20.9	20	20.3	21.5	15	31

Table 131. Duration with at risk behavior by sentinel groups (Dawei, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4	4	3.5	4.5	1	11
MSM/TGW	5.8	5	4.8	6.8	0	21

Table 132. HIV test results by sentinel groups and age groups (Dawei, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	135	0	0	298	1	0.3	433	1	0.2
FSW	34	1	2.9	40	2	5	74	3	4.1
Male STI patients	33	5	15.2	67	16	23.9	100	21	21
MSM/TGW	47	2	4.3	57	8	14	104	10	9.6
New TB patients	22	1	4.5	128	11	8.6	150	12	8

Table 133. VDRL test results by sentinel groups and age groups (Dawei, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	135	0	0	298	1	0.3	433	1	0.2
FSW	34	0	0	40	0	0	74	0	0
Male STI patients	33	16	48.5	67	25	37.3	100	41	41
MSM/TGW	47	4	8.5	57	5	8.8	104	9	8.7

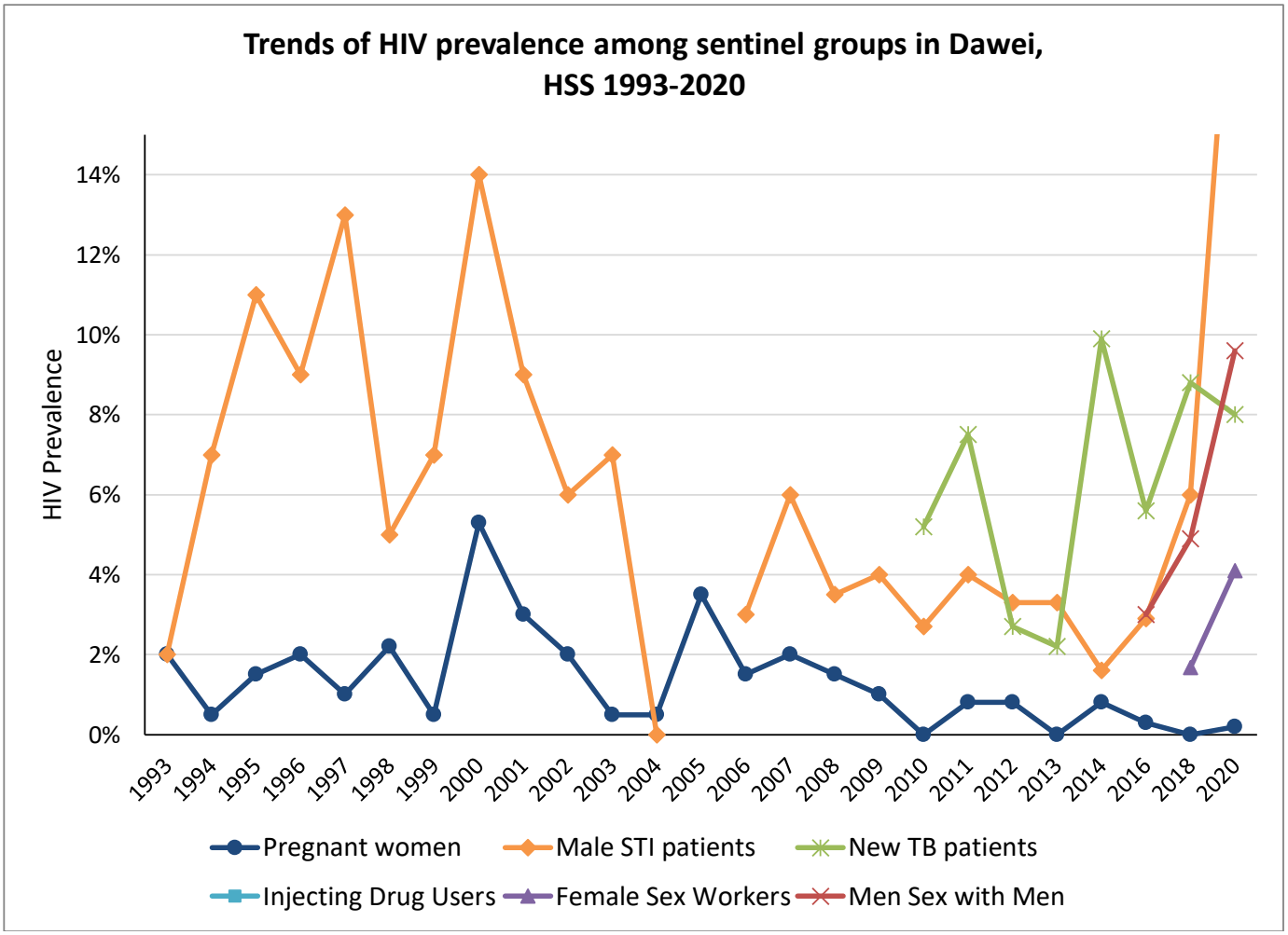


Figure 22. Trends of HIV prevalence by Sentinel Groups, Dawei (HSS 1993-2020)

Sentinel Site: Kawthoung

Table 134. Basic characteristics of sentinel groups (Kawthoung, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	123	41%	31	35%	41	41%	45	43%	6	10%
	≥25 yr	175	59%	57	65%	60	59%	59	57%	53	90%
Urban/ Rural	Urban	170	57%	83	94%	97	96%	88	85%	29	49%
	Rural	128	43%	5	6%	4	4%	16	15%	30	51%
Marital Status	Currently married	298	100%	55	63%	44	44%	35	34%	43	73%
	Not currently married			33	38%	57	56%	69	66%	16	27%
Sex	Female	298	100%	88	100%					10	17%
	Male					101	100%	104	100%	49	83%
FSW type	Direct			85	97%						
	Indirect			3	3%						
MSM type	Apwint							23	22%		
	Apone							81	78%		
	Tha Nge							0	0%		
TB status	AFB Negative									26	44%
	AFB Positive									33	56%
	Extrapulmonary									0	0%
Gravida	Primipara	142	48%								
	Multipara	156	52%								
Source of serum	Aids STD Public					0	0%				
	GP					0	0%				
	NGOs					101	100%				
	Other Source					0	0%				

Table 135. Distribution of age by sentinel groups (Kawthoung, HSS 2020)

Characteristics	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	26.8	26	26	27.5	16	49
FSW	29.7	30	27.9	31.6	18	50
Male STI patients	30.2	30	28	32.3	17	60
MSM/TGW	27.5	26	26	29	18	48
New TB patients	44.7	41	40.6	48.8	20	80

Table 136. Distribution of age at initiating risk behaviours by sentinel groups (Kawthoung, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	28.6	28	26.9	30.3	18	48
MSM/TGW	25.8	25	24.4	27.1	17	47

Table 137. Duration with at risk behavior by sentinel groups (Kawthoung, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	1.2	1	0.9	1.4	0	5
MSM/TGW	1.7	1	1.1	2.4	0	25

Table 138. HIV test results by sentinel groups and age groups (Kawthoung, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	123	0	0	175	1	0.6	298	1	0.3
FSW	31	0	0	57	1	1.8	88	1	1.1
Male STI patients	41	0	0	60	2	3.3	101	2	2
MSM/TGW	45	0	0	59	0	0	104	0	0
New TB patients	6	0	0	53	12	22.6	59	12	20.3

Table 139. VDRL test results by sentinel groups and age groups (Kawthoung, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	123	0	0	175	0	0	298	0	0
FSW	31	0	0	57	2	3.5	88	2	2.3
Male STI patients	41	0	0	60	2	3.3	101	2	2
MSM/TGW	45	0	0	59	3	5.1	104	3	2.9

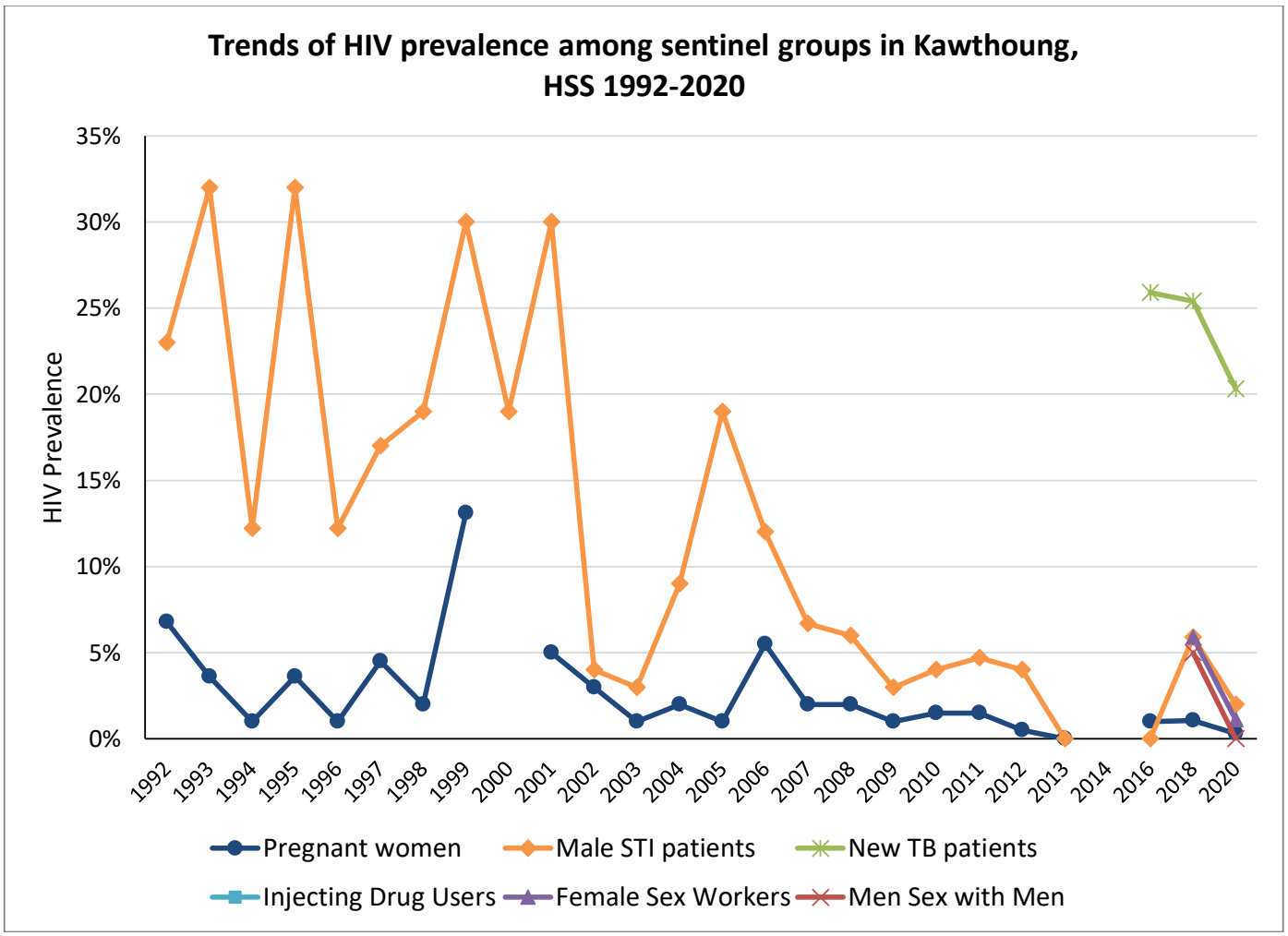


Figure 23. Trends of HIV prevalence by Sentinel Groups, Kawthoung (HSS 1992-2020)

Region: Sagaing Region

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Monywa	√	√	√	√	√	√
Kale	√	√	√	√	√	√
Shwebo	√	√		√	√	√

Sentinel Site: Monywa

Table 140. Basic characteristics of sentinel groups (Monywa, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	104	26%	48	40%	32	31%	53	53%	16	11%	28	18%
	≥25 yr	296	74%	73	60%	70	69%	47	47%	134	89%	132	83%
Urban/ Rural	Urban	388	97%	114	94%	60	59%	68	68%	92	61%	148	93%
	Rural	12	3%	7	6%	42	41%	32	32%	58	39%	12	8%
Marital Status	Currently married	391	98%	55	45%	29	28%	33	33%	91	61%	99	62%
	Not currently married	9	2%	66	55%	73	72%	67	67%	59	39%	61	38%
Sex	Female	400	100%	121	100%	0	0%	0	0%	46	31%	1	1%
	Male	0	0%	0	0%	102	100 %	100	100%	104	69%	159	99%
FSW type	Direct			37	31%								
	Indirect			84	69%								
MSM type	Apwint							23	23%				
	Apone							32	32%				
	Tha Nge							45	45%				
TB status	AFB Negative									47	31%		
	AFB Positive									74	49%		
	Extrapulmonary									29	19%		
Gravida	Primipara	218	55%										
	Multipara	182	46%										
Source of serum	Aids STD Public					102	100 %						
	GP					0	0%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 141. Distribution of age by sentinel groups (Monywa, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.8	29	28.2	29.4	16	43
FSW	26.4	26	25.3	27.6	16	48
Male STI patients	29.7	28	28.1	31.4	18	58
MSM/TGW	25.8	23	24.3	27.2	16	49
New TB patients	44.9	44	42.2	47.6	18	86
PWID	32.2	32	31	33.5	18	62

Table 142. Distribution of age at initiating risk behaviours by sentinel groups (Monywa, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23.9	25	23	24.8	15	36
MSM/TGW	15.8	16	15.3	16.2	10	20
PWID	27.5	27	26.4	28.6	17	50

Table 143. Duration with at risk behavior by sentinel groups (Monywa, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	2.5	2	2.1	3	0	17
MSM/TGW	10	7	8.4	11.6	1	34
PWID	4.7	4	4.3	5.1	0	14

Table 144. HIV test results by sentinel groups and age groups (Monywa, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	104	0	0	296	0	0	400	0	0
FSW	48	0	0	73	6	8.2	121	6	5
Male STI patients	32	5	15.6	70	29	41.4	102	34	33.3
MSM/TGW	53	2	3.8	47	3	6.4	100	5	5
New TB patients	16	0	0	134	8	6	150	8	5.3
PWID	28	1	3.6	132	22	16.7	160	23	14.4

Table 145. VDRL test results by sentinel groups and age groups (Monywa, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	104	0	0	296	0	0	400	0	0
FSW	48	2	4.2	73	11	15.1	121	13	10.7
Male STI patients	32	8	25	70	20	28.6	102	28	27.5
MSM/TGW	53	0	0	47	0	0	100	0	0
PWID	28	0	0	132	0	0	160	0	0

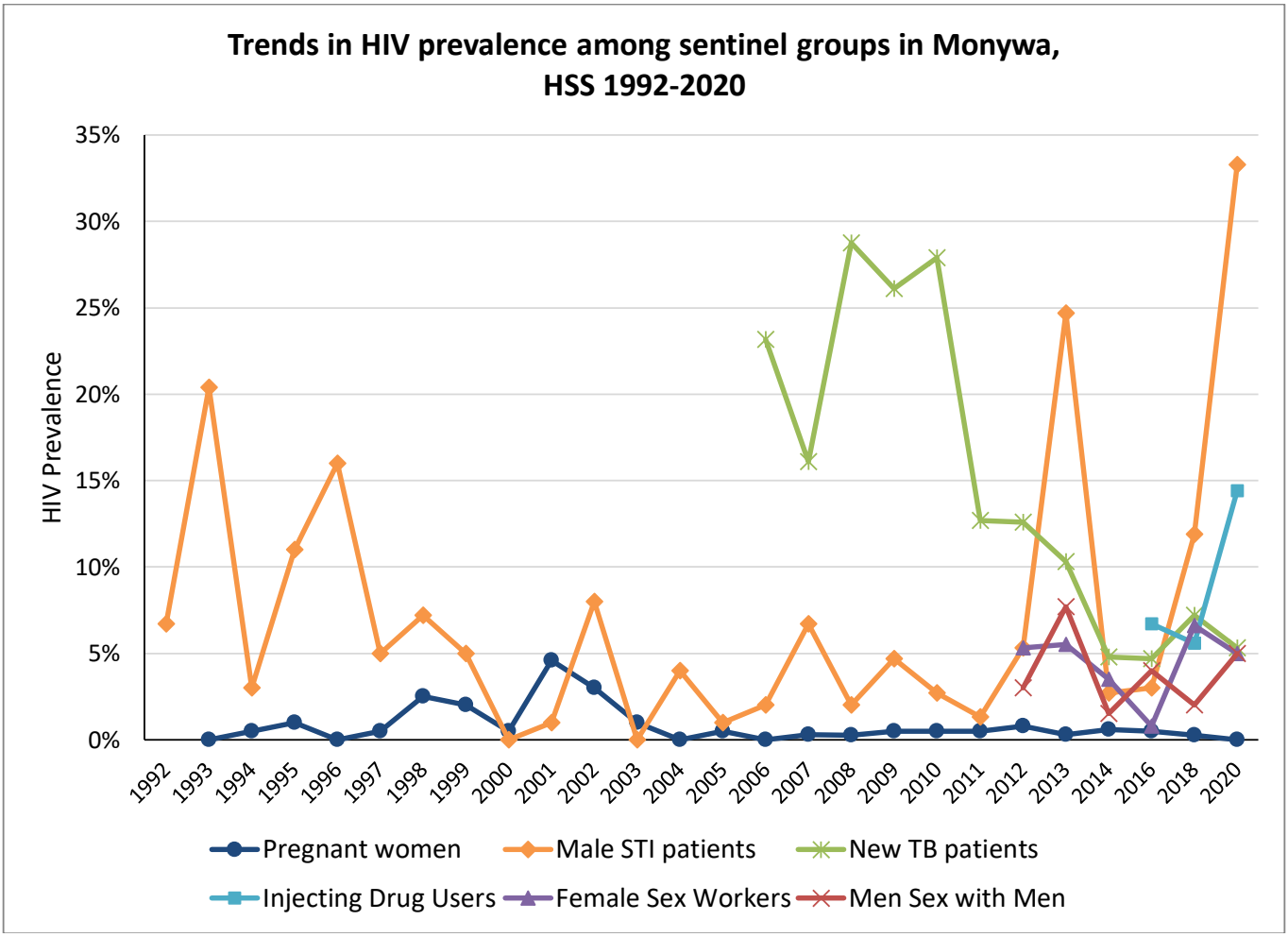


Figure 24. Trends of HIV prevalence by sentinel groups in Monywa, HSS 1992-2020

Sentinel site: Kale

Table 146. Basic characteristics of sentinel groups (Kale, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	106	27%	29	33%	9	39%	31	31%	33	22%	21	18%
	≥25 yr	294	74%	60	67%	14	61%	69	69%	117	78%	99	83%
Urban/ Rural	Urban	396	99%	77	87%	18	78%	74	74%	55	37%	42	35%
	Rural	4	1%	12	13%	5	22%	26	26%	95	63%	78	65%
Marital Status	Currently married	400	100%	23	26%	11	48%	25	25%	97	65%	51	43%
	Not currently married			66	74%	12	52%	75	75%	53	35%	69	57%
Sex	Female	400	100%	89	100%					42	28%	4	3%
	Male					23	100%	100	100%	108	72%	116	97%
FSW type	Direct			51	57%								
	Indirect			38	43%								
MSM type	Apwint							4	4%				
	Apone							5	5%				
	Tha Nge							91	91%				
TB status	AFB Negative									76	51%		
	AFB Positive									74	49%		
	Extrapulmonary									0	0%		
Gravida	Primipara	128	32%										
	Multipara	272	68%										
Source of serum	Aids STD Public					6	26%						
	GP					17	74%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 147. Distribution of age by sentinel groups (Kale, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.2	28	27.6	28.8	16	46
FSW	28.2	27	26.7	29.7	18	52
Male STI patients	27.1	25	24.5	29.7	19	42
MSM/TGW	29	27	27.4	30.5	18	52
New TB patients	41.1	39	38.3	43.8	15	81
PWID	32	30	30.3	33.6	18	67

Table 148. Distribution of age at initiating risk behaviours by sentinel groups (Kale, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21.8	20	20.8	22.7	15	38
MSM/TGW	22.7	20	21.5	23.9	16	40
PWID	27.6	27	25.9	29.3	12	67

Table 149. Duration with at risk behavior by sentinel groups (Kale, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.4	5	5.3	7.5	0	27
MSM/TGW	6.3	5	5.2	7.3	0	20
PWID	4.4	3	3.6	5.2	0	20

Table 150. HIV test results by sentinel groups and age groups (Kale, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	106	0	0	294	0	0	400	0	0
FSW	29	0	0	60	1	1.7	89	1	1.1
Male STI patients	9	0	0	14	3	21.4	23	3	13
MSM/TGW	31	1	3.2	69	2	2.9	100	3	3
New TB patients	33	2	6.1	117	13	11.1	150	15	10
PWID	21	6	28.6	99	29	29.3	120	35	29.2

Table 151. VDRL test results by sentinel groups and age groups (Kale, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	106	0	0	294	0	0	400	0	0
FSW	29	0	0	60	5	8.3	89	5	5.6
Male STI patients	9	2	22.2	14	3	21.4	23	5	21.7
MSM/TGW	31	1	3.2	69	0	0	100	1	1
PWID	21	0	0	99	0	0	120	0	0

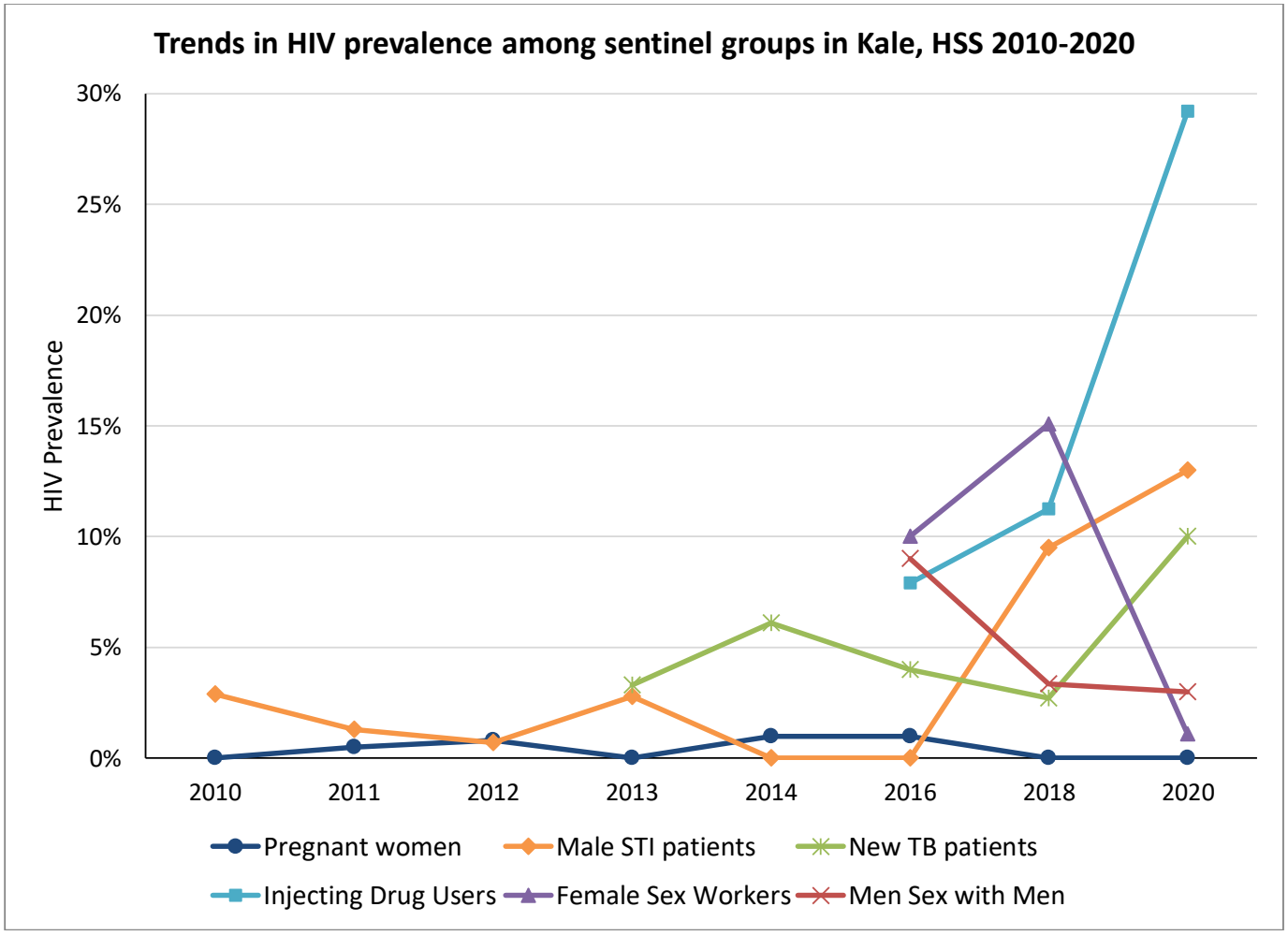


Figure 25. Trends of HIV prevalence by sentinel groups in Kale, HSS 2010-2020

Sentinel site: Shwebo

Table 152. Basic characteristics of sentinel groups (Shwebo, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	118	30%	47	39%	36	36%	75	75%	12	8%
	≥25 yr	282	71%	73	61%	64	64%	25	25%	136	92%
Urban/ Rural	Urban	339	85%	118	98%	70	70%	67	67%	48	32%
	Rural	61	15%	2	2%	30	30%	33	33%	100	68%
Marital Status	Currently married	400	100%	44	37%	60	60%	14	14%	111	75%
	Not currently married	0	0%	76	63%	40	40%	86	86%	37	25%
Sex	Female	400	100%	120	100%	0	0%	0	0%	37	25%
	Male	0	0%	0	0%	100	100%	100	100%	111	75%
FSW type	Direct			56	47%						
	Indirect			64	53%						
MSM type	Apwint							15	15%		
	Apone							4	4%		
	Tha Nge							81	81%		
TB status	AFB Negative									78	53%
	AFB Positive									68	46%
	Extrapulmonary									2	1%
Gravida	Primipara	171	43%								
	Multipara	229	57%								
Source of serum	Aids STD Public					48	48%				
	GP					29	29%				
	NGOs					22	22%				
	Other Source					1	1%				

Table 153. Distribution of age by sentinel groups (Shwebo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28	28	27.4	28.5	15	43
FSW	29.1	27	27.3	31	18	64
Male STI patients	29.8	28	28	31.6	18	68
MSM/TGW	23.1	20	21.7	24.5	18	52
New TB patients	46.1	43	43.4	48.9	15	85

Table 154. Distribution of age at initiating risk behaviours by sentinel groups (Shwebo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	24.5	23	23.4	25.6	17	41
MSM/TGW	19.3	18	18.3	20.3	15	42

Table 155. Duration with at risk behavior by sentinel groups (Shwebo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4.7	3	3.7	5.6	0	29
MSM/TGW	3.8	2	3	4.5	0	18

Table 156. HIV test results by sentinel groups and age groups (Shwebo, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	118	1	0.8	282	2	0.7	400	3	0.8
FSW	47	0	0	73	2	2.7	120	2	1.7
Male STI patients	36	1	2.8	64	1	1.6	100	2	2
MSM/TGW	75	0	0	25	3	12	100	3	3
New TB patients	12	1	8.3	136	11	8.1	148	12	8.1

Table 157. VDRL test results by sentinel groups and age groups (Shwebo, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	118	0	0	282	0	0	400	0	0
FSW	47	1	2.1	73	4	5.5	120	5	4.2
Male STI patients	36	5	13.9	64	3	4.7	100	8	8
MSM/TGW	75	3	4	25	3	12	100	6	6

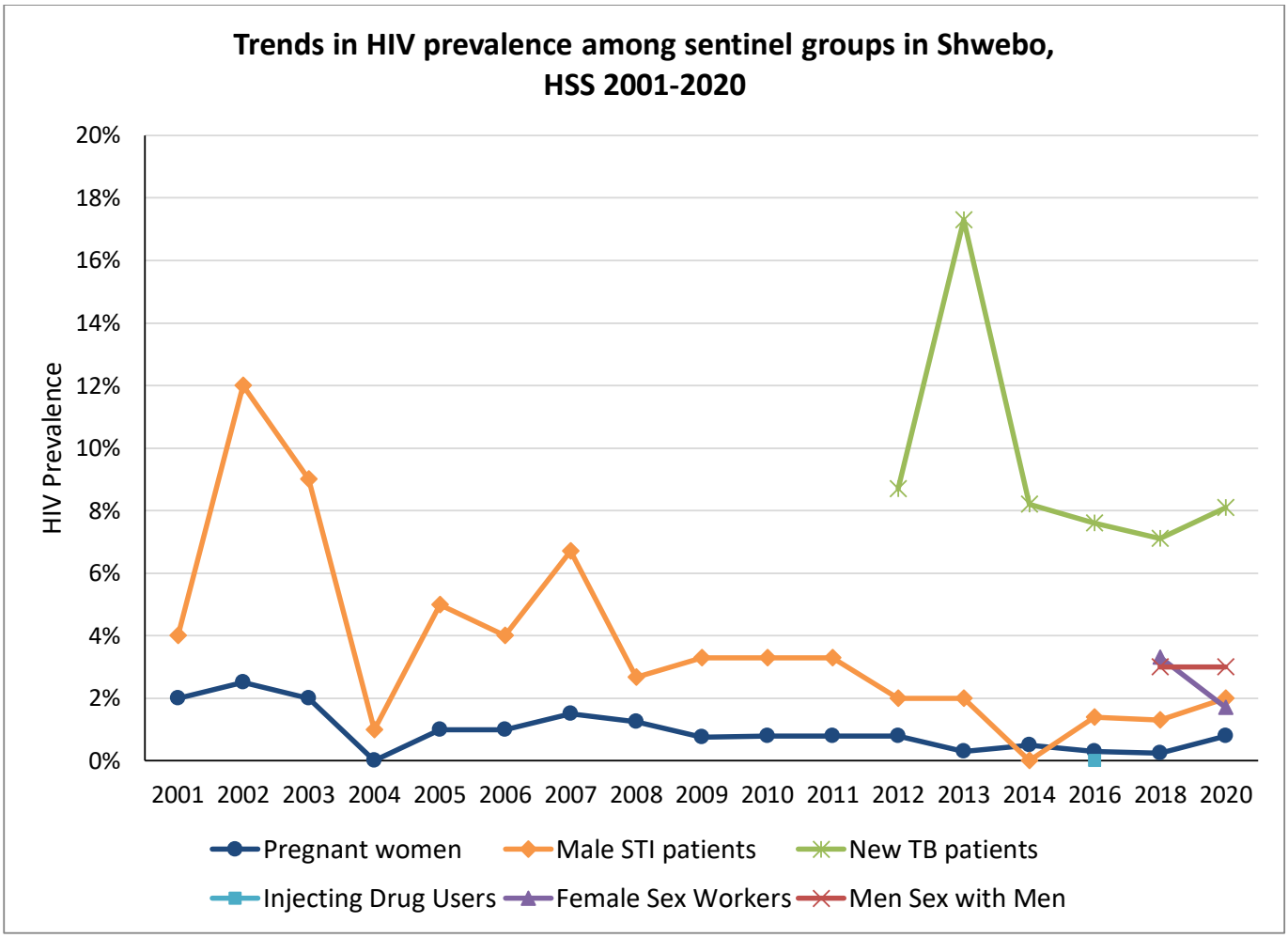


Figure 26. Trends of HIV prevalence by sentinel groups in Shwebo, HSS 2001-2020

Region: Yangon Region

Sentinel site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Yangon	√	√	√	√	√	√

Sentinel Site: Yangon

Table 158. Basic characteristics of sentinel groups (Yangon, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	123	30%	95	40%	26	26%	97	49%	24	16%	24	15%
	≥25 yr	281	70%	145	60%	74	74%	103	52%	125	84%	136	85%
Urban/ Rural	Urban	297	74%	224	93%	83	83%	177	89%	138	93%	158	99%
	Rural	107	26%	16	7%	17	17%	23	12%	11	7%	2	1%
Marital Status	Currently married	404	100%	97	40%	66	66%	21	11%	109	73%	70	44%
	Not currently married	0	0%	143	60%	34	34%	179	90%	40	27%	90	56%
Sex	Female	404	100%	240	100%	0	0%	0	0%	50	34%	2	1%
	Male	0	0%	0	0%	100	100%	200	100%	99	66%	158	99%
FSW type	Direct			162	68%								
	Indirect			78	33%								
MSM type	Apwint							21	11%				
	Apone							113	56%				
	Tha Nge							66	33%				
TB status	AFB Negative									60	40%		
	AFB Positive									89	60%		
	Extrapulmonary												
Gravida	Primipara	195	48%										
	Multipara	209	52%										
Source of serum	Aids STD Public					100	100%						
	GP					0	0%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 159. Distribution of age by sentinel groups (Yangon, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.2	28	27.6	28.9	15	45
FSW	29.9	27	28.7	31.2	18	56
Male STI patients	34.6	30	31.8	37.4	16	70
MSM/TGW	26.5	25	25.4	27.5	18	62
New TB patients	41.6	40	39	44.2	15	88
PWID	32.8	30	31.5	34.2	19	59

Table 160. Distribution of age at initiating risk behaviours by sentinel groups (Yangon, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23.1	20	22.3	23.9	13	47
MSM/TGW	19.7	19	19.2	20.3	6	38
PWID	23.2	21	22.2	24.3	14	47

Table 161. Duration with at risk behavior by sentinel groups (Yangon, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.8	4.5	6	7.6	0	29
MSM/TGW	6.7	5	5.8	7.7	0	44
PWID	9.6	7	8.4	10.8	0	35

Table 162. HIV test results by sentinel groups and age groups (Yangon, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	123	0	0	281	0	0	404	0	0
FSW	95	3	3.2	145	11	7.6	240	14	5.8
Male STI patients	26	1	3.8	74	3	4.1	100	4	4
MSM/TGW	97	28	28.9	103	58	56.3	200	86	43
New TB patients	24	2	8.3	125	12	9.6	149	14	9.4
PWID	24	8	33.3	136	24	17.6	160	32	20

Table 163. VDRL test results by sentinel groups and age groups (Yangon, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	123	4	3.3	281	4	1.4	404	8	2
FSW	95	15	15.8	145	26	17.9	240	41	17.1
Male STI patients	26	5	19.2	74	27	36.5	100	32	32
MSM/TGW	97	21	21.6	103	43	41.7	200	64	32
PWID	24	1	4.2	136	7	5.1	160	8	5

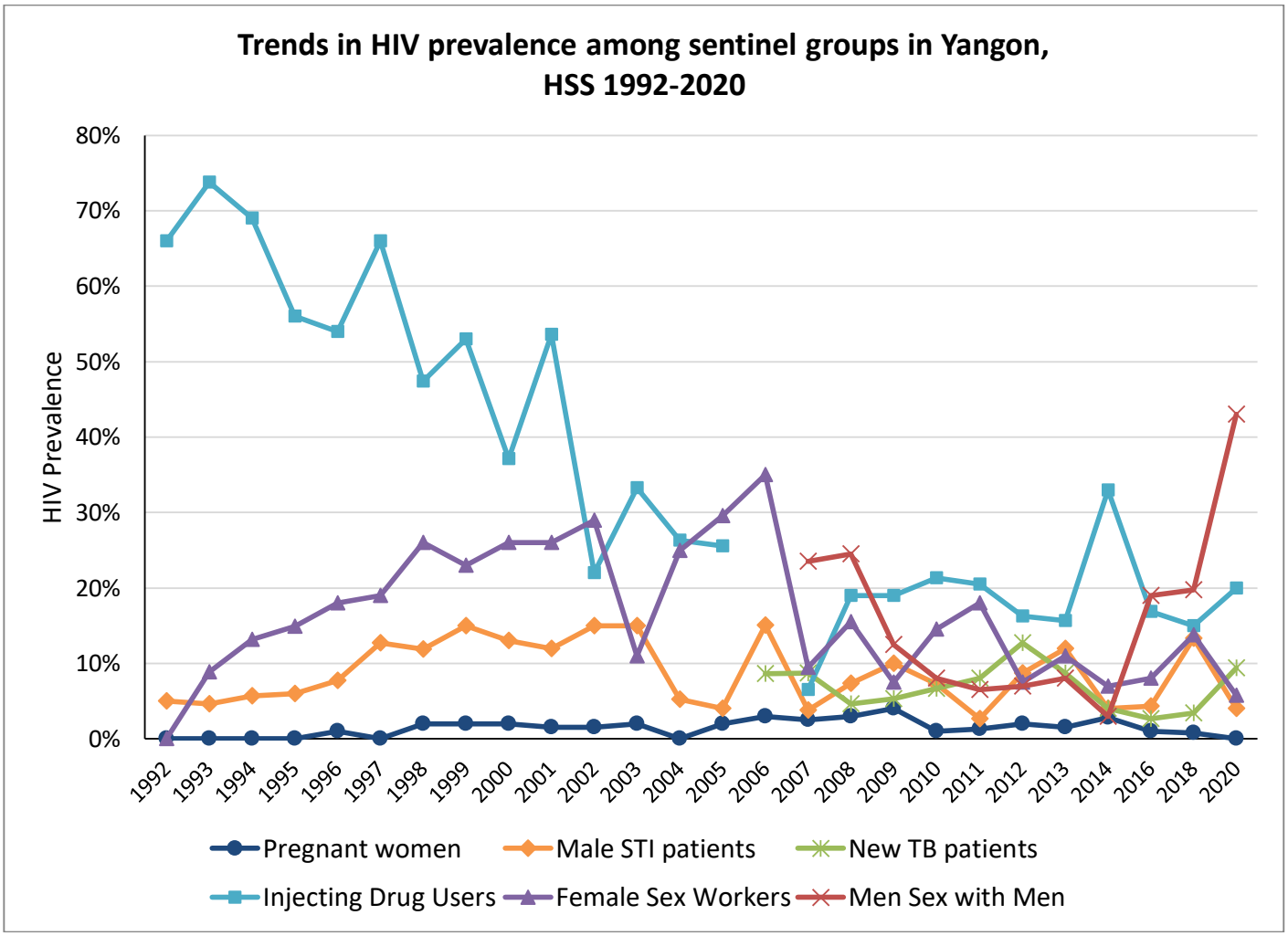


Figure 27. Trends of HIV prevalence by sentinel groups in Yangon, HSS 1992-2020

State: Chin

Sentinel Site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Hakha				√	√	√

Sentinel Site: Hakha

Table 164. Basic characteristics of sentinel groups (Hakha, HSS 2020)

Characteristics		ANC		Male STI patients		New TB patients	
		N	%	N	%	N	%
Age	<25 yr	105	26%	20	20%	8	21%
	≥25 yr	294	74%	79	80%	30	79%
Urban/Rural	Urban	398	100%	86	87%	17	45%
	Rural	1	0%	13	13%	21	55%
Marital Status	Currently married	399	100%	76	77%	27	71%
	Not currently married			23	23%	11	29%
Sex	Female	399	100%			14	37%
	Male			99	100%	24	63%
	Apone						
	Tha Nge						
TB status	AFB Negative					16	42%
	AFB Positive					12	32%
	Extrapulmonary					10	26%
Gravida	Primipara	154	39%				
	Multipara	245	61%				
Source of serum	Aids STD Public			93	94%		
	GP			6	6%		
	NGOs			0	0%		
	Other Source			0	0%		

Table 165. Distribution of age by sentinel groups (Hakha, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.8	28	28.2	29.4	17	46
Male STI patients	32.1	30	30.5	33.7	17	49
New TB patients	41	35	34.8	47.2	15	87

Table 166. HIV test results by sentinel groups and age groups (Hakha, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	105	1	1	294	0	0	399	1	0.3
Male STI patients	20	0	0	79	0	0	99	0	0
New TB patients	8	0	0	30	2	6.7	38	2	5.3

Table 167. VDRL test results by sentinel groups and age groups (Hakha, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	105	1	1	294	0	0	399	1	0.3
Male STI patients	20	0	0	79	3	3.8	99	3	3

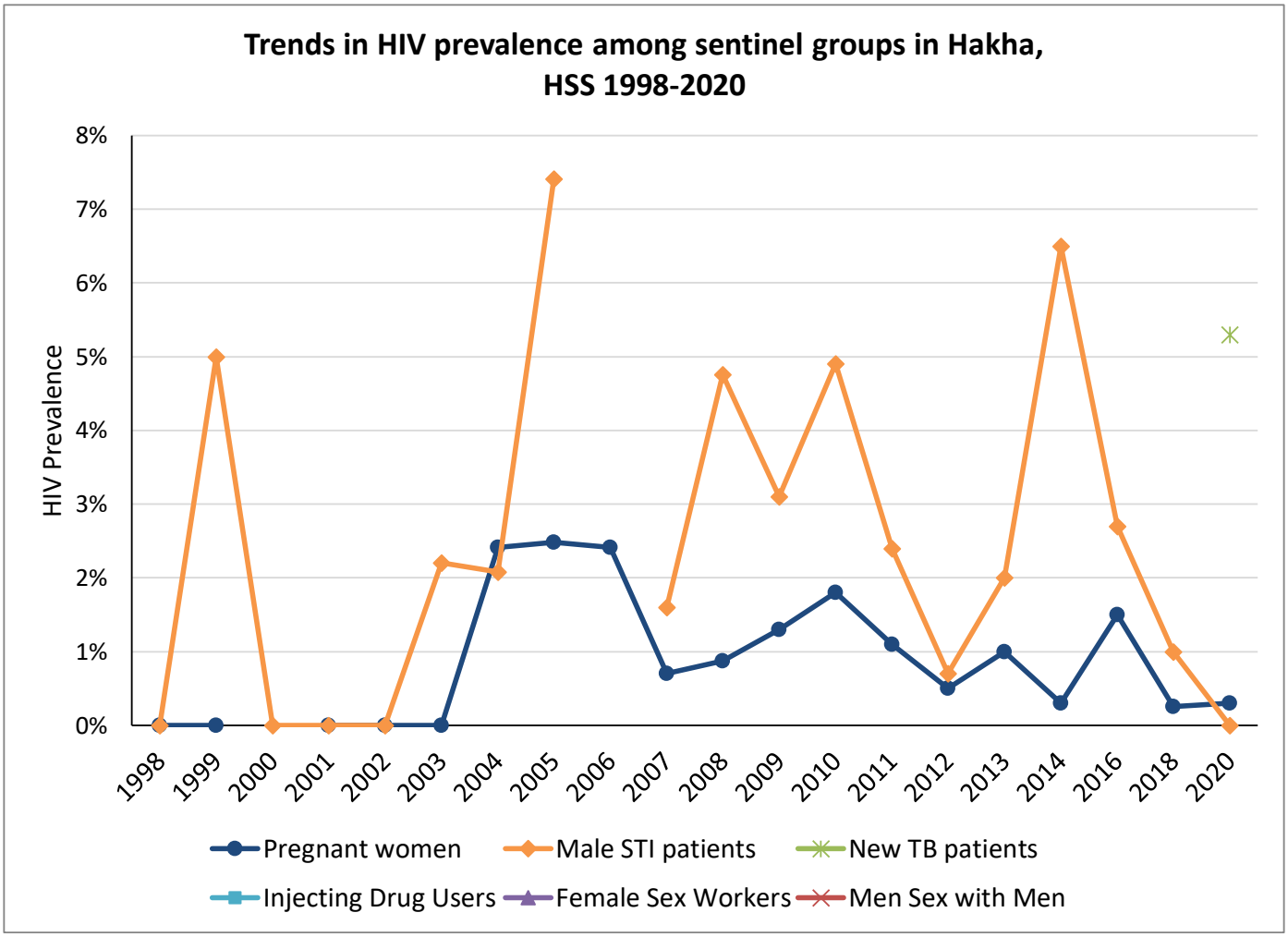


Figure 28. Trends of HIV prevalence by sentinel groups in Hakha, HSS 1998-2020

State: Kachin State

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Myitkyina	√	√	√	√	√	√
Bahmo	√	√	√	√	√	√

Sentinel Site: Myitkyina

Table 168. Basic characteristics of sentinel groups (Myitkyina, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	116	29%	46	44%	22	23%	44	44%	23	15%	32	20%
	≥25 yr	284	71%	59	56%	74	77%	56	56%	127	85%	128	80%
Urban/ Rural	Urban	149	37%	25	24%	82	85%	37	37%	13	9%	122	76%
	Rural	251	63%	80	76%	14	15%	63	63%	137	91%	38	24%
Marital Status	Currently married	400	100%	37	35%	50	52%	19	19%	124	83%	73	46%
	Not currently married	0	0%	68	65%	46	48%	81	81%	26	17%	87	54%
Sex	Female	400	100%	105	100%	0	0%	0	0%	40	27%	0	0%
	Male	0	0%	0	0%	96	100%	100	100%	110	73%	160	100 %
FSW type	Direct			31	30%								
	Indirect			74	70%								
MSM type	Apwint							5	5%				
	Apone							29	29%				
	Tha Nge							66	66%				
TB status	AFB Negative									77	51%		
	AFB Positive									71	47%		
	Extrapulmonary									2	1%		
Gravida	Primipara	166	42%										
	Multipara	234	59%										
Source of serum	Aids STD Public					96	100%						
	GP					0	0%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 169. Distribution of age by sentinel groups (Myitkyina, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.3	28	27.7	28.9	18	46
FSW	27.8	26	26.3	29.4	16	49
Male STI patients	33.3	32	31.1	35.4	18	72
MSM/TGW	27.2	26	25.7	28.8	16	52
New TB patients	40.5	38	38	43	16	84
PWID	30.4	29	29.4	31.4	18	48

Table 170. Distribution of age at initiating risk behaviours by sentinel groups (Myitkyina, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21	20	20	22	14	40
MSM/TGW	19.6	18	18.6	20.6	9	40
PWID	24	22	23	25	13	44

Table 171. Duration with at risk behavior by sentinel groups (Myitkyina, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.8	5	5.6	8	0	27
MSM/TGW	7.7	7	6.6	8.8	0	26
PWID	6.4	5	5.5	7.2	0	25

Table 172. HIV test results by sentinel groups and age groups (Myitkyina, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	116	0	0	284	0	0	400	0	0
FSW	46	5	10.9	59	22	37.3	105	27	25.7
Male STI patients	22	4	18.2	74	17	23	96	21	21.9
MSM/TGW	44	14	31.8	56	27	48.2	100	41	41
New TB patients	23	4	17.4	127	43	33.9	150	47	31.3
PWID	32	8	25	128	42	32.8	160	50	31.3

Table 173. VDRL test results by sentinel groups and age groups (Myitkyina, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	116	0	0	284	0	0	400	0	0
FSW	46	1	2.2	59	1	1.7	105	2	1.9
Male STI patients	22	4	18.2	74	16	21.6	96	20	20.8
MSM/TGW	44	4	9.1	56	3	5.4	100	7	7
PWID	32	0	0	128	0	0	160	0	0

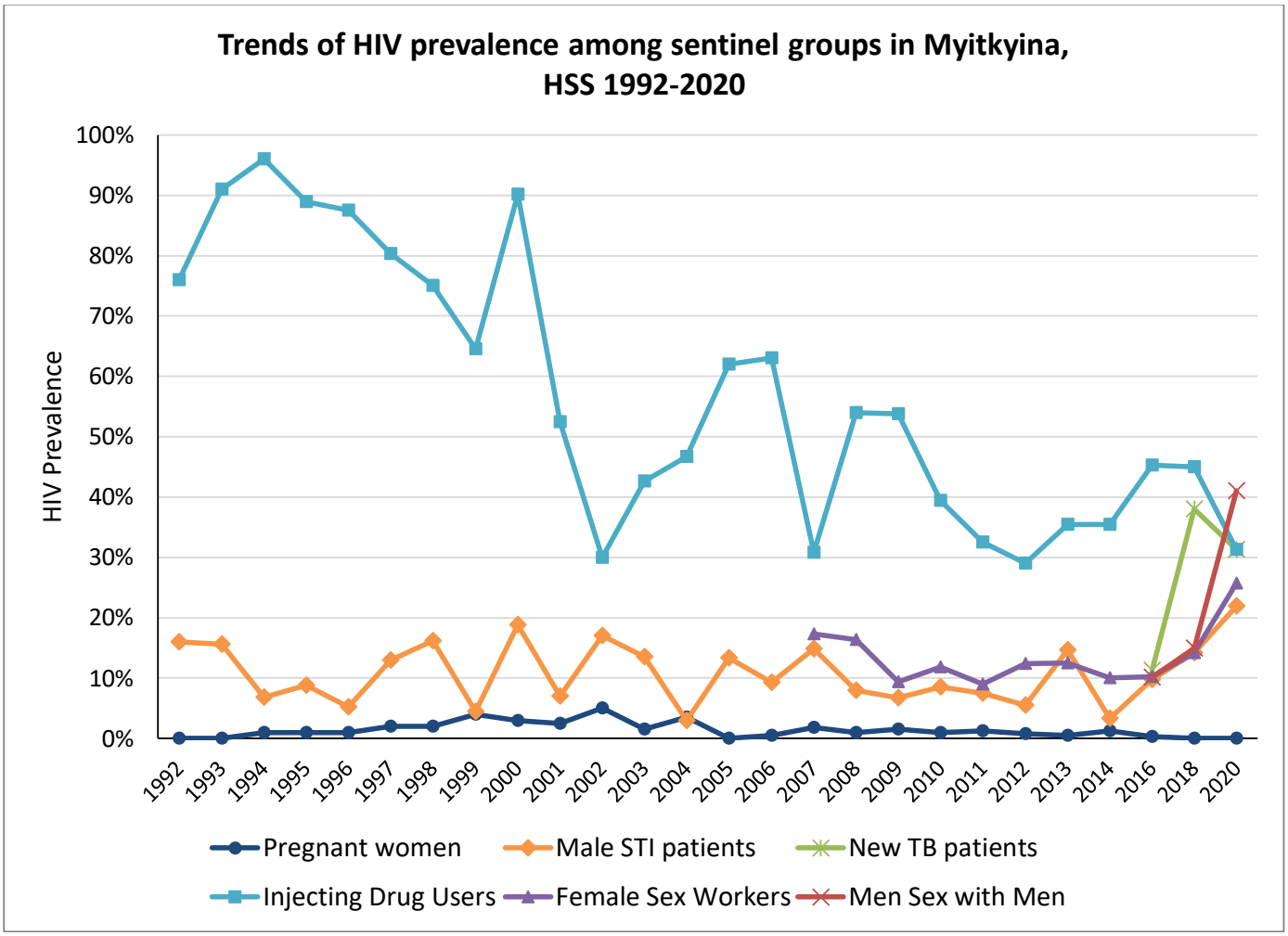


Figure 29. Trends of HIV prevalence by sentinel groups in Myitkyina, HSS 1992-2020

Sentinel Group: Bahmo

Table 174. Basic characteristics of sentinel groups (Bahmo, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	136	34%	72	60%	55	55%	85	85%	15	10%	41	33%
	≥25 yr	264	66%	48	40%	45	45%	15	15%	135	90%	85	67%
Urban/ Rural	Urban	330	83%	120	100%	83	83%	99	99%	49	33%	55	44%
	Rural	70	18%	0	0%	17	17%	1	1%	101	67%	71	56%
Marital Status	Currently married	399	100%	33	28%	33	33%	1	1%	102	68%	55	44%
	Not currently married	1	0%	87	73%	67	67%	99	99%	48	32%	71	56%
Sex	Female	400	100%	120	100%					51	34%	1	1%
	Male					100	100%	100	100%	99	66%	125	99%
FSW type	Direct			57	48%								
	Indirect			63	53%								
MSM type	Apwint							6	6%				
	Apone							15	15%				
	Tha Nge							79	79%				
TB status	AFB Negative									117	78%		
	AFB Positive									33	22%		
	Extrapulmonary												
Gravida	Primipara	170	43%										
	Multipara	230	57%										
Source of serum	Aids STD Public					51	51%						
	GP					49	49%						
	NGOs												
	Other Source												

Table 175. Distribution of age by sentinel groups (Bahmo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28	28	27.4	28.6	16	49
FSW	24.9	22	23.4	26.4	16	57
Male STI patients	26.6	23	24.8	28.4	16	57
MSM/TGW	20.6	19	19.7	21.5	16	46
New TB patients	45.5	42	42.6	48.3	15	87
PWID	29.6	29	28.1	31.1	18	62

Table 176. Distribution of age at initiating risk behaviours by sentinel groups (Bahmo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	22	20	21	23	16	40
MSM/TGW	18.7	18	18.2	19.2	15	32
PWID	24.7	24	23.5	26	13	56

Table 177. Duration with at risk behavior by sentinel groups (Bahmo, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	3	2	2.2	3.7	0	27
MSM/TGW	1.9	1	1.3	2.6	0	26
PWID	4.9	3	4	5.8	0	24

Table 178. HIV test results by sentinel groups and age groups (Bahmo, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	136	0	0	264	2	0.8	400	2	0.5
FSW	72	0	0	48	1	2.1	120	1	0.8
Male STI patients	55	4	7.3	45	11	24.4	100	15	15
MSM/TGW	85	0	0	15	1	6.7	100	1	1
New TB patients	15	3	20	135	25	18.5	150	28	18.7
PWID	41	11	26.8	85	38	44.7	126	49	38.9

Table 179. VDRL test results by sentinel groups and age groups (Bahmo, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	136	0	0	264	0	0	400	0	0
FSW	72	5	6.9	48	8	16.7	120	13	10.8
Male STI patients	55	5	9.1	45	5	11.1	100	10	10
MSM/TGW	85	4	4.7	15	1	6.7	100	5	5
PWID	41	0	0	85	1	1.2	126	1	0.8

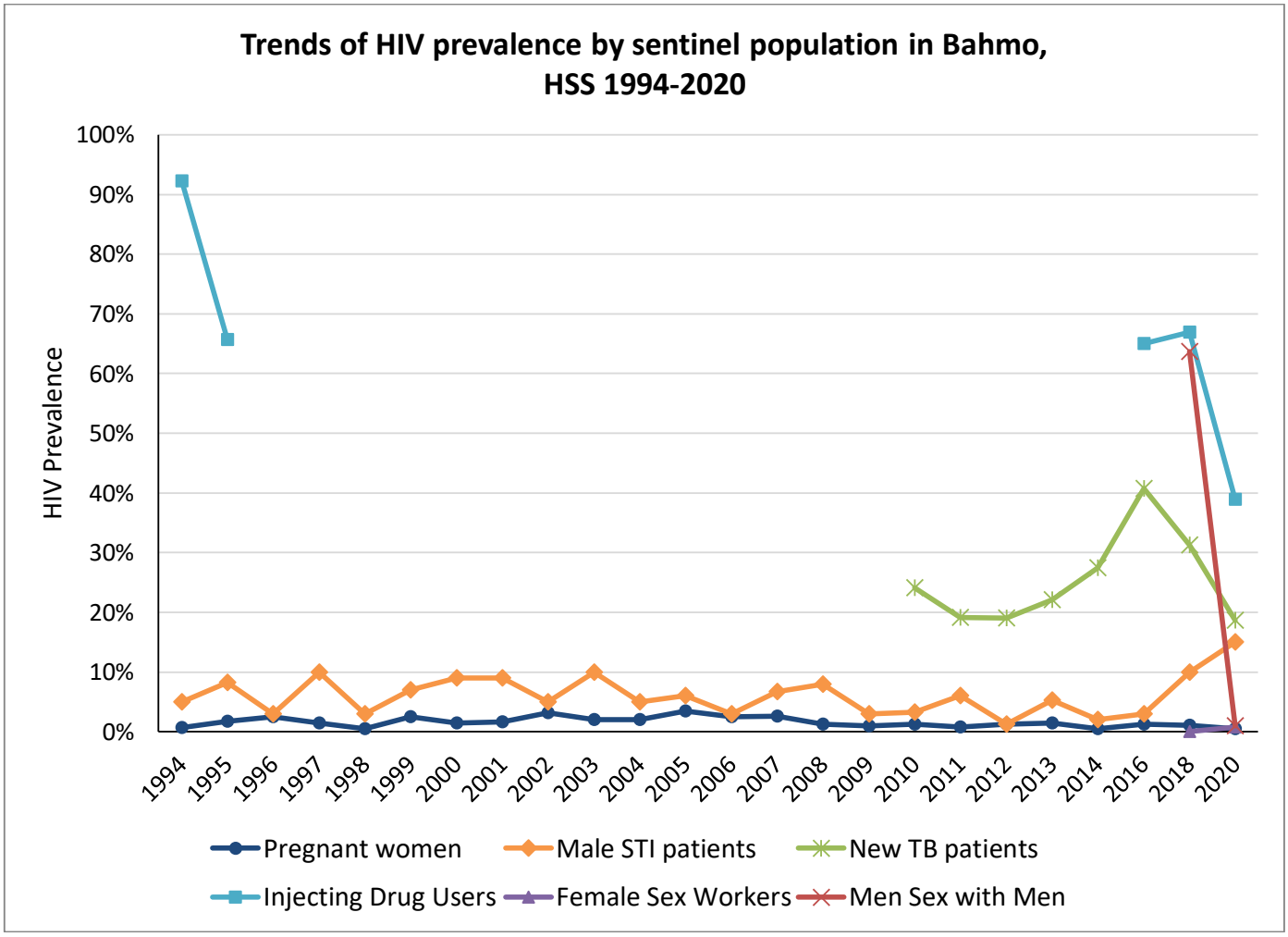


Figure 30. Trends of HIV prevalence among sentinel populations in Bahmo, HSS 1992-2020

State: Kayah State

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Loikaw				√	√	√

Sentinel Site: Loikaw

Table 180. Basic characteristics of sentinel groups (Loikaw, HSS 2020)

Characteristics		ANC		Male STI patients		New TB patients	
		N	%	N	%	N	%
Age	<25 yr	109	27%	14	16%	20	16%
	≥25 yr	291	73%	76	84%	106	84%
Urban/Rural	Urban	224	56%	54	60%	65	52%
	Rural	176	44%	36	40%	61	48%
Marital Status	Currently married	398	100%	55	61%	100	79%
	Not currently married	2	1%	35	39%	26	21%
Sex	Female	400	100%			45	36%
	Male			90	100%	81	64%
	Apone						
	Tha Nge						
TB status	AFB Negative					72	57%
	AFB Positive					48	38%
	Extrapulmonary					6	5%
Gravida	Primipara	153	38%				
	Multipara	247	62%				
Source of serum	Aids STD Public			36	40%		
	GP			54	60%		
	NGOs			0	0%		
	Other Source			0	0%		

Table 181. Distribution of age by sentinel groups (Loikaw, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.8	28	28.2	29.4	16	45
Male STI patients	33.1	33	31.5	34.7	16	58
New TB patients	42	40	39	44.9	15	84

Table 182. HIV test results by sentinel groups and age groups (Loikaw, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	109	0	0	291	2	0.7	400	2	0.5
Male STI patients	14	2	14.3	76	6	7.9	90	8	8.9
New TB patients	20	1	5	106	3	2.8	126	4	3.2

Table 183. VDRL test results by sentinel groups and age groups (Loikaw, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	109	0	0	291	1	0.3	400	1	0.3
Male STI patients	14	1	7.1	76	3	3.9	90	4	4.4

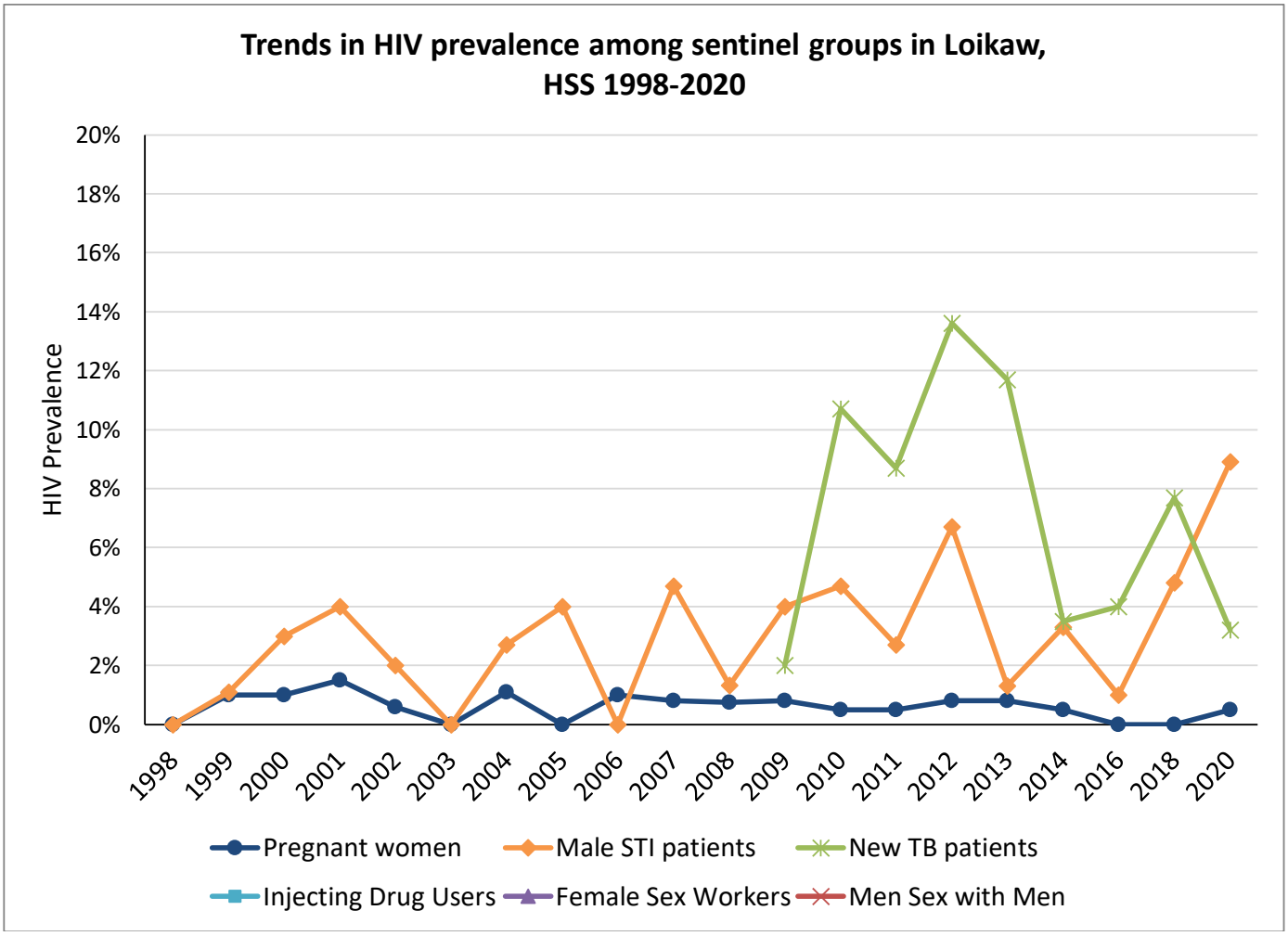


Figure 31. Trends of HIV prevalence among sentinel groups in Loikaw, HSS 1998-2016

Region: Kayin State

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Hpa-An	√	√		√	√	√
Myawaddy	√	√		√	√	√

Sentinel site: Hpa-An

Table 184. Basic characteristics of sentinel groups (Hpa-An, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	134	34%	44	37%	26	26%	74	74%	24	16%
	≥25 yr	266	67%	76	63%	74	74%	26	26%	126	84%
Urban/ Rural	Urban	399	100%	105	88%	27	27%	56	56%	46	31%
	Rural	1	0%	15	13%	73	73%	44	44%	104	69%
Marital Status	Currently married	400	100%	66	55%	45	45%	15	15%	125	83%
	Not currently married			54	45%	55	55%	85	85%	25	17%
Sex	Female	400	100%	120	100%					64	43%
	Male					100	100%	100	100%	86	57%
FSW type	Direct			74	62%						
	Indirect			46	38%						
MSM type	Apwint							16	16%		
	Apone							33	33%		
	Tha Nge							51	51%		
TB status	AFB Negative									66	44%
	AFB Positive									84	56%
	Extrapulmonary									0	0%
Gravida	Primipara	164	41%								
	Multipara	236	59%								
Source of serum	Aids STD Public					81	81%				
	GP					19	19%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 185. Distribution of age by sentinel groups (Hpa-An, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28	28	27.4	28.6	16	45
FSW	28.8	28	27.2	30.3	18	49
Male STI patients	31.9	30	30.1	33.7	18	54
MSM/TGW	22.4	20	21.2	23.5	16	50
New TB patients	37.7	38	35.9	39.5	16	55

Table 186. Distribution of age at initiating risk behaviours by sentinel groups (Hpa-An, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	22	20	21.1	23	12	37
MSM/TGW	18.3	18	17.7	18.8	8	27

Table 187. Duration with at risk behavior by sentinel groups (Hpa-An, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.7	5.5	5.6	7.9	0	29
MSM/TGW	4.1	2	3.1	5.1	0	30

Table 188. HIV test results by sentinel groups and age groups (Hpa-An, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	134	0	0	266	1	0.4	400	1	0.3
FSW	44	0	0	76	1	1.3	120	1	0.8
Male STI patients	26	0	0	74	8	10.8	100	8	8
MSM/TGW	74	0	0	26	3	11.5	100	3	3
New TB patients	24	0	0	126	1	0.8	150	1	0.7

Table 189. VDRL test results by sentinel groups and age groups (Hpa-An, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	134	3	2.2	266	3	1.1	400	6	1.5
FSW	44	1	2.3	76	3	3.9	120	4	3.3
Male STI patients	26	2	7.7	74	16	21.6	100	18	18
MSM/TGW	74	2	2.7	26	5	19.2	100	7	7

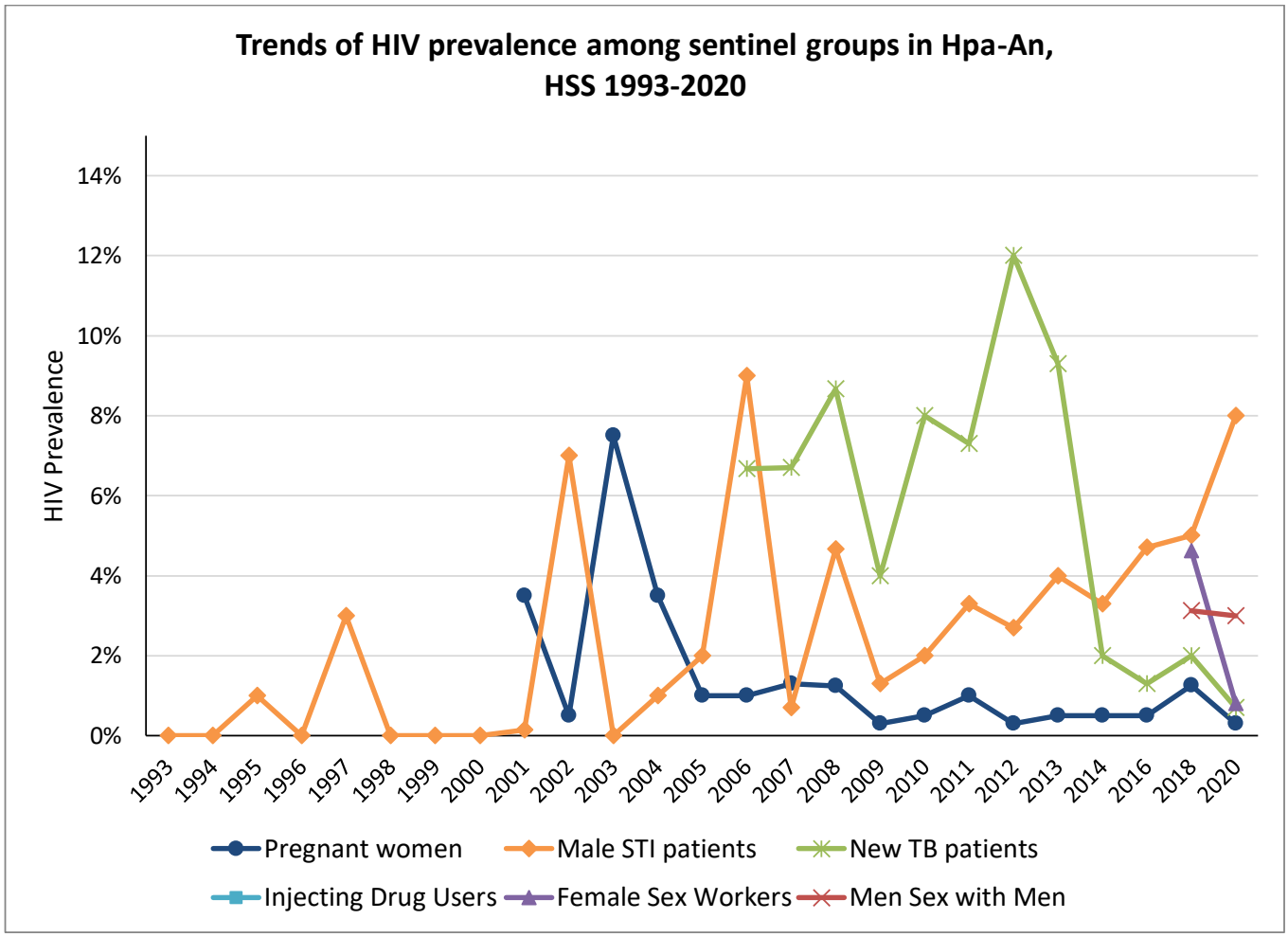


Figure 32. Trends of HIV prevalence among sentinel groups in Hpa-An, HSS 1993-2020

Sentinel site: Myawaddy

Table 190. Basic characteristics of sentinel groups (Myawaddy, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	142	34%	48	40%	39	45%	25	35%	29	19%
	≥25 yr	277	66%	72	60%	47	55%	46	65%	121	81%
Urban/ Rural	Urban	369	88%	120	100%	48	56%	62	87%	104	69%
	Rural	50	12%	0	0%	38	44%	9	13%	46	31%
Marital Status	Currently married	359	86%	19	16%	42	49%	29	41%	81	54%
	Not currently married	60	14%	101	84%	44	51%	42	59%	69	46%
Sex	Female	419	100%	120	100%	0	0%	0	0%	49	33%
	Male	0	0%	0	0%	86	100%	71	100%	101	67%
FSW type	Direct			119	99%						
	Indirect			1	1%						
MSM type	Apwint							48	68%		
	Apone							13	18%		
	Tha Nge							10	14%		
TB status	AFB Negative									73	49%
	AFB Positive									68	45%
	Extrapulmonary									9	6%
Gravida	Primipara	141	34%								
	Multipara	278	66%								
Source of serum	Aids STD Public					29	34%				
	GP					57	66%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 191. Distribution of age by sentinel groups (Myawaddy, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	27	27.5	28.7	15	45
FSW	26.5	26	25.5	27.5	18	42
Male STI patients	28.9	25	26.1	31.7	15	86
MSM/TGW	29	27	26.9	31.1	17	54
New TB patients	41.1	40	38.4	43.8	15	88

Table 192. Distribution of age at initiating risk behaviours by sentinel groups (Myawaddy, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21.2	20	20.4	21.9	14	35
MSM/TGW	17	16	15.9	18.1	11	30

Table 193. Duration with at risk behavior by sentinel groups (Myawaddy, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.3	4.5	4.6	6	0	19
MSM/TGW	12	10	10	13.9	0	34

Table 194. HIV test results by sentinel groups and age groups (Myawaddy, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	142	0	0	277	3	1.1	419	3	0.7
FSW	48	2	4.2	72	7	9.7	120	9	7.5
Male STI patients	39	0	0	47	0	0	86	0	0
MSM/TGW	25	8	32	46	25	54.3	71	33	46.5
New TB patients	29	3	10.3	121	18	14.9	150	21	14

Table 195. VDRL test results by sentinel groups and age groups (Myawaddy, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	142	2	1.4	277	3	1.1	419	5	1.2
FSW	48	6	12.5	72	5	6.9	120	11	9.2
Male STI patients	39	4	10.3	47	11	23.4	86	15	17.4
MSM/TGW	25	5	20	46	8	17.4	71	13	18.3

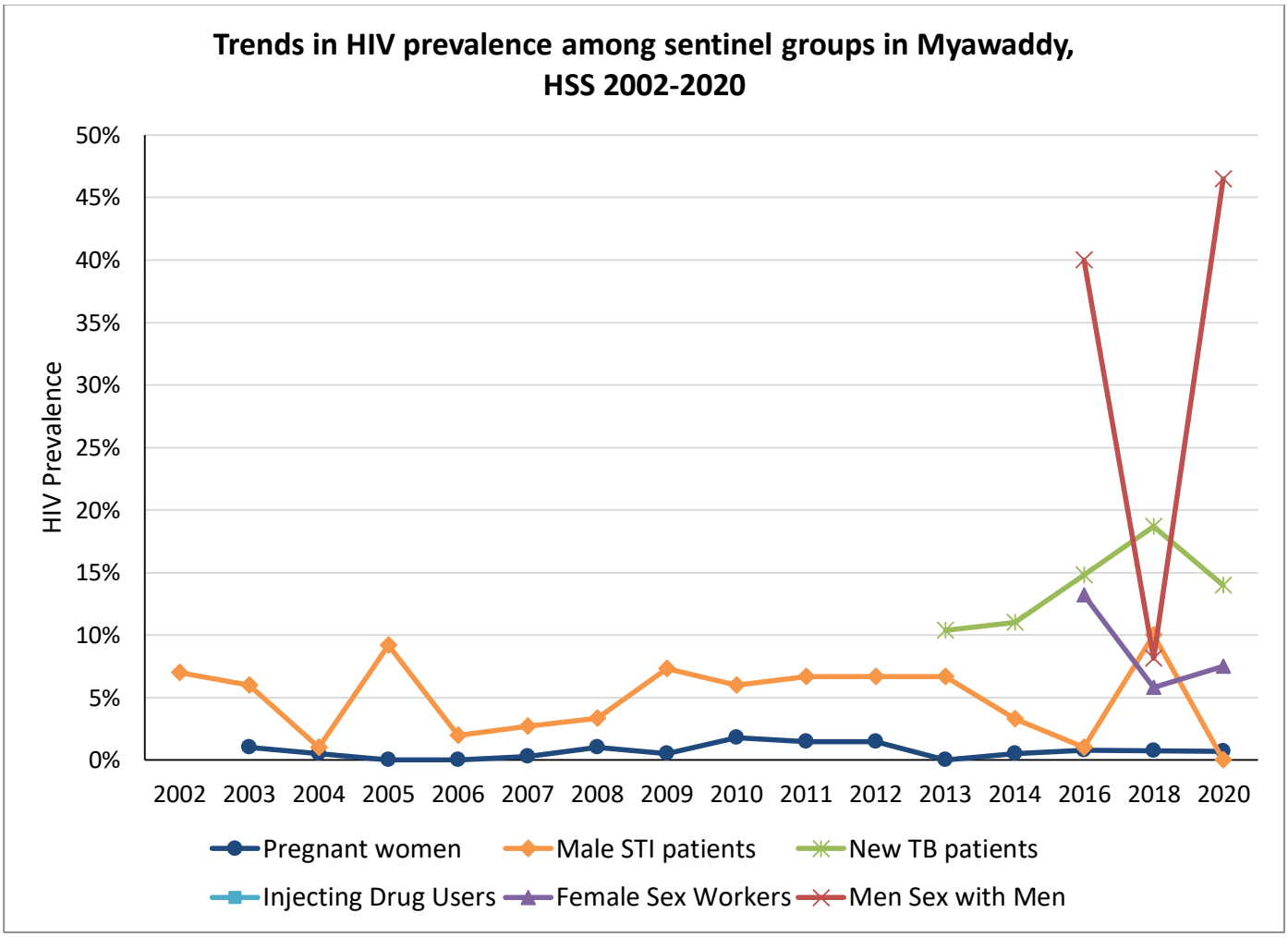


Figure 33. Trends of HIV prevalence by sentinel groups in Myawaddy, HSS 2002-2020

State: Rakhine State

Sentinel site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Sittwe	√	√		√	√	√

Sentinel site: Sittwe

Table 196. Basic characteristics of sentinel groups (Sittwe, HSS 2020)

Characteristic		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	119	40%	33	33%	51	34%	45	45%	24	21%
	≥25 yr	181	60%	67	67%	97	66%	55	55%	93	79%
Urban/Rural	Urban	156	52%	61	61%	98	66%	51	51%	59	50%
	Rural	144	48%	39	39%	50	34%	49	49%	58	50%
Marital Status	Currently married	300	100%	27	27%	65	44%	17	17%	82	70%
	Not currently married	0	0%	73	73%	83	56%	83	83%	35	30%
Sex	Female	300	100%	100	100%	0	0%	0	0%	43	37%
	Male	0	0%	0	0%	148	100%	100	100%	74	63%
FSW type	Direct			68	68%						
	Indirect			32	32%						
MSM type	Apwint							45	45%		
	Apone							52	52%		
	Tha Nge							3	3%		
TB status	AFB Negative									71	61%
	AFB Positive									46	39%
	Extrapulmonary									0	0%
Gravida	Primipara	133	44%								
	Multipara	167	56%								

Table 197. Distribution of age by sentinel groups (Sittwe, HSS 2020)

Sentinel groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	26.9	26	26.2	27.6	16	45
FSW	29.9	29	28.1	31.6	16	56
Male STI patients	29.4	28	27.7	31	16	61
MSM/TGW	26.9	25	25.2	28.7	16	62
New TB patients	46.4	48	42.9	49.9	15	80

Table 198. Distribution of age at initiating risk behaviours by sentinel groups (Sittwe, HSS 2020)

Sentinel groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.7	20	20	21.5	16	35
MSM/TGW	17.7	18	17.3	18.1	14	25

Table 199. Duration with at risk behavior by sentinel groups (Sittwe, HSS 2020)

Sentinel groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	9.1	8.5	7.8	10.4	0	26
MSM/TGW	9.3	7	7.7	10.9	1	44

Table 200. HIV test results by sentinel groups and age groups (Sittwe, HSS 2020)

Sentinel groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	119	2	1.7	181	5	2.8	300	7	2.3
FSW	33	1	3	67	4	6	100	5	5
Male STI patients	51	1	2	97	9	9.3	148	10	6.8
MSM/TGW	45	6	13.3	55	14	25.5	100	20	20
New TB patients	24	0	0	93	2	2.2	117	2	1.7

Table 201. VDRL test results by sentinel groups and age groups (Sittwe, HSS 2020)

Sentinel groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	119	2	1.7	181	5	2.8	300	7	2.3
FSW	33	1	3	67	8	11.9	100	9	9
Male STI patients	51	1	2	97	14	14.4	148	15	10.1
MSM/TGW	45	7	15.6	55	14	25.5	100	21	21

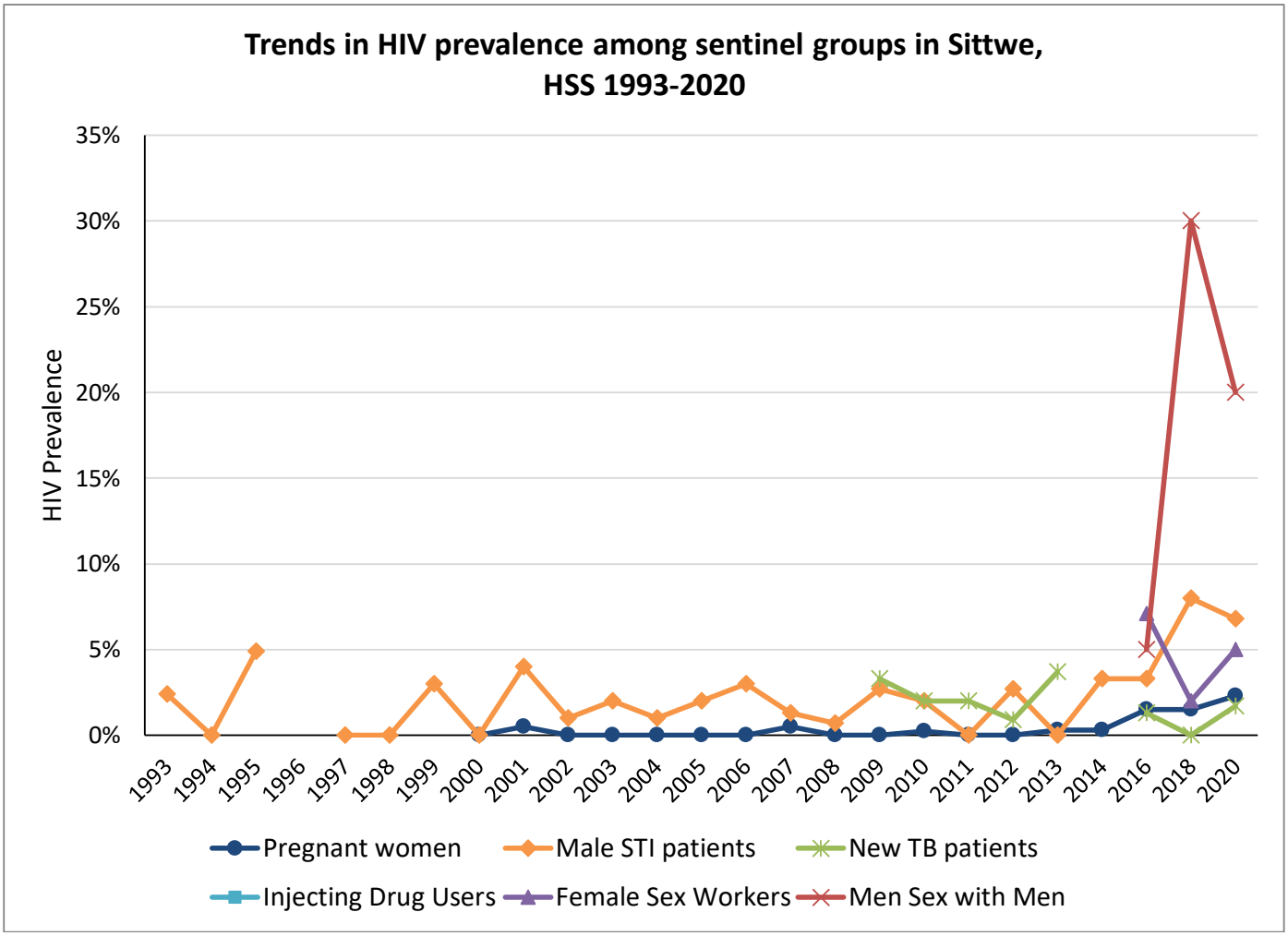


Figure 34. Trends of HIV prevalence by sentinel groups in Sittwe, HSS 1992-2016

State: Shan State

Sentinel Sites	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Taunggyi	√	√	√	√	√	√
Lashio	√	√	√	√	√	√
Muse	√	√	√	√	√	√
Kengtung	√	√		√	√	√
Tachileik	√	√	√	√	√	√

Sentinel Site: Taunggyi

Table 202. Basic characteristics of sentinel groups (Taunggyi, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	110	28%	40	33%	31	31%	63	63%	17	14%	22	14%
	≥25 yr	290	73%	80	67%	69	69%	37	37%	103	86%	138	86%
Urban/ Rural	Urban	149	37%	118	98%	71	71%	96	96%	73	61%	118	74%
	Rural	251	63%	2	2%	29	29%	4	4%	47	39%	42	26%
Marital Status	Currently married	398	100%	19	16%	59	59%	11	11%	54	45%	52	33%
	Not currently married	2	1%	101	84%	41	41%	89	89%	66	55%	108	68%
Sex	Female	400	100%	120	100%	0	0%	0	0%	47	39%	12	8%
	Male	0	0%	0	0%	100	100 %	100	100%	73	61%	148	93%
FSW type	Direct			9	8%								
	Indirect			111	93%								
MSM type	Apwint							15	15%				
	Apone							40	40%				
	Tha Nge							45	45%				
TB status	AFB Negative									51	43%		
	AFB Positive									58	48%		
	Extrapulmonary									11	9%		
Gravida	Primipara	155	39%										
	Multipara	245	61%										
Source of serum	Aids ST DPublic					57	57%						
	GP					43	43%						
	NGOs					0	0%						
	Other Source					0	0%						

Table 203. Distribution of age by sentinel groups (Taunggyi, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.6	28	28	29.2	16	44
FSW	27.7	27	26.5	29	18	53
Male STI patients	30.6	28	28.7	32.5	18	60
MSM/TGW	23.9	22	22.7	25	17	43
New TB patients	41.9	39	39.1	44.8	16	89
PWID	30.9	30	30	31.9	21	51

Table 204. Distribution of age at initiating risk behaviours by sentinel groups (Taunggyi, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	21.5	21	20.9	22.2	14	36
MSM/TGW	18.9	19	18.4	19.4	14	29
PWID	25.5	25	24.8	26.1	16	37

Table 205. Duration with at risk behavior by sentinel groups (Taunggyi, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	6.2	5	5.3	7.1	1	26
MSM/TGW	5	3	4	5.9	0	23
PWID	5.5	4	4.8	6.2	1	23

Table 206. HIV test results by sentinel groups and age groups (Taunggyi, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	110	1	0.9	290	0	0	400	1	0.3
FSW	40	5	12.5	80	17	21.3	120	22	18.3
Male STI patients	31	3	9.7	69	3	4.3	100	6	6
MSM/TGW	63	6	9.5	37	7	18.9	100	13	13
New TB patients	17	0	0	103	7	6.8	120	7	5.8
PWID	22	2	9.1	138	17	12.3	160	19	11.9

Table 207. VDRL test results by sentinel groups and age groups (Taunggyi, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	110	0	0	290	0	0	400	0	0
FSW	40	8	20	80	12	15	120	20	16.7
Male STI patients	31	10	32.3	69	18	26.1	100	28	28
MSM/TGW	63	1	1.6	37	3	8.1	100	4	4
PWID	22	0	0	138	2	1.4	160	2	1.3

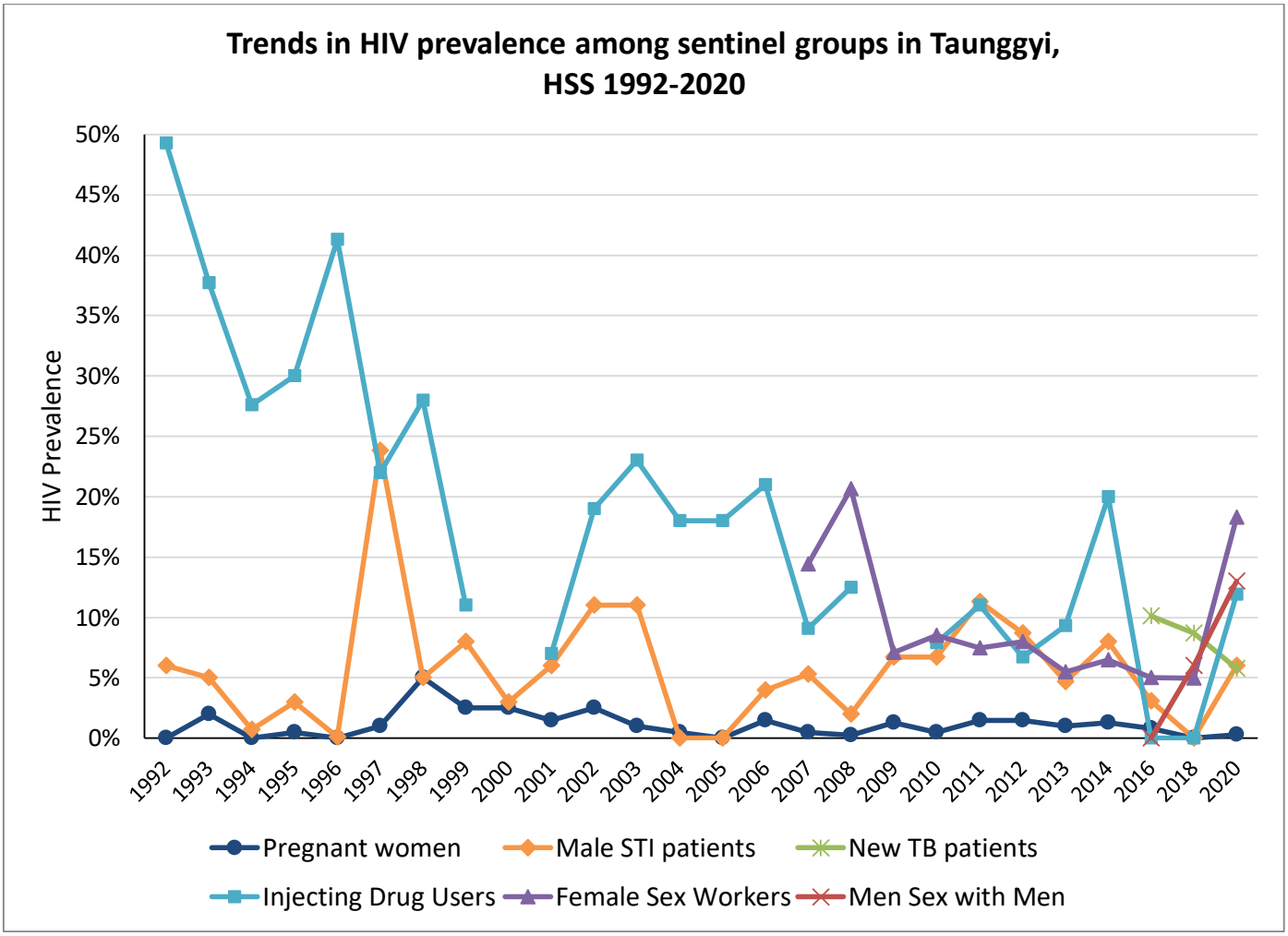


Figure 35. Trends of HIV prevalence by sentinel groups in Taunggyi, HSS 1992-2020

Sentinel Site: Lashio

Table 208. Basic characteristics of sentinel groups (Lashio, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	124	39%	47	36%	28	28%	42	42%	26	17%	16	10%
	≥25 yr	196	61%	84	64%	72	72%	58	58%	124	83%	144	90%
Urban/ Rural	Urban	278	87%	114	87%	88	88%	85	85%	103	69%	156	98%
	Rural	42	13%	17	13%	12	12%	15	15%	47	31%	4	3%
Marital Status	Currently married	314	98%	24	18%	52	52%	10	10%	103	69%	71	44%
	Not currently married	6	2%	107	82%	48	48%	90	90%	47	31%	89	56%
Sex	Female	320	100%	131	100%					52	35%	2	1%
	Male					100	100%	100	100%	98	65%	158	99%
FSW type	Direct			82	63%								
	Indirect			49	37%								
MSM type	Apwint							9	9%				
	Apone							53	53%				
	Tha Nge							38	38%				
TB status	AFB Negative									89	59%		
	AFB Positive									50	33%		
	Extrapulmonary									11	7%		
Gravida	Primipara	103	32%										
	Multipara	217	68%										
Source of serum	Aids STD Public					55	55%						
	GP					44	44%						
	NGOs					1	1%						
	Other Source					0	0%						

Table 209. Distribution of age by sentinel groups (Lashio, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27	26	26.4	27.7	15	46
FSW	27.9	27	26.6	29.1	17	52
Male STI patients	30	28	28	32	15	86
MSM/TGW	28.6	27	26.8	30.4	18	51
New TB patients	41.8	40	39.1	44.5	15	86
PWID	35.5	35	34.1	36.9	18	59

Table 210. Distribution of age at initiating risk behaviours by sentinel groups (Lashio, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23	22	22.1	24	15	37
MSM/TGW	19.7	19	18.8	20.6	13	39
PWID	23.8	22	22.8	24.7	15	42

Table 211. Duration with at risk behavior by sentinel groups (Lashio, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4.9	3	3.9	5.9	0	32
MSM/TGW	8.9	6.5	7.2	10.6	0	36
PWID	11.8	10	10.5	13.1	0	43

Table 212. HIV test results by sentinel groups and age groups (Lashio, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	124	0	0	196	2	1	320	2	0.6
FSW	47	3	6.4	84	5	6	131	8	6.1
Male STI patients	28	2	7.1	72	9	12.5	100	11	11
MSM/TGW	42	3	7.1	58	8	13.8	100	11	11
New TB patients	26	1	3.8	124	21	16.9	150	22	14.7
PWID	16	4	25	144	55	38.2	160	59	36.9

Table 213. VDRL test results by sentinel groups and age groups (Lashio, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	124	0	0	196	0	0	320	0	0
FSW	47	12	25.5	84	23	27.4	131	35	26.7
Male STI patients	28	6	21.4	72	23	31.9	100	29	29
MSM/TGW	42	4	9.5	58	11	19	100	15	15
PWID	16	0	0	144	0	0	160	0	0

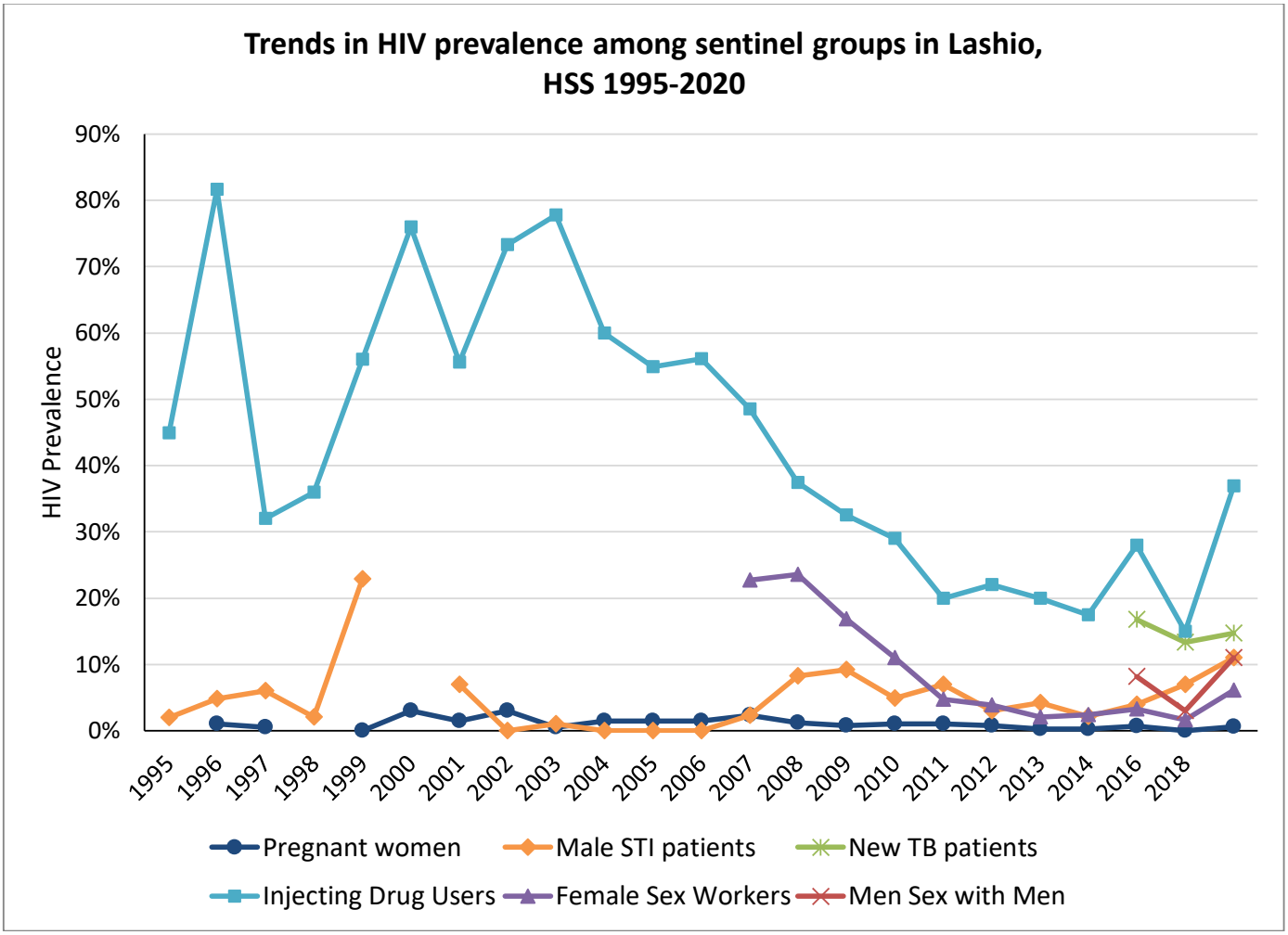


Figure 36. Trends of HIV prevalence among sentinel groups in Lashio, HSS 1994-2020

Sentinel Site: Muse

Table 214. Basic characteristics of sentinel groups (Muse, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	139	35%	38	33%	31	33%	20	65%	17	17%	10	6%
	≥25 yr	261	65%	77	67%	64	67%	11	35%	84	83%	150	94%
Urban/ Rural	Urban	311	78%	57	50%	74	78%	27	87%	53	52%	134	84%
	Rural	89	22%	58	50%	21	22%	4	13%	48	48%	26	16%
Marital Status	Currently married	400	100%	29	25%	51	54%	0	0%	84	83%	67	42%
	Not currently married	0	0%	86	75%	44	46%	31	100%	17	17%	93	58%
Sex	Female	400	100%	115	100%			0	0%	32	32%	4	3%
	Male	0	0%	0	0%			31	100%	69	68%	156	98%
FSW type	Direct			92	80%								
	Indirect			23	20%								
MSM type	Apwint							4	13%				
	Apone							26	84%				
	Tha Nge							1	3%				
TB status	AFB Negative									44	44%		
	AFB Positive									43	43%		
	Extrapulmonary									14	14%		
Gravida	Primipara	155	39%										
	Multipara	245	61%										
Source of serum	Aids STD Public					5	5%						
	GP					43	45%						
	NGOs					0	0%						
	Other Source					47	49%						

Table 215. Distribution of age by sentinel groups (Muse, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.4	27	26.8	27.9	16	45
FSW	27.3	27	26.1	28.4	16	40
Male STI patients	28.6	27	27.2	30	17	51
MSM/TGW	24	24	22.2	25.9	16	36
New TB patients	39	38	36.2	41.8	16	73
PWID	36.1	35	34.6	37.5	19	64

Table 216. Distribution of age at initiating risk behaviours by sentinel groups (Muse, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23	23	22.1	23.8	15	32
MSM/TGW	20	20	18.9	21	14	26
PWID	26.4	25	25.4	27.3	14	47

Table 217. Duration with at risk behavior by sentinel groups (Muse, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4.3	4	3.9	4.7	0	15
MSM/TGW	4.1	3	2.6	5.5	0	17
PWID	9.7	8	8.5	10.9	0	39

Table 218. HIV test results by sentinel groups and age groups (Muse, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	139	1	0.7	261	1	0.4	400	2	0.5
FSW	38	0	0	77	2	2.6	115	2	1.7
Male STI patients	31	1	3.2	64	0	0	95	1	1.1
MSM/TGW	20	1	5	11	0	0	31	1	3.2
New TB patients	17	1	5.9	84	25	29.8	101	26	25.7
PWID	10	4	40	150	36	24	160	40	25

Table 219. VDRL test results by sentinel groups and age groups (Muse, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	139	1	0.7	261	4	1.5	400	5	1.3
FSW	38	0	0	77	4	5.2	115	4	3.5
Male STI patients	31	1	3.2	64	2	3.1	95	3	3.2
MSM/TGW	20	2	10	11	0	0	31	2	6.5
PWID	10	0	0	150	0	0	160	0	0

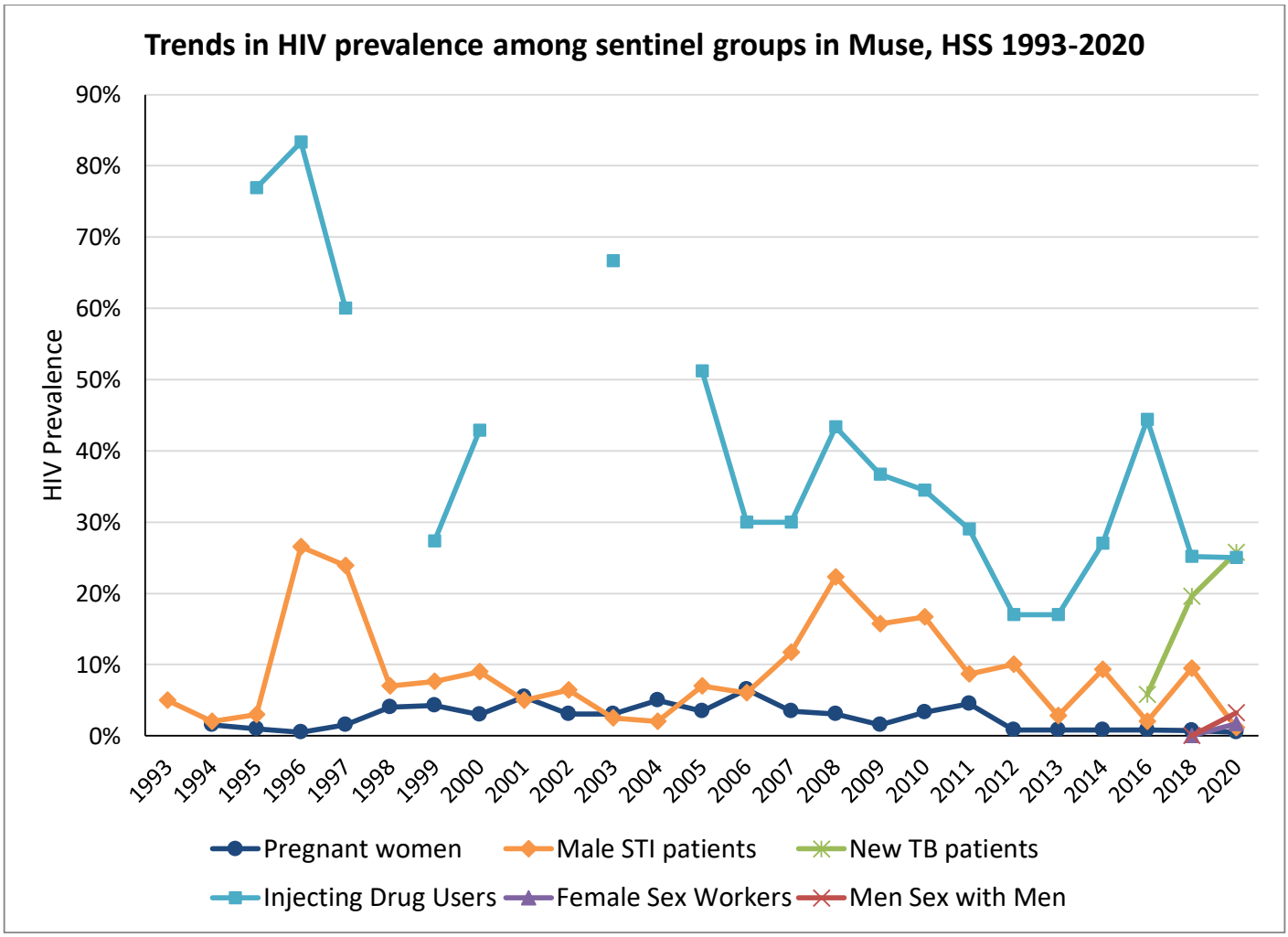


Figure 37. Trends of HIV prevalence by sentinel groups in Muse, HSS 1992-2020

Sentinel site: Kengtung

Table 220. Basic characteristics of sentinel groups (Kengtung, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	198	50%	62	49%	3	30%	23	57%	26	17%
	≥25 yr	202	51%	64	51%	7	70%	17	43%	124	83%
Urban/ Rural	Urban	213	53%	95	75%	10	100%	32	80%	122	81%
	Rural	187	47%	31	25%	0	0%	8	20%	28	19%
Marital Status	Currently married	329	82%	15	12%	4	40%	0	0%	59	39%
	Not currently married	71	18%	111	88%	6	60%	40	100%	91	61%
Sex	Female	400	100%	126	100%					55	37%
	Male					10	100%	40	100%	95	63%
FSW type	Direct			121	96%						
	Indirect			5	4%						
MSM type	Apwint							13	33%		
	Apone							27	68%		
	Tha Nge							0	0%		
TB status	AFB Negative									109	73%
	AFB Positive									38	25%
	Extrapulmonary									3	2%
Gravida	Primipara	187	47%								
	Multipara	213	53%								
Source of serum	Aids STD Public					10	100%				
	GP					0	0%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 221. Distribution of age by sentinel groups (Kengtung, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	25.5	25	24.9	26.1	15	45
FSW	25.6	25	24.6	26.7	15	48
Male STI patients	32.1	33	24.5	39.7	20	50
MSM/TGW	25.2	23	23.5	27	19	41
New TB patients	44.1	45	41.3	47	15	84

Table 222. Distribution of age at initiating risk behaviours by sentinel groups (Kengtung, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	20.3	19	19.5	21.1	12	35
MSM/TGW	18	18	17.2	18.8	12	25

Table 223. Duration with at risk behavior by sentinel groups (Kengtung, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	5.3	4.5	4.5	6.2	0	25
MSM/TGW	7.2	6	5.8	8.6	2	21

Table 224. HIV test results by sentinel groups and age groups (Kengtung, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	198	0	0	202	1	0.5	400	1	0.3
FSW	62	0	0	64	6	9.4	126	6	4.8
Male STI patients	3	0	0	7	1	14.3	10	1	10
MSM/TGW	23	0	0	17	0	0	40	0	0
New TB patients	26	1	3.8	124	7	5.6	150	8	5.3

Table 225. VDRL test results by sentinel groups and age groups (Kengtung, HSS_2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	198	0	0	202	0	0	400	0	0
FSW	62	1	1.6	64	0	0	126	1	0.8
Male STI patients	3	1	33.3	7	2	28.6	10	3	30
MSM/TGW	23	0	0	17	0	0	40	0	0

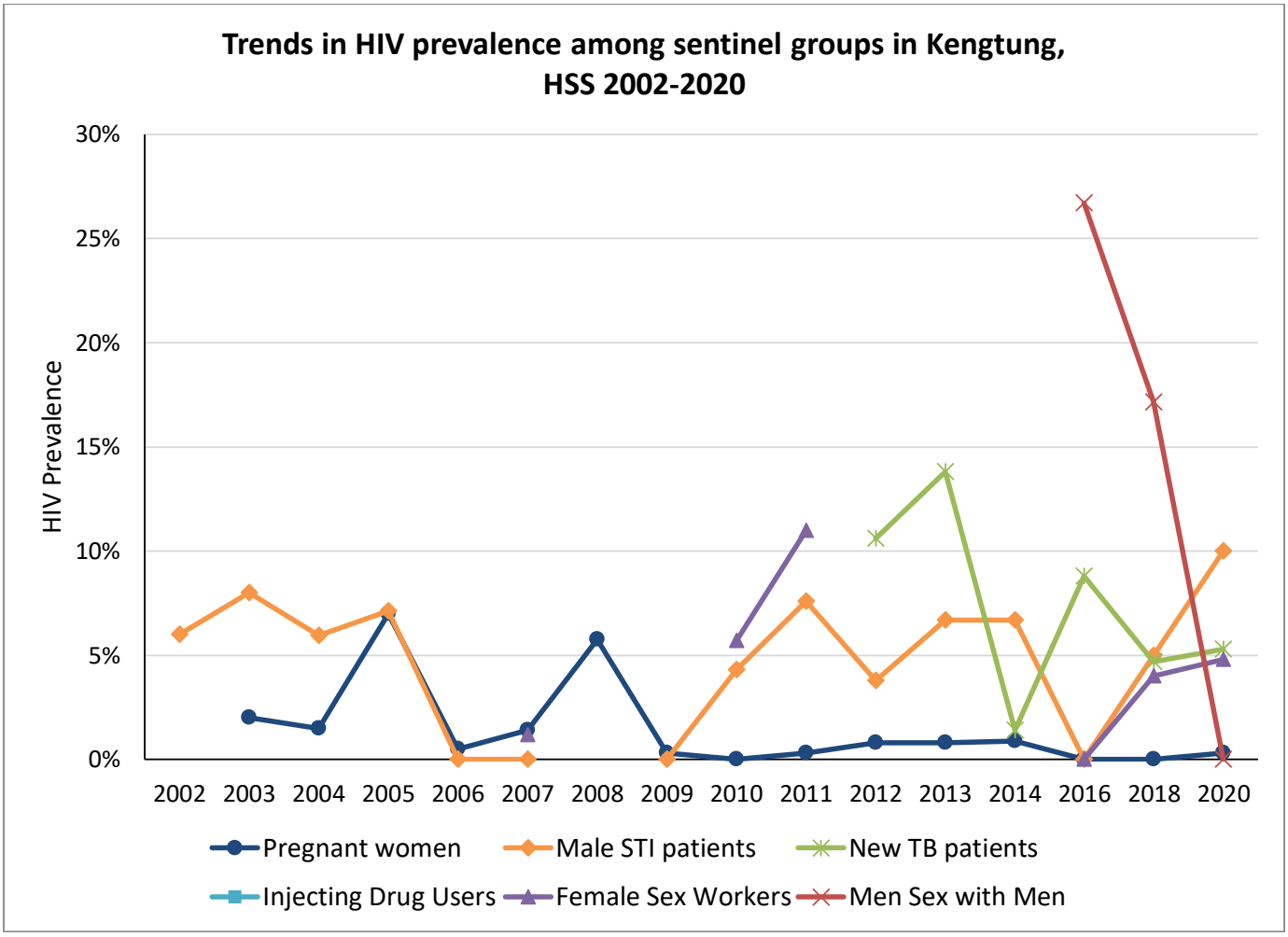


Figure 38. Trends of HIV prevalence among sentinel groups in Kengtung, HSS 2002-2016

Sentinel Site: Tachileik

Table 226. Basic characteristics of sentinel groups (Tachileik, HSS 2020)

Sentinel Groups		ANC		FSW		Male STI patients		MSM/TGW		New TB patients		PWID	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	<25 yr	197	49%	68	57%	26	32%	56	60%	20	19%	18	11%
	≥25 yr	205	51%	52	43%	55	68%	38	40%	88	81%	142	89%
Urban/ Rural	Urban	39	10%	111	93%	70	86%	89	95%	29	27%	159	99%
	Rural	363	90%	9	8%	11	14%	5	5%	79	73%	1	1%
Marital Status	Currently married	398	99%	8	7%	36	44%	4	4%	81	75%	100	63%
	Not currently married	4	1%	112	93%	45	56%	90	96%	27	25%	60	38%
Sex	Female	402	100%	120	100%	0	0%	0	0%	43	40%	3	2%
	Male	0	0%	0	0%	81	100%	94	100%	65	60%	157	98%
FSW type	Direct			81	68%								
	Indirect			39	33%								
MSM type	Apwint							16	17%				
	Apone							43	46%				
	Tha Nge							35	37%				
TB status	AFB Negative									49	45%		
	AFB Positive									54	50%		
	Extrapulmonary									5	5%		
Gravida	Primipara	152	38%										
	Multipara	250	62%										
Source of serum	Aids STD Public					45	56%						
	GP					31	38%						
	NGOs					5	6%						
	Other Source					0	0%						

Table 227. Distribution of age by sentinel groups (Tachileik, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	25.2	25	24.6	25.9	15	45
FSW	24.6	24	23.6	25.6	15	40
Male STI patients	31.3	29	28.9	33.7	18	69
MSM/TGW	24	23	22.9	25	16	40
New TB patients	41.2	40	38	44.4	15	71
PWID	35.8	35	34.3	37.4	19	65

Table 228. Distribution of age at initiating risk behaviours by sentinel groups (Tachileik, 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	22.5	22	21.5	23.4	14	38
MSM/TGW	20	19	19.2	20.9	11	36
PWID	28	28	26.8	29.1	14	50

Table 229. Duration with at risk behavior by sentinel groups (Tachileik, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	2.1	1	1.6	2.6	0	14
MSM/TGW	3.9	3	3.2	4.7	0	18
PWID	7.9	7	7.1	8.6	0	30

Table 230. HIV test results by sentinel groups and age groups (Tachileik, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	197	1	0.5	205	3	1.5	402	4	1
FSW	68	4	5.9	52	1	1.9	120	5	4.2
Male STI patients	26	2	7.7	55	11	20	81	13	16
MSM/TGW	56	10	17.9	38	9	23.7	94	19	20.2
New TB patients	20	1	5	88	7	8	108	8	7.4
PWID	18	0	0	142	6	4.2	160	6	3.8

Table 231. VDRL test results by sentinel groups and age groups (Tachileik, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalenc
ANC	197	0	0	205	0	0	402	0	0
FSW	68	3	4.4	52	4	7.7	120	7	5.8
Male STI patients	26	8	30.8	55	19	34.5	81	27	33.3
MSM/TGW	56	9	16.1	38	4	10.5	94	13	13.8
PWID	18	0	0	142	1	0.7	160	1	0.6

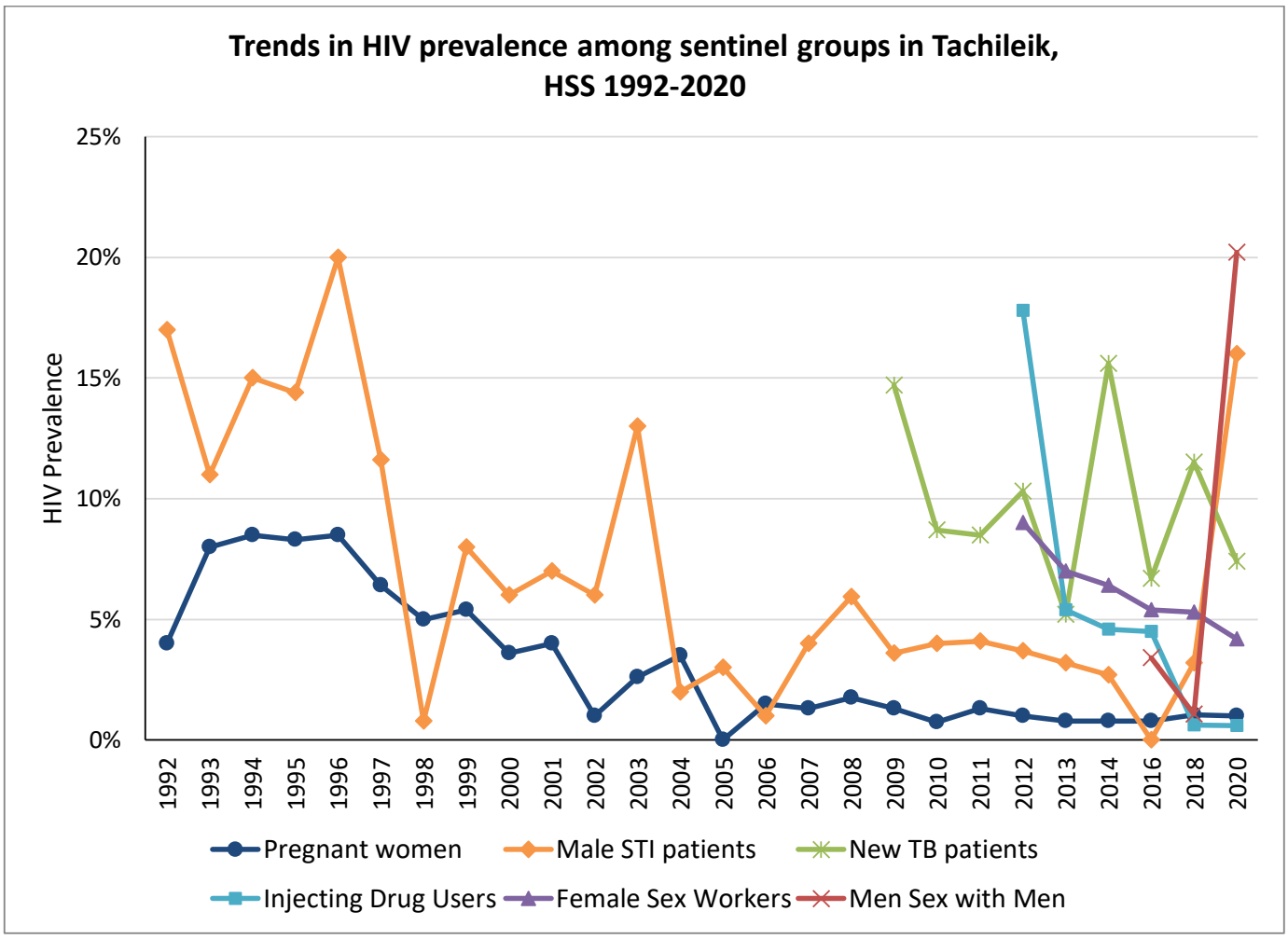


Figure 39. Trends of HIV prevalence by sentinel groups in Tachileik, HSS 1992-2020

Region: Nay Pyi Taw Territory

Sentinel Site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Pyinmana	√	√		√	√	√

Sentinel Site: Pyinmana

Table 232. Basic characteristics of sentinel groups (Pyinmana, HSS 2020)

Characteristics		ANC		FSW		Male STI patients		MSM/TGW		New TB patients	
		N	%	N	%	N	%	N	%	N	%
Age	<25 yr	146	36%	8	19%	22	30%	68	67%	15	17%
	≥25 yr	265	64%	35	81%	51	70%	34	33%	75	83%
Urban/ Rural	Urban	161	39%	42	98%	55	75%	98	96%	54	60%
	Rural	250	61%	1	2%	18	25%	4	4%	36	40%
Marital Status	Currently married	411	100%	24	56%	53	73%	27	26%	62	69%
	Not currently married	0	0%	19	44%	20	27%	75	74%	28	31%
Sex	Female	411	100%	43	100%	0	0%	0	0%	29	32%
	Male	0	0%	0	0%	73	100%	102	100%	61	68%
FSW type	Direct			8	19%						
	Indirect			35	81%						
MSM type	Apwint							12	12%		
	Apone							6	6%		
	Tha Nge							84	82%		
TB status	AFB Negative									29	32%
	AFB Positive									52	58%
	Extrapulmonary									9	10%
Gravida	Primipara	182	44%								
	Multipara	229	56%								
Source of serum	Aids STD Public					73	100%				
	GP					0	0%				
	NGOs					0	0%				
	Other Source					0	0%				

Table 233. Distribution of age by sentinel groups (Pyinmana, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	27.5	27	26.9	28.1	15	45
FSW	28.1	27	26.6	29.7	18	39
Male STI patients	30.1	27	27.9	32.3	18	62
MSM/TGW	24.2	21	22.6	25.8	16	54
New TB patients	39.8	39	36.6	42.9	16	75

Table 234. Distribution of age at initiating risk behaviours by sentinel groups (Pyinmana, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	23.3	23	21.7	24.9	14	37
MSM/TGW	18	18	17.3	18.7	8	39

Table 235. Duration with at risk behavior by sentinel groups (Pyinmana, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
FSW	4.8	4	3.6	6	0	17
MSM/TGW	6.2	2	4.7	7.7	0	36

Table 236. HIV test results by sentinel groups and age groups (Pyinmana, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	146	2	1.4	265	7	2.6	411	9	2.2
FSW	8	1	12.5	35	0	0	43	1	2.3
Male STI patients	22	2	9.1	51	3	5.9	73	5	6.8
MSM/TGW	68	2	2.9	34	2	5.9	102	4	3.9
New TB patients	15	1	6.7	75	17	22.7	90	18	20

Table 237. VDRL test results by sentinel groups and age groups (Pyinmana, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	146	1	0.7	265	4	1.5	411	5	1.2
FSW	8	0	0	35	4	11.4	43	4	9.3
Male STI patients	22	15	68.2	51	23	45.1	73	38	52.1
MSM/TGW	68	2	2.9	34	0	0	102	2	2

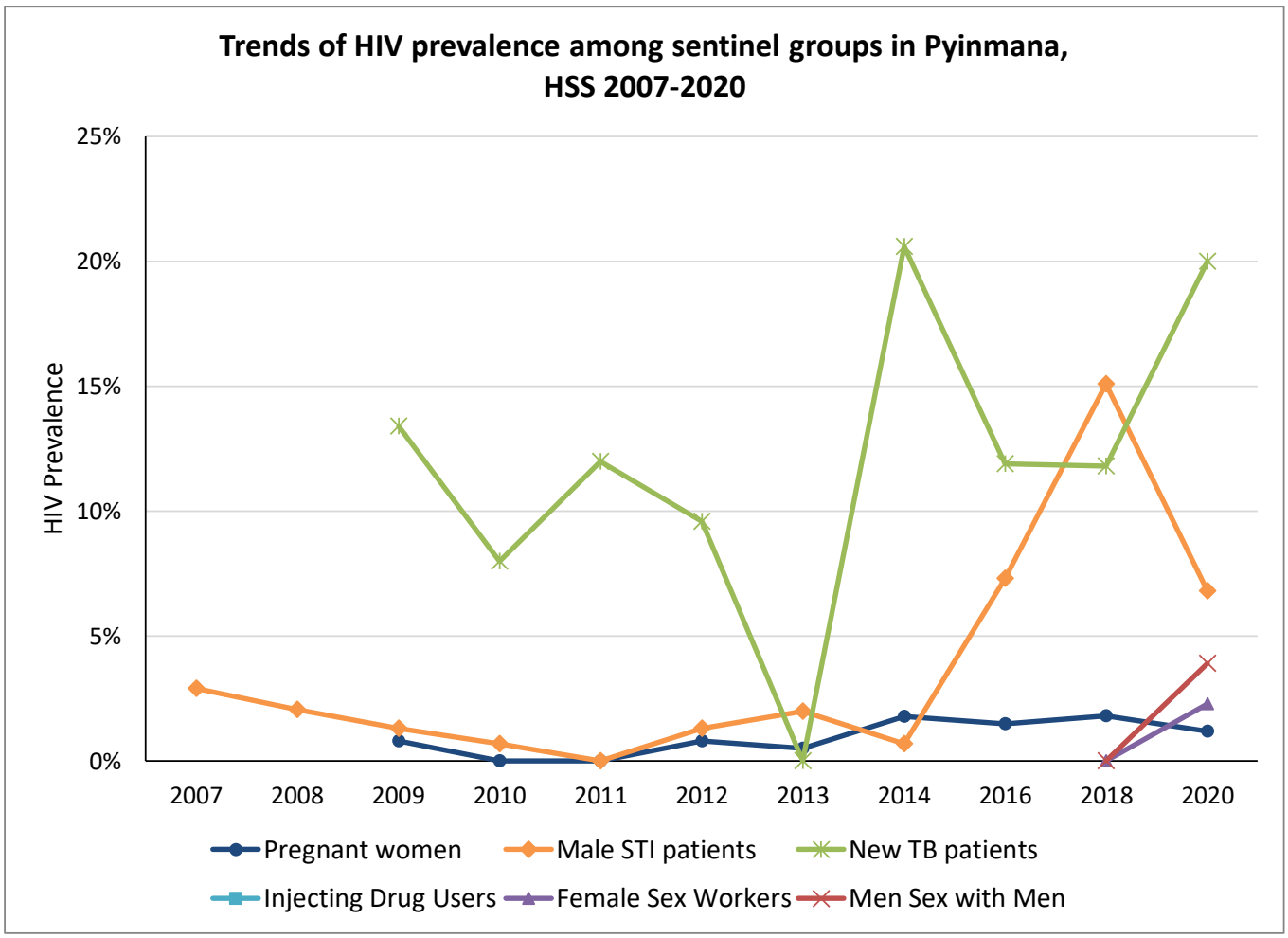


Figure 40. Trends of HIV prevalence among sentinel groups in Pyinmana, HSS 2007-2020

State: Mon State

Sentinel Site	Sentinel Groups					
	FSW	MSM/TGW	PWID	TB	Pregnant women	STI patients
Mawlamyine				√	√	√

Sentinel Site: Mawlamyine

Table 238. Basic characteristics of sentinel groups (Mawlamyine, HSS 2020)

Characteristics		ANC		Male STI patients		New TB patients	
		N	%	N	%	N	%
Age	<25 yr	133	33%	34	34%	18	12%
	≥25 yr	267	67%	66	66%	132	88%
Urban/Rural	Urban	221	55%	93	93%	117	78%
	Rural	179	45%	7	7%	33	22%
Marital Status	Currently married	399	100%	19	19%	83	55%
	Not currently married	1	0%	81	81%	67	45%
Sex	Female	400	100%	0	0%	44	29%
	Male	0	0%	100	100%	106	71%
	Apone						
	Tha Nge						
TB status	AFB Negative					56	37%
	AFB Positive					75	50%
	Extrapulmonary					19	13%
Gravida	Primipara	160	40%				
	Multipara	240	60%				

Table 239. Distribution of age by sentinel groups (Mawlamyine, HSS 2020)

Sentinel Groups	Mean	Median	95% Lower CI for Mean	95% Upper CI for Mean	Minimum	Maximum
ANC	28.1	28	27.5	28.8	16	47
Male STI patients	28.7	28	27.2	30.2	17	51
New TB patients	44.3	45	41.8	46.8	15	81

Table 240. HIV test results by sentinel groups and age groups (Mawlamyine, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Positive	Prevalence	Tested	Positive	Prevalence	Tested	Positive	Prevalence
ANC	133	1	0.8	267	3	1.1	400	4	1
Male STI patients	34	5	14.7	66	21	31.8	100	26	26
New TB patients	18	1	5.6	132	10	7.6	150	11	7.3

Table 241. VDRL test results by sentinel groups and age groups (Mawlamyine, HSS 2020)

Sentinel Groups	<25 yr			≥25 yr			Total		
	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence	Tested	Reactive	Prevalence
ANC	133	2	1.5	267	3	1.1	400	5	1.3
Male STI patients	34	19	55.9	66	35	53	100	54	54

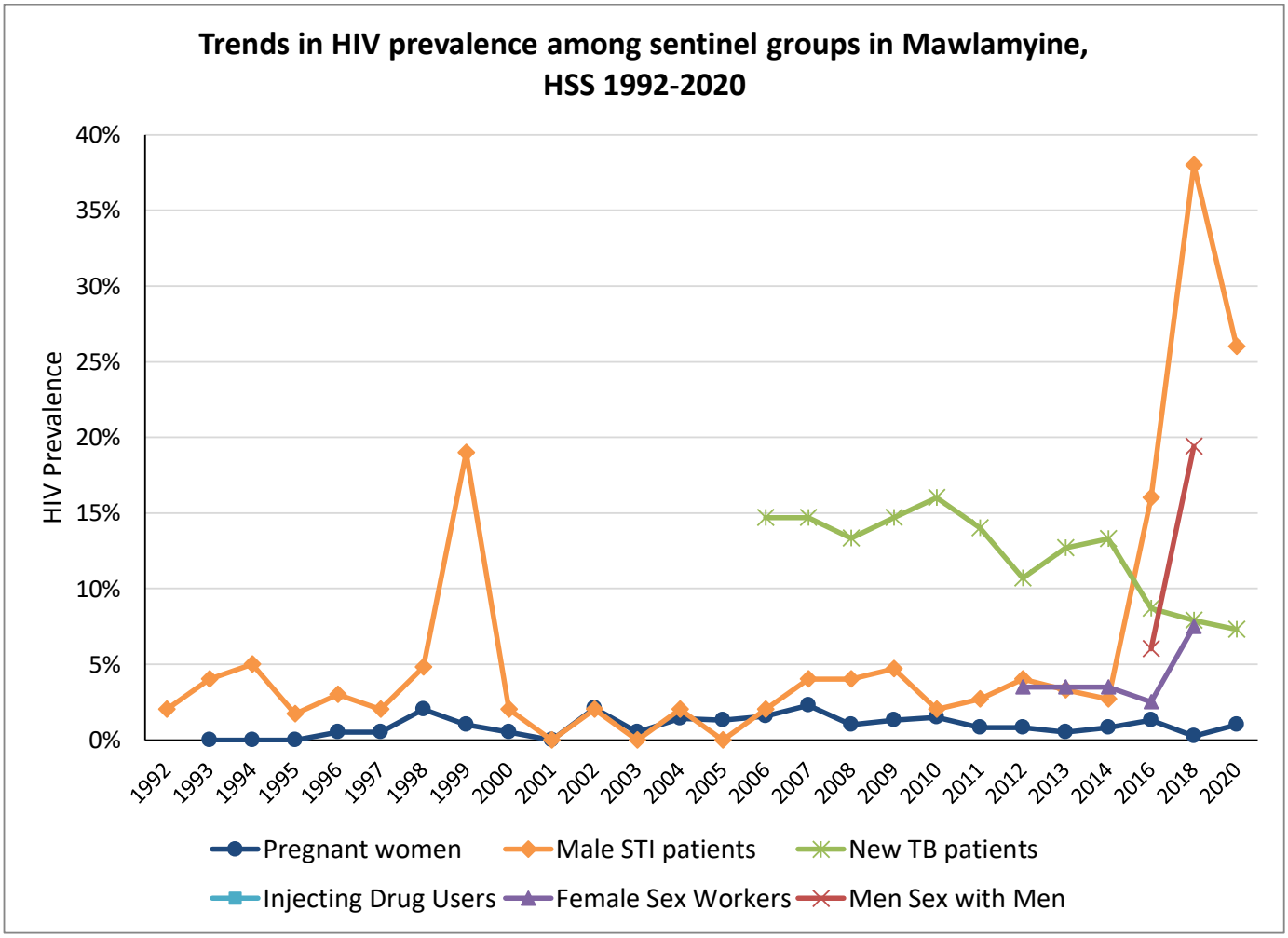


Figure 41. Trends of HIV prevalence among sentinel groups in Mawlamyine, HSS 1992-2020