

Second Generation Surveillance of Antenatal Women, STI Clinic Clients and Youth, VANUATU, 2008



Vanuatu Ministry of Health



Secretariat of the
Pacific Community

ACKNOWLEDGEMENTS

The Vanuatu Ministry of Health would like to extend its sincere thanks to the pregnant women, youth and STI clients who participated in the surveys.

Thanks are also extended to Ms Miriam Abel, Director General and Len Tarivonda Director of Public Health for their support in developing the project, Dr Ahmed Suleman Latif (Consultant) for data analysis and report preparation, the Secretariat for the Pacific Community for providing technical assistance and to the Global Fund to Fight AIDS, Tuberculosis and Malaria for financial assistance.

Survey Personnel:

Name	Affiliation	Role
Marina Laklotal	Ministry of Health	Survey Coordinator
Siula Bula	Wan Smol Bag	Supervisor HSS Survey
Smith Wuwut	Wan Smol Bag	Interviewer
Obed Melven	Wan Smol Bag	Interviewer
Wilson Daniel	Wan Smol Bag	Interviewer
Floflo Yannick	Wan Smol Bag	Interviewer
Anneth Willie	Wan Smol Bag	Interviewer
Jayline Malverus	Wan Smol Bag	Interviewer
Lethine Lee	Wan Smol Bag	Interviewer
Fank Gideon	Wan Smol Bag	Interviewer
Edmond Pierre	Wan Smol Bag	Interviewer
Edgen Norman	Wan Smol Bag	Interviewer
Moses Matovu	Ministry of Health	Supervisor HSS
Leimako Simon	KPH Clinic Wan Smol Bag	Interviewer
Norley Jack	KPH Clinic Wan Smol Bag	Interviewer
Rose Nerampath	KPH Clinic Wan Smol Bag	Interviewer
Angela Mento	VCH - ANC	Supervisor SPS
Toumelu Kalsakau	Ministry of Health	Interviewer
Shirley L. Tokon	Ministry of Health	Interviewer
Theto Moses	Ministry of Health	Interviewer
Esther Noe	VCH- ANC	Interviewer
Enneth Ilaisa	VCH-ANC	Interviewer
Norrah Simon	Presbyterian Church	Interviewer
Timothy Phatu	Vila Central Hospital	Laboratory officer In-charge of Serology Unit

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	I
TABLE OF CONTENTS	II
LIST OF TABLES	IV
LIST OF FIGURES	V
LIST OF ABBREVIATIONS	VI
EXECUTIVE SUMMARY	VII
KEY FINDINGS FOR ANTENATAL WOMEN.....	VII
KEY FINDINGS FOR YOUTH.....	VIII
KEY FINDINGS FOR STI CLINIC CLIENTS.....	X
RECOMMENDATIONS.....	XI
INTRODUCTION	1
VANUATU BACKGROUND	1
HIV AND STIS IN THE PACIFIC	1
WHY DO SECOND GENERATION SURVEILLANCE?.....	2
SGS IN LOW PREVALENCE SETTINGS	2
SPECIMEN COLLECTION AND TESTING FOR SGS.....	3
DATA ANALYSIS	4
PART 1: SPS SURVEY OF ANTENATAL WOMEN	5
SURVEY METHODOLOGY	5
ELIGIBILITY CRITERIA	5
RESULTS	6
<i>Demographic characteristics</i>	6
<i>Pregnancy Characteristics and Contraception Use</i>	8
<i>Sexual behaviours</i>	9
<i>Reported knowledge and use of condoms</i>	10
<i>Alcohol and drug use</i>	11
<i>Drug and substance use</i>	13
<i>HIV/AIDS Knowledge and attitudes</i>	14
<i>Attitudes and beliefs</i>	15
<i>Access to HIV testing</i>	16
<i>Participation in HIV/AIDS prevention activities</i>	17
<i>History of sexually transmitted infections</i>	18
<i>Genital symptoms in the last month</i>	18
<i>Results of STI tests performed</i>	19
DISCUSSION.....	23
PART 2: BEHAVIOURAL SURVEILLANCE SURVEY OF YOUTH	24
SURVEY METHODOLOGY	24
ELIGIBILITY CRITERIA	24

RESULTS	25
<i>Demographic characteristics</i>	25
<i>Sexual behaviours</i>	26
<i>Transactional sex</i>	27
<i>Other sexual behaviours and forced sex</i>	29
<i>Male to male sex</i>	30
<i>Alcohol consumption</i>	30
<i>Substance and drug use</i>	32
<i>Injecting drug use</i>	33
<i>HIV/AIDS Knowledge, attitudes and beliefs</i>	34
<i>Attitudes and beliefs</i>	36
<i>Attitudes and beliefs</i>	36
<i>Attitudes on HIV testing</i>	37
<i>Participation in HIV/AIDS Prevention activities</i>	38
<i>History of sexually transmitted infections and genital symptoms</i>	38
UNGASS INDICATORS.....	40
DISCUSSION.....	41
PART 3: HSS SURVEY OF STI CLINIC CLIENTS.....	43
SURVEY METHODOLOGY	43
ELIGIBILITY CRITERIA	44
RESULTS	44
<i>Demographic characteristics</i>	44
<i>Sexual behaviours</i>	45
<i>Other sexual behaviours</i>	46
<i>Transactional sex</i>	48
<i>Male to male sex</i>	49
<i>Alcohol consumption</i>	49
<i>Substance and drug use</i>	50
<i>HIV/AIDS Knowledge, attitudes and beliefs</i>	51
<i>Attitudes and beliefs</i>	52
<i>Attitudes towards HIV testing</i>	53
<i>Participation in HIV/AIDS Prevention activities</i>	53
<i>History of sexually transmitted infections</i>	54
<i>Results of STI tests performed</i>	55
UNGASS INDICATORS	56
DISCUSSION.....	57
REFERENCES	58

LIST OF TABLES

TABLE 1: SPECIMENS AND TESTS PERFORMED FOR STIS	4
TABLE 2: OVERVIEW OF THE SURVEY METHODOLOGY, ANTENATAL WOMEN	5
TABLE 3: REPORTED DEMOGRAPHIC CHARACTERISTICS, ANTENATAL WOMEN, VANUATU, 2008	6
TABLE 4: REPORTED MARITAL STATUS AND LIVING ARRANGEMENTS ANTENATAL WOMEN, VANUATU, 2008	7
TABLE 5: REPORTED PREGNANCY CHARACTERISTICS, ANTENATAL WOMEN, VANUATU, 2008	8
TABLE 6: REPORTED PLANNING OF PREGNANCY AND CONTRACEPTION USE, ANTENATAL WOMEN, VANUATU, 2008	9
TABLE 7: REPORTED AGE AT FIRST SEX AND NUMBER OF LIFETIME SEX PARTNERS, ANTENATAL WOMEN, VANUATU, 2008	9
TABLE 8: OTHER SEXUAL BEHAVIOURS, ANTENATAL WOMEN, VANUATU, 2008	10
TABLE 9: REPORTED KNOWLEDGE AND USE OF CONDOMS, ANTENATAL WOMEN, VANUATU, 2008	11
TABLE 10: REPORTED FREQUENCY AND CONSUMPTION OF ALCOHOL IN THE 12 MONTHS BEFORE PREGNANCY, ANTENATAL WOMEN, VANUATU, 2008	12
TABLE 11: DRUG AND SUBSTANCE USE, ANTENATAL WOMEN, VANUATU, 2008	13
TABLE 12: HIV/AIDS KNOWLEDGE, ANTENATAL WOMEN, VANUATU, 2008	14
TABLE 13: HIV/AIDS ATTITUDES AND BELIEFS, ANTENATAL WOMEN, VANUATU, 2008	16
TABLE 14: HIV/AIDS TESTING, ANTENATAL WOMEN, VANUATU, 2008	17
TABLE 15: HIV/AIDS KNOWLEDGE, ATTITUDES AND BELIEFS: PREVENTION ACTIVITIES, ANTENATAL WOMEN, VANUATU, 2008	17
TABLE 16: HISTORY OF STIS, ANTENATAL WOMEN, VANUATU, 2008	18
TABLE 17: GENITAL SYMPTOMS IN THE LAST MONTH, ANTENATAL WOMEN, VANUATU, 2008	19
TABLE 18: RESULTS OF LABORATORY TESTS PERFORMED, ANTENATAL WOMEN, VANUATU, 2008	19
TABLE 19: PREVALENCE OF CHLAMYDIA BY SELECTED DEMOGRAPHIC AND RISK FACTORS, ANTENATAL WOMEN, VANUATU, 2005 AND 2008	21
TABLE 20: OUTCOMES FOR UNGASS INDICATORS, ANTENATAL WOMEN, VANUATU, 2008	22
TABLE 21: OVERVIEW OF THE SURVEY METHODOLOGY, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	24
TABLE 22: DEMOGRAPHIC CHARACTERISTICS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	25
TABLE 23: AGE AT FIRST SEX, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	26
TABLE 24: SEXUAL BEHAVIOURS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	26
TABLE 25: REPORTED CONDOM USE, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	27
TABLE 26: REPORTED TRANSACTIONAL SEX IN THE LAST 12 MONTHS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	28
TABLE 27: OTHER SEXUAL BEHAVIOURS AND FORCED SEX, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	29
TABLE 28: MALE TO MALE SEX, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	30
TABLE 29: ALCOHOL CONSUMPTION IN THE LAST 12 MONTHS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	31
TABLE 30: EVER USED DRUGS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	32
TABLE 31: SUBSTANCE AND DRUG USE, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	33
TABLE 32: INJECTING DRUG USE IN THE LAST 12 MONTHS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	34
TABLE 33: HIV/AIDS KNOWLEDGE, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	35
TABLE 34: HIV/AIDS KNOWLEDGE, ATTITUDES AND BELIEFS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	36
TABLE 35: ATTITUDES AND BELIEFS ON HIV TESTING, YOUTH, VANUATU, 2008	37
TABLE 36: HIV/AIDS PREVENTION ACTIVITIES, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	38
TABLE 37: REPORTED HISTORY OF STIS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	38
TABLE 38: REPORTED HISTORY OF GENITAL SYMPTOMS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	39
TABLE 39 UNGASS INDICATORS, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	40
TABLE 40: OVERVIEW OF THE SURVEY METHODOLOGY IN STI CLINIC PATIENTS	43
TABLE 41: REPORTED DEMOGRAPHIC CHARACTERISTICS, STI CLINIC CLIENTS, VANUATU, 2008	44
TABLE 42: MARITAL STATUS AND LIVING ARRANGEMENTS, STI CLINIC CLIENTS, VANUATU, 2008	45
TABLE 43: REPORTED SEXUAL HISTORY, STI CLINIC CLIENTS, VANUATU, 2008	45
TABLE 44: CONDOM USE, STI CLINIC PATIENTS, VANUATU, 2008	46

TABLE 45: OTHER SEXUAL BEHAVIOURS, STI CLINIC CLIENTS, VANUATU, 2008	46
TABLE 46: REPORTED SEXUAL HISTORY, TRANSACTIONAL SEX, STI CLINIC CLIENTS, VANUATU, 2008	48
TABLE 47: ALCOHOL CONSUMPTION IN THE LAST 12 MONTHS, STI CLINIC CLIENTS, VANUATU, 2008	49
TABLE 48: SUBSTANCE AND DRUG USE, STI CLINIC CLIENTS, VANUATU, 2008	50
TABLE 49 HIV/AIDS KNOWLEDGE, ATTITUDES AND BELIEFS, STI CLINIC CLIENTS, VANUATU, 2008	51
TABLE 50: HIV/AIDS KNOWLEDGE, ATTITUDES AND BELIEFS, STI CLINIC CLIENTS, VANUATU, 2008	52
TABLE 51: HIV/AIDS KNOWLEDGE: HIV TESTING, STI CLINIC CLIENTS, VANUATU, 2008	53
TABLE 52: HIV/AIDS KNOWLEDGE, ATTITUDES AND BELIEFS, PREVENTION ACTIVITIES, STI CLINIC CLIENTS, VANUATU, 2008	54
TABLE 53: HISTORY OF STIS, STI CLINIC CLIENTS, VANUATU, 2008	54
TABLE 54: RESULTS OF LABORATORY TESTS PERFORMED, STI CLINIC CLIENTS, VANUATU, 2008	55
TABLE 55: UNGASS INDICATORS, STI CLINIC CLIENTS, VANUATU, 2008	56

LIST OF FIGURES

FIGURE 1: REASONS FOR NOT USING A CONDOM AT LAST SEX, ANTENATAL WOMEN, VANUATU, 2008	11
FIGURE 2: FREQUENCY OF ALCOHOL CONSUMPTION IN THE LAST 12 MONTHS BY SEX, YOUTH AGED 15 TO 24 YRS, VANUATU, 2008	32
FIGURE 3: FORCED SEX, MALE STI CLINIC CLIENTS, VANUATU, 2008	47
FIGURE 4: FORCED SEX, FEMALE STI CLINIC CLIENTS, VANUATU, 2008	48

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
BSS	Behavioural Surveillance Survey
ELISA	Enzyme Linked Immunosorbent Assay
HIV	Human Immunodeficiency Virus
HSS	HIV Surveillance Survey
PCR	Polymerase Chain Reaction
PICTs	Pacific Island Countries and Territories
RPR	Rapid Plasma Reagin
SGS	Second Generation HIV Surveillance
SPC	Secretariat of the Pacific Community
SPS	STI Prevalence Surveillance
STI	Sexually transmitted Infection
TPPA	Treponema Pallidum Particle Agglutination
UNGASS	United Nations General Assembly Special Session

EXECUTIVE SUMMARY

Vanuatu is comprised of a Y-shaped collection of 80 islands, 65 of these being inhabited. The country spans a distance of 1,100km from the Torres Islands in the far north to the barren Matthew and Hunter Islands in the south. The island republic is divided into six provinces named after the group of islands each province is comprised of:

- Tafea Province
- Shefa Province
- Malampa Province
- Penama Province
- Torba Province
- Sanma Province

This report includes the findings from the three Second Generation Surveillance (SGS) surveys of sexually transmitted infections (STIs) and Human Immunodeficiency Virus (HIV) prevalence and risk behaviour, which were conducted in 2008:

1. STI Prevalence Survey (SPS) among pregnant women,
2. Behavioural Surveillance Survey (BSS) among youth, and
3. HIV Surveillance Survey (HSS) in clients attending an STI clinic.

The Antenatal women's survey was conducted at the Vila Central Hospital, in Port Vila, the same site where it was conducted on the first round of SGS in 2005. The STI clinic attendees and youth surveys were also conducted in Port Vila, Efate in keeping with the previous round of SGS. Information on sexual behaviour and risk factors was collected from all participants through interviewer administered questionnaires. In addition, antenatal clinic attendees were tested for HIV, Hepatitis B virus, syphilis, Chlamydia and gonorrhoea infections, and STI clinic attendees were tested for HIV, Hepatitis B virus and syphilis infections. The surveys were carried out between April 2008 and July 2008.

Key Findings for Antenatal Women

- 303 women aged 15 to 39 years took part in the survey.
- Most women attended for antenatal care in the second (70%) or third (26%) trimester of pregnancy.

- Only 38% of women reported that they had planned their pregnancy and of those who did not plan their pregnancy, 50% did not use any contraceptives in the three months prior to becoming pregnant.
- The mean age at first sexual intercourse was 17.9 years. The average number of partners in the lifetime was three, while the average number of partners in the last 12 months was only one.
- Seven percent of women reported that they had sex with more than 1 partner in the last 12 months.
- Most women had heard of a male condom (91%) and half had heard of a female condom (55%). Only two in five women reported ever using a male condom (43%), while none reported they had ever used a female condom.
- Almost one quarter of women reported that they had been off island in the last 12 months (24%) and of these, 43% reported having sex with someone who was not their partner.
- Over one third of women surveyed reported ever having been forced to have sex.
- The prevalence of consuming alcohol was generally very low. However, one quarter of women reported they had used tobacco (24%) and kava (24%) in the last 12 months.
- While around two thirds of women correctly answered individual questions on HIV transmission and prevention, between 10% and 30% of women did not know the answer to questions.
- Less than half of women agreed that they would be willing to have casual contact with a person if they knew they had HIV, and only one third agreed or strongly agreed that a person should be able to keep their HIV status private.
- STI prevalence was lowest for gonorrhoea (3%) and highest for Chlamydia (25%), for which there was a significant increase from 13.2% in the first round of SGS.¹
- One in twenty women (5%) was found to have an early syphilis infection.
- The prevalence of Hepatitis B was 11.9% and no cases of HIV were detected.

Key Findings for Youth

- 301 youth (155 males and 146 females) aged 15 to 24 years took part in the survey.
- The mean age at first sexual intercourse was 16.7 years for males and 17 years for females.

- Four fifths of males (83%) and three quarters of females (77%) reported ever having sexual intercourse. However, only 71% of males and 56% of females reported having sexual intercourse in the last 12 months.
- Overall half of the males (53%) and over one quarter of females (27%) reported having sex with two or more partners in the last 12 months.
- One third of males (33%) and nearly half of the females (46%) reported that they used a male condom when they first had sex. One in seven females (15%) and one in eleven males (9%) reported that they had always used a condom in the last 12 months.
- Overall, 75 of 109 males (69%) and 24 of 80 females (30%) who had sex in the last 12 months, also reported that they had paid or received money, goods or favours in exchange for sex in the previous 12 months.
- One third of males (30%) and two thirds of females (67%) reported that they had ever been forced to have sex.
- Nearly one fifth of sexually active males reported that they had ever had sexual contact with another man (20 of 111 males). All except one male also reported having insertive sex with another male in the last 12 months.
- Approximately one quarter of males (27%) and females (23%) who reported that they had consumed alcohol in the last 12 months, also reported that they consume five or more drinks during a session at least weekly.
- Kava was the most commonly reported drug used in the last 30 days by males (48%) and females (26%). Significant proportions of males (43%) and females (17%) also reported using marijuana in the last 30 days. Tobacco was the next most commonly reported drug, with 41% of males and 14% of females reporting use in the previous 30 days.
- One in eight males (20) reported injecting drugs in the previous 12 months compared with only two females (1.4%). Reported drugs injected included speed, heroin and coke. More than half of injecting drug users reported needles and syringes had been used by someone else.
- Overall knowledge was generally high for sexual transmission of HIV and knowledge of mother to child transmission. However, the proportions of youth who reported they did not know the answer to individual questions ranged from 8% to 17%.

- Just over half of youth agreed that they would be willing to have casual contact with a person if they knew they had HIV (56%) and only 44% agreed or strongly agreed that a person should be able to keep their HIV status private.
- Most youth believed that it was possible to get a confidential HIV test (91%) although 6% reported that they did not know if it was possible.
- Nearly three quarters of youth (72%) reported that they had seen 'The Love Patrol' while only one third had participated in a HIV education program (30%).
- Over one quarter of youth reported that they had ever been diagnosed with an STI, and gonorrhoea was the most commonly reported infection (21%).
- Two in five females (42%) and one in four males (28%) reported having at least one STI symptom in the last month. However only one third of females who reported having a symptom also reported that had sought treatment (32%) compared with 93% of males.

Key Findings for STI Clinic Clients

- 74 males and 131 females attending the STI Clinic at Wan Smol Bag in Port Vila took part in the survey. The mean age of participants was 23.9 years for males and 23.2 years for females.
- The mean age at first sexual intercourse was 16.9 years for males and 17.4 years for females; 12.9% of males and 6.2% of females had first sex when they were less than 15 years of age.
- 73% of all males and 35% of all females surveyed reported having more than 1 partner in the last 12 months; the average number of partners was four for males and two for females.
- While over half of males and females (56%) reported that they had ever used a condom, only four percent of males and less than two percent of females reported using a condom every time they had sex in the last 12 months.
- Nearly a quarter of survey respondents had been off island in the previous twelve months and of these 35% of the females and 65% of the males had had sex with someone other than their partner while off island.
- Over 40% of males and over 60% of females surveyed reported ever having been forced to have sex against their will.

- One in six males (18%) and one in fifteen females (7%) reported receiving money, goods or favours in exchange for sex, and 11% of males and 1.5% of females reported giving money, good or favours in exchange for sex in the last 12 months.
- Four males (5.4%) reported sex with another man in the previous twelve months.
- Tobacco use was common with over half of males (58%) and one third of females (37%) reporting using in the last 30 days. One quarter of males (26%) and one in fifteen females also reported using marijuana in the last 30 days.
- Although knowledge of sexual transmission of HIV and knowledge of mother to child transmission was generally high, there was some variability between questions and between 5% and 26% of participants reported that they did not know the answer to individual questions.
- No participants were found to have the HIV virus. Hepatitis B surface antigen was detected in 19% of males and 9% of females, while syphilis seropositivity was detected in 7% of males and less than one percent of females.

Recommendations

A number of the recommendations that were made following the first round of SGS in 2004/05 were unable to be implemented but are still valid following this more recent round.¹

- Implement staggered surveys when two or more population groups are to be surveyed. Due to limited personnel it is difficult for Pacific Island countries and territories (PICTs) to manage several surveys simultaneously. If surveys are staggered logistical or technical problems will be more readily identified and resolved, and personnel will have increased opportunity to gain sustainable skills.
- Use probabilistic sampling strategies which help to ensure representative samples and statistically valid estimates from surveys. When convenience sampling is used, there is no way of verifying whether the sample is representative of the population of interest. The other major disadvantage is that findings from future surveys cannot be reliably compared with previous findings. Methodologies are available which enable probabilistic sampling even when sampling frames (population lists) are unavailable.²
- Include high risk groups in future SGS, for example sex workers or men who have sex with men. Successful outcomes from surveys from high risk groups will require formative research e.g. group mapping, preliminary estimation of the size of the populations and the prevalence of risk behaviours in the population(s) of interest. Generic questionnaires

can then be modified to include relevant behaviours and use appropriate language and terms.

Other recommendations based on findings:

- Use findings from the surveys to improve HIV prevention activities.
- Present data to key personnel who can implement changes in policy and programs.
- Modify existing activities and programs using findings from surveys, e.g. sexual behaviours, condom use, knowledge and attitudes on HIV, access to testing for HIV and STIs.
- Continue with STI screening programs implemented in 2008.
- Develop educational activities targeting groups at greater risk for infection.
- Ensure adequate supplies of drugs and commodities are available on a continuous basis for the management of people with STIs and their partners.

INTRODUCTION

Vanuatu Background

Vanuatu is comprised of a Y-shaped collection of 80 islands, 65 of these being inhabited. The country spans a distance of 1,100km from the Torres Islands in the far north to the barren Matthew and Hunter Islands in the south. The island republic is divided into six provinces named after the group of islands each province is comprised of:

- Tafea Province
- Shefa Province
- Malampa Province
- Penama Province
- Torba Province
- Sanma Province

The census carried out in 1999 officially recorded Vanuatu's population at 186, 678. Most of Vanuatu's population were living in rural areas (78.5%), though the current trend is of general migration to the two urban centres of Luganville and Port Vila. It has been estimated that the overall population of Vanuatu has grown at a rate of 3% every year over the past 10 years, growth rate estimates in urban centres (4.6%) being twice that of rural areas (2.6%). The average number of persons per household is 4-5 and women have on average 4 to 5 children (total fertility rate of 4.5).

HIV and STIs in the Pacific

Second Generation Surveillance (SGS) surveys conducted among antenatal women from six Pacific Island Countries and Territories (PICTS) in 2004/2005 found a high prevalence of sexually transmitted infections (STIs), of which Chlamydia was the most commonly detected. Prevalence estimates for Chlamydia ranged from 6% to 29% for pregnant women from the 6 PICTs, with estimates highest among women aged less than 25 years.^{1,3} Vanuatu was one of the 6 PICTs included in this first round of SGS, and STI testing of pregnant women estimated the prevalence of Chlamydia at 13.2%, gonorrhoea at 2.4% and syphilis at 2.8%. As STIs can result in serious complications in adults and the babies of infected women, SGS highlighted the need for introducing systems and interventions to improve this situation.

Although the reported prevalence of the Human Immunodeficiency Virus (HIV), which causes Acquired Immunodeficiency Syndrome (AIDS), is low in all PICTs except New Guinea, the spread of HIV infection remains a real possibility.^{4,5} This is because risk factors for acquiring HIV are very similar to those associated with acquiring other STIs, the presence of both ulcerative and non-ulcerative STIs facilitates the transmission of HIV⁶ and evidence indicates a high prevalence of high risk behaviours in the Pacific.

The risk of the increased prevalence of HIV/AIDS has resulted in increased attention being given to STIs and their control as an intervention to limit the spread of an HIV epidemic. One recent intervention has included the introduction of pilot programs for screening adults for Chlamydia, gonorrhoea and trichomoniasis in a number of PICTS in 2008. These programs will help to reduce the prevalence of STIs and facilitate ongoing surveillance of the prevalence these infections.

Why do Second Generation Surveillance?

Second generation surveillance (SGS) involves strengthening existing HIV surveillance systems to improve the quality and breadth of information. SGS uses information from ongoing routine data collection systems *and* includes periodic collection of behavioural and biological data. SGS includes both surveillance of both the general population and specific high risk subgroups.

SGS aims to:

- Increase the understanding of trends over time
- Increase knowledge of risk behaviours driving trends
- Use flexible tools that can change according changes over time
- Make better use of existing surveillance data

SGS in Low Prevalence Settings

SGS aims to provide an early warning of groups who are a high risk and the associated risk behaviours.

Comprehensive SGS surveillance activities in low-level epidemics include

- cross-sectional behaviours surveys
- Surveillance of STI's,
- HIV serosurveillance,
- HIV and AIDS Case reporting

- Screening donated blood.

This report includes the findings from the three SGS surveys that were conducted in 2008:

1. STI Prevalence Survey (SPS) among pregnant women,
2. Behavioural Surveillance Survey (BSS) among youth, and
3. HIV Surveillance Survey (HSS) in clients attending an STI clinic.

Specimen Collection and testing for SGS

The STI prevalence survey involved the collection of a 10-15 ml first catch urine specimen from each participant to test for the presence of Chlamydia and gonorrhoea, and a blood sample to test for syphilis, HIV and hepatitis B surface antigens. The HIV prevalence surveys included the collection of blood for syphilis, HIV and hepatitis B surface antigens.

Urine specimens were transferred to the central laboratory in Port Vila and frozen at minus twenty degrees Celsius until subsequent shipment to Melbourne. Frozen urine specimens were sent to the Molecular Microbiology Laboratory at the Royal Women's Hospital in Melbourne, Australia.

Laboratory testing involved amplification of *C.trachomatis* and *N.gonorrhoeae* sequences using the ROCHE COBAS Amplicor (Roche Diagnostics, Branchburg, New Jersey, United States of America). All positive *N.Gonorrhoeae* specimens were then confirmed by an alternate Polymerase Chain Reaction (PCR) assay, using primers and probes directed at a 90 base pair region of OPA gene.⁷

For participants involved in SPS and HSS surveys, a 10 ml blood sample was taken for testing. Screening for Syphilis by Rapid Plasma Reagin (RPR) and Treponema Pallidum Particle Agglutination test (TPPA), and for Hepatitis B and HIV by Enzyme Linked Immunosorbent Assay (ELISA) (Determine and Serodia) was undertaken at the Serology Unit Vila at the Central Hospital in Port Vila. Samples for confirmatory tests for HIV were sent to the Pasteur Institute, Noumea, New Caledonia.

Table 1: Specimens and tests performed for STIs

Infection	Specimen	Tests
Chlamydia	Urine	PCR Assay
Gonorrhoea	Urine	PCR Assay
Syphilis	Blood	TPPA RPP RPR titre (if RPR was reactive). Cases were recorded as positive if titres were greater than or equal to 1:8.
Hepatitis B	Blood	
HIV antibodies	Blood	ELISA: Determine and Serodia
HIV Confirmatory	Blood	Confirmed according to the regional algorithm

Data analysis

Data from the survey was analysed using EpiInfo V3.4.2 and Excel 2007.

PART 1: SPS SURVEY OF ANTENATAL WOMEN

Survey Methodology

Table 2 shows an overview of the survey methodology used for the STI prevalence survey of Antenatal women.

Table 2: Overview of the survey methodology, Antenatal Women

Methodology	Survey details
Population	<i>Antenatal women</i>
Survey type	<i>STI Prevalence Survey (SPS)</i>
Sampling method	<i>Consecutive sampling</i>
Inclusion criteria	<i>Women attending for the first time for the pregnancy and women who had not previously been tested for an STI during their pregnancy</i>
Target sample size	<i>300</i>
Final sample size	<i>303</i>
Interview location	<i>Antenatal clinic at Vila Central Hospital, Port Vila, Vanuatu</i>
Administration of interview	<i>Nurses from the antenatal clinic</i>
Type of consent	<i>Verbal. Interviewers signed a declaration not to release any information without the participants approval</i>
Time required for the interview	<i>25 to 30 minutes</i>
Specimens collected	<i>Blood and urine</i>
Laboratory testing	<i>Gonorrhoea and Chlamydia by PCR assay; Blood tests for HIV, Hepatitis B virus and syphilis</i>
Data collection period	<i>April to July 2008</i>

The interviewers provided women with details of the requirements for participation, and the confidential and anonymous nature of the survey. When the interview was completed a specimen of venous blood was drawn and participants were asked to provide 10 - 15 ml of first catch urine.

Eligibility criteria

Women between the ages of 15 and 49 years, who were attending for the first time during the pregnancy or had not been tested for an STI during the pregnancy, were eligible to participate. A total of 305 women were seen during the survey period and of these, two women declined to take part in the survey.

Results

Demographic characteristics

The demographic findings for women who took part in the survey are summarised in Table 3.

Table 3: Reported demographic characteristics, Antenatal Women, Vanuatu, 2008

	N	%		N	%
Age group			Highest education completed		
16 to 24 yrs	155	51.2	Never attended school	5	1.7
25 to 39 yrs	148	48.8	Primary	124	40.9
Total	303	100	Junior High School	85	28.1
			Senior High School	78	25.7
Ethnicity:			Tertiary	11	3.6
Melanesian	294	97.0	Total	303	100
Micronesian	3	1.0			
Polynesian	3	1.0	Province of Birth		
Other	3	1.0	Shefa	137	45.4
Total	303	100.0	Malampa	58	19.2
Occupation			Tafea	58	19.2
Housewife/home duties	138	45.8	Penama	23	7.6
Not employed	73	24.3	Sanma	18	6.0
Clerical/Office work	52	17.3	Torba	5	1.7
Other	38	12.6	Overseas	3	1.0
Total	301	100.0	Total	302	100

Participants were aged 15 to 39 years, with similar proportions of women aged 15 to 24 (51%) and 25 to 39 (49%). The mean age of women was 25.3 years, with a median age of 24 years.

The majority of women were Melanesian (97%) and 45% were born in Shefa province of Vanuatu. All participating women lived in the urban areas of Port Vila. One quarter of women (27 %) reported that they had been away from their home village for more than one month continuously in the last 12 months.

Just over one third of women aged 15 to 24 years (39%) and nearly one half aged 25 to 39 years (47%) had not completed junior high school. The most common occupation reported was housewife/home duties (46%) followed by not being employed (24%). 'Other' occupations included retail and the hospitality industry.

The reported marital status and living arrangements of the women are summarised in Table 4.

Table 4: Reported Marital Status and Living Arrangements Antenatal Women, Vanuatu, 2008

	N	%
Marital Status		
<i>Ever married</i>	87	28.7
<i>Currently married</i>	85	28.1
Still in a relationship with the father of your unborn child	260	86.4
Living Arrangements		
<i>Living with your spouse</i>	87	28.8
<i>Living with a sex partner (non-married)</i>	137	45.4
<i>Not living with any sex partner</i>	78	25.8

A higher proportion of women aged 25 to 39 years (47%) reported ever having been married compared with women aged 15 to 24 years (12%). The majority of women were still in a relationship with the father of their unborn baby (86%) and nearly three quarters were currently living with a spouse or sex partner (74%).

The most commonly reported occupations for partners were construction workers, labourers or landscaping workers (27%), professionals such as doctors or lawyers (12%) and farmers (10%). One in six women reported that their partner was unemployed (17%).

Pregnancy Characteristics and Contraception Use

Table 5 shows the reported pregnancy characteristics for women taking part in the survey.

Table 5: Reported pregnancy characteristics, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
Number of previous pregnancies						
0	106	67.9	15	10.2	121	39.8
1	36	23.1	36	24.5	72	24.0
2	12	7.7	43	29.3	55	18.1
3	2	1.3	27	18.4	29	9.5
4 or more	0	0	26	10.2	26	8.6
Number of miscarriages						
0	142	91.0	119	81.5	261	86.5
1	13	8.3	22	15.1	35	11.6
2 or more	1	0.6	5	3.4	6	2.0
Number of live births						
0	106	67.9	15	10.3	121	39.9
1	37	23.7	38	26.0	75	25.1
2 or more	13	8.3	93	63.7	106	35.0
Number of living children						
0	106	67.9	14	9.5	120	39.5
1	38	24.4	42	28.6	81	26.6
2	11	7.1	40	27.2	51	16.8
3	1	0.6	25	17.0	26	8.6
4 or more	0	0	26	17.7	26	8.6
Trimester of current pregnancy						
1	10	6.5	3	2.1	13	4.3
2	110	71.0	99	68.8	209	69.7
3	35	22.6	42	29.2	77	26.0

Two thirds of women aged 15 to 24 years were primiparous (68%) compared with only 10% of women aged 25 to 39 years. Approximately one in ten women aged 15 to 24 years (9%) reported having at least one miscarriage compared with 18% of women aged

25 to 39 years. Overall, only 4% of women were in the first trimester pregnancy when first attending the antenatal clinic for their pregnancy.

The majority of women (61%) reported that they had not planned their current pregnancy (Table 6). Half of women who had not planned their pregnancy reported that they had not used contraceptive in the three months prior to their pregnancy. The most common forms of contraceptive used were male condoms (9%) and withdrawal (9%).

Table 6: Reported planning of pregnancy and contraception use, Antenatal Women, Vanuatu, 2008

	N	%
Were trying to get pregnant	116	38.4
Contraceptives used in the 3 months before pregnancy, for women who didn't plan their pregnancy*		
- No method	94	50.5
- Birth control pills	28	15.1
- Withdrawal	28	15.1
- Depo Provera	19	10.2
- Male condoms	17	9.1
- Natural (Calendar, rhythm)	12	6.5

Sexual behaviours

The mean age of first sexual intercourse was a little lower for younger women; 17.4 years for women aged 15 to 24 years and 18.8 years for women aged 25 to 39 years (Table 7). The average number of lifetime sex partners was 2.9 for both age groups.

Table 7: Reported age at first sex and number of lifetime sex partners, Antenatal Women, Vanuatu, 2008

	15 to 24 years	25 to 39 years	Total
Age when first had sex (years):			
Mean	17.4	18.8	17.9
Age range	12 to 23	13 to 27	12 to 27
Number of sex partners in lifetime:			
Mean number of partners	2.9	2.9	2.9
Range	2 to 29	1 to 10	1 to 29
Number of sex partners in last 12 months:			
Mean number of partners	1.1	1.1	1.1
Range	1 to 7	1 to 4	1 to 7

A small proportion of women (4%) reported having two or more sexual relationships at the same time in the preceding 12 months (Table 8).

Nearly one quarter of women reported they had been off Island in the previous 12 months, and of these, 43% reported engaging in sexual activities with someone other than their partner while off island.

Just over one third of women reported that they had ever been forced into having sex (37%). The most commonly reported persons who forced sex were partners (52%), followed by strangers (14%), family friends (10%) and relatives (9%).

Table 8: Other sexual behaviours, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
More than two sexual relationships at the same time in last 12 months	7	4.5	4	2.7	11	3.6
Been off Island in last 12 months	34	22.1	38	25.7	72	23.8
Had sex while off Island other than with partner	12	37.5	18	47.4	30	42.9
Ever forced into having sex	62	40.8	47	32.2	109	36.6

Reported knowledge and use of condoms

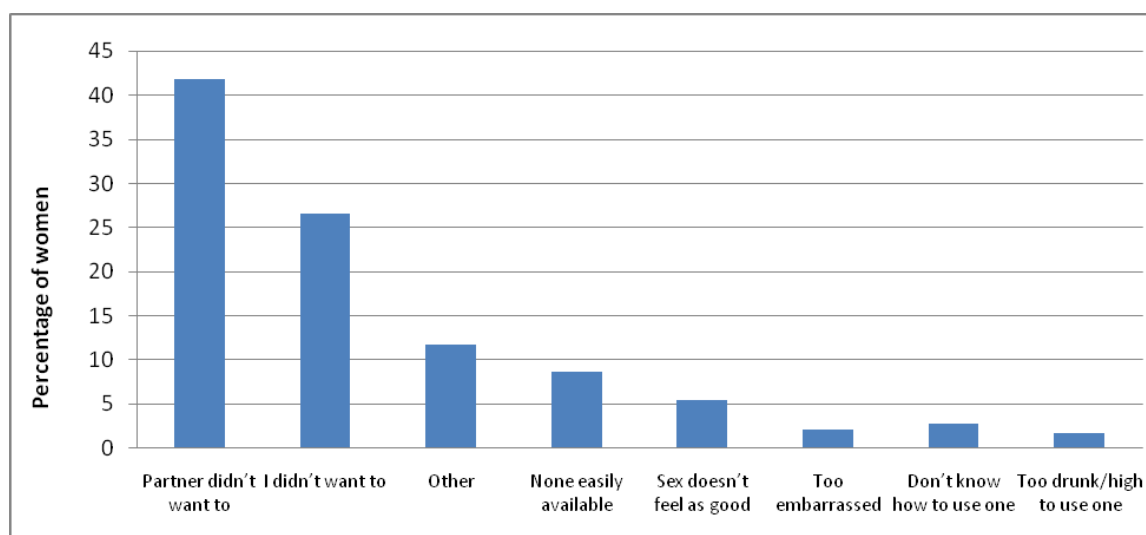
While the majority of women had heard of male condoms (91%), only 55.1% had heard of female condoms (Table 9). One-third of women (34%) reported that they had used a male condom the first time they had sex. Women aged 15 to 24 years (42%) were nearly twice as likely to have used a condom at first sex compared to those 25 to 49 years (24%). Less than half of women (43%) had ever used a condom and one in seven reported using a condom at last sexual intercourse (15%).

The most common reasons for not using a condom at last intercourse included: 'partner didn't want to' (41%), 'I didn't want to' (30%), and 'none easily available' (10%). Figure 1 shows distribution of reported reasons for not using a condom at last intercourse.

Table 9: Reported knowledge and use of condoms, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
Had ever heard of a male condom	134	86.5	141	95.2	275	90.8
Had ever heard of a female condom	80	51.6	87	58.8	167	55.1
Used a condom the first time had sex:						
Yes male condom	65	42.5	36	24.3	101	33.6
Yes female condom	0	0.0	0	0.0	0	0.0
Ever used a condom:						
Male condom	39	42.4	48	42.9	87	42.6
Female condom	0	0.0	0	0.0	0	0.0
Condom used at last sex:						
Male condom	24	15.8	21	14.7	45	15.3

Figure 1: Reasons for not using a condom at last sex, Antenatal Women, Vanuatu, 2008



* Responses for 250 women who reported they did not use a condom at the last sexual intercourse.

Alcohol and drug use

Table 10 shows the reported frequency of alcohol use and the number of standard drinks normally consumed by antenatal women during the 12 months before they became pregnant.

Table 10: Reported Frequency and Consumption of Alcohol in the 12 months before pregnancy, Antenatal Women, Vanuatu, 2008

	N	%
Frequency of alcohol use		
<i>4 or more times a week</i>	3	1.0
<i>2 to 3 times a week</i>	6	2.0
<i>2 to 4 times a month</i>	40	13.4
<i>Monthly or less</i>	47	15.7
<i>Never</i>	203	67.9
Number of standard drinks usually consumed		
<i>1 or 2</i>	42	49.5
<i>3 or 4</i>	28	32.9
<i>5 or 6</i>	12	14.2
<i>7 or more</i>	3	3.6
Consumed 5 or more standard drinks in the 12 months prior to becoming pregnant:		
<i>Weekly</i>	2	2.0
<i>Less than monthly</i>	20	18.4
<i>Monthly</i>	18	20.4
<i>Never</i>	58	59.2
Has drunk alcohol while pregnant	6	2.0

Over two-thirds of the women reported they had not consumed alcohol during the 12 months before they became pregnant. Most women who consumed alcohol, drank less often than weekly, and only 3% of women overall reported consuming alcohol two or more times per week.

Almost half of women who reported consuming alcohol reported that they usually consumed one to two standard drinks on a typical drinking occasion. However one in five women (18%) reported they normally consumed five or more drinks. The average number of drinks consumed was three (range: 1 to 15).

Drug and substance use

Table 11 shows the proportions of antenatal women who reported ever using drugs and drug use in the previous 12 months.

Table 11: Drug and substance use, Antenatal Women, Vanuatu, 2008

Drug	Ever used		Used in last 12 months		
	N	% all respondents	N	% ever users	% all respondents
Tobacco	111	36.6	74	66.7	24.4
Kava	108	35.6	72	66.7	23.8
Marijuana/cannabis	19	6.3	5	26.3	1.7
Inhalants/Sniffings	1	0.3	1	100.0	0.3

Over one third of women reported ever using tobacco (36.6 %) and a quarter reported using tobacco in the previous 12 months (24.4%). Two thirds of women who had ever used tobacco reported use in the previous 12 months (66.7%).

Findings for kava use were almost identical to those for tobacco, with over one third of the women reporting they had ever consumed Kava (35.6%), and one quarter reporting consumption in the last 12 months (23.8%). Overall, two thirds of women who had ever consumed Kava, reported consumption in the last 12 months (66.7%).

Only 6% of women reported ever using marijuana and less than 2% reported using marijuana in the last 12 months. Inhalant use was very uncommon, with only one woman reporting ever having sniffed inhalants.

One woman reported that she had injected drugs for recreational purposes in the previous 12 months.

HIV/AIDS Knowledge and attitudes

Responses for knowledge of transmission and prevention of HIV, and common fallacies for acquiring HIV are shown in Table 12.

Table 12: HIV/AIDS Knowledge, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
Have you ever heard of HIV or the disease called AIDS?						
Yes	143	92.3	134	91.2	277	91.7
No	12	7.7	13	8.8	25	8.3
Having sex with only one, uninfected, faithful partner can reduce the chance of getting HIV						
True	86	59.7	95	71.4	181	65.1
False	13	9	13	9.8	26	9.4
Don't know	45	31.3	25	18.8	70	25.5
Using condoms correctly can reduce the chance of getting HIV						
True	110	76.4	106	80.3	216	78
False	4	2.8	4	3.0	8	2.9
Don't know	30	20.8	22	16.7	52	19.1
A healthy looking person can be infected with HIV						
True	116	80.6	113	85.0	229	82.4
False	7	4.9	3	2.3	10	3.6
Don't know	21	14.6	17	12.8	38	14.0
A person can get HIV from mosquito bites						
True	42	29.2	38	28.8	80	28.9
False	64	44.4	50	37.9	114	41.2
Don't know	38	26.4	44	33.3	82	30.0
A person can get HIV by sharing a meal with someone who is infected with HIV						
True	16	11.1	7	5.3	23	8.3
False	106	73.6	107	80.5	213	76.6
Don't know	22	15.3	19	14.3	41	15.1
A pregnant woman who has HIV or AIDS can pass on HIV to her unborn baby						
True	127	88.2	118	88.7	245	88.4
False	3	2.1	1	0.8	4	1.4
Don't know	14	9.7	14	10.5	28	10.1

While over 90% of women reported they had heard of HIV/AIDS, knowledge of sexual transmission and prevention, and common fallacies was not consistently high for antenatal women.

Approximately four fifths of women were aware that using condoms correctly can reduce the chance of acquiring HIV (78.0%), while only two thirds agreed that the chance of acquiring HIV can be reduced by having only one uninfected, faithful partner (65.1%).

Most women knew that a healthy looking person can be infected with HIV (82.4%) and HIV cannot be acquired by sharing a meal with a person with this condition (76.6%). However, less than half of the women knew that HIV cannot be acquired from mosquito bites (41.2%).

The majority of women were aware that a woman who has HIV can pass the virus onto her unborn baby (88.4%).

While only small proportions gave incorrect responses to questions, far more women indicated that they did not know the answer to these questions. The prevalence of not knowing answers ranged from 10.1% for knowing that an infected mother can pass on HIV to her unborn baby, to 30% for knowing HIV cannot be acquired from mosquito bites.

Attitudes and beliefs

Outcomes on attitudes and beliefs towards people living with HIV/AIDS are shown in Table 13. The questions explored attitudes towards casual contact with persons with HIV, caring for a family member with HIV and the individual's right to privacy of their HIV status.

Six in ten women reported they would be willing to care for a family member who became ill with HIV in their own household (60.7%) and that if a family member became ill with HIV they would not want it to remain a secret (60.1%).

Less than half of women reported that they would be willing buy vegetables from a vendor or shopkeeper if they knew that the vendor had HIV (46.5%). As might then be expected, fewer women subsequently agreed that a female teacher, who has HIV though is not sick, should be allowed to continue to teach (36.0%).

Less than one third of women (31.4%) agreed or strongly agreed that a person should be able to keep their HIV status private.

Table 13: HIV/AIDS Attitudes and Beliefs, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
Would be willing buy fresh vegetables from a shopkeeper or vendor who has HIV?						
Yes	65	41.9	76	51.4	141	46.5
No	58	37.4	53	35.8	111	36.6
Don't know	32	20.6	19	12.8	51	16.8
If a member of your family became ill with HIV, would want it to remain secret?						
Yes	41	26.6	33	22.4	74	24.6
No	88	57.1	93	63.3	181	60.1
Don't know	25	16.2	21	14.3	46	15.3
If a family member became sick with HIV, would be willing to take care of her/him in own household?						
Yes	87	56.1	97	65.5	184	60.7
No	40	25.8	28	18.9	68	22.4
Don't know	28	18.1	23	15.5	51	16.8
If a female teacher has HIV and is not sick, she should be allowed to continue teaching?						
Should be allowed	50	33.1	57	39.0	107	36.0
Should not be allowed	50	33.1	51	34.9	101	34.0
Don't know / not sure / depends	51	33.8	38	26.0	89	30.0
A person should be able to keep his/her HIV status private						
Strongly agree	28	18.1	37	25.2	65	21.5
Agree	14	9.0	16	10.9	30	9.9
Disagree	54	34.8	49	33.3	103	34.1
Strongly disagree	28	18.1	20	13.6	48	15.9
Don't know	31	20.0	25	17.0	56	18.5

Access to HIV testing

The majority of women (90.7%) agreed that it was possible to get a confidential HIV test in their community (Table 14). Of the 28 respondents who did not believe that it was possible to get a confidential test, the most common reasons were that 'the testing site was too public' (32%), 'the testing site was too difficult to get to' (18%) and that 'other people would find out' (14%). There were only 28 responses to the question assessing

whether women had ever had an HIV test and all respondents reported they had not had an HIV test previously.

Table 14: HIV/AIDS testing, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
It is possible to get a confidential test to find out if you have HIV?						
Yes	137	88.4	137	93.2	274	90.7
No	5	3.2	5	3.4	10	3.3
Don't know	13	8.4	5	3.4	18	6

Participation in HIV/AIDS prevention activities

Table 15 summarises the responses on participation in HIV/AIDS awareness and prevention activities. The most common medium for obtaining messages about HIV or AIDS, with was radio, with 91% of women reporting they obtained information in this way.

Nearly three quarters of women (72%) had seen the serial *"The Love Patrol"*, a locally produced series that was aired on television and also made available on CD-Rom.

Just under one third of women had participated in a HIV education program (30%) and just over one third reported attending an HIV community event (36%).

Table 15: HIV/AIDS Knowledge, Attitudes and Beliefs: Prevention activities, Antenatal Women, Vanuatu, 2008

HIV Prevention Activity	N	%
Heard messages about HIV on radio	278	91.7
Seen messages about HIV on TV	0	0.0
Read messages about HIV in newspapers	218	71.9
Has seen "The Love Patrol"	217	71.6
Participated in HIV education program	91	30.0
Attended HIV community event	109	36.0

History of sexually transmitted infections

Reported history of sexually transmitted infections (STIs) is shown in Table 16.

Table 16: History of STIs, Antenatal Women, Vanuatu, 2008

History of STIs	N	%
Had ever been diagnosed with a sexually transmitted disease or infection	38	12.5
Infection(s) respondents were diagnosed with		
<i>Gonorrhoea</i>	30	9.9
<i>Syphilis</i>	0	0.0
<i>Trichomonas</i>	3	1.0
<i>Genital Herpes</i>	0	0.0
<i>Genital Warts</i>	2	0.7
Sexual partner(s) were also treated	20	52.6

One in eight antenatal women (12.5%) reported that they had been diagnosed with STI in the past. The majority of women reported that they had been diagnosed with gonorrhoea.

Overall, nearly two thirds of women (63.2%) aged 25 to 39 years and 42.1% 15 to 24 years reported that their sex partners had also been treated.

Genital symptoms in the last month

Table 17 shows the prevalence of STI symptoms in the last month for antenatal women. The most common symptom reported was abdominal pain during sex (44%) followed by genital or anal discharge (20%) and rash, sore or ulcer on the genitals (14%).

Overall, over half of all women (52%) reported having at least one symptom in the last month.

Only one fifth of women had sought assessment of their symptoms, yet almost all women (93%) reported they would seek care if they were worried that they had a STI.

Table 17: Genital symptoms in the last month, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N	%	N	%	N	%
Symptoms in the last month:						
<i>Lower abdominal pain</i>	80	51.6	53	35.8	133	43.9
<i>Genital or anal discharge</i>	36	23.2	23	15.5	59	19.5
<i>Rash, ulcer or sore around the genitals</i>	23	14.8	18	12.2	41	13.5
<i>At least one symptom</i>	94	60.6	64	43.5	158	52.1
Sought treatment for symptoms	20	21.5	12	19.0	32	20.5
If worried you had an STI where would you go for help:						
<i>Health clinic</i>	140	91.5	139	95.2	279	93.3
<i>Faith healer</i>	6	3.9	6	4.1	12	4.0
<i>Traditional healer</i>	6	3.9	1	0.7	7	2.3
<i>Would not get help</i>	1	0.7	0	0.0	1	0.3

Results of STI tests performed

Table 18 summarises the results of STI tests performed during SGS.

Table 18: Results of Laboratory Tests Performed, Antenatal Women, Vanuatu, 2008

	15 to 24 years		25 to 39 years		Total	
	N tested	% positive	N tested	% positive	N tested	% positive
Chlamydia	96	30.2	71	18.3	167	25.1
Gonorrhoea	96	4.2	71	1.4	167	3.0
Hepatitis B (Antigen)	156	12.2	147	11.6	303	11.9
HIV	155	0.0	148	0.0	303	0.0
Syphilis	155	4.5	147	5.4	302	5.0

Table 18 shows that one quarter of women (25.1%) were found to have Chlamydia.ⁱ Chlamydia was more commonly diagnosed among women aged 15 to 24 years (30%)

ⁱ Unfortunately, 136 of 303 urine samples were misplaced, so were unable to be sent off to Australia for testing for presence of Chlamydia and gonorrhoea.

compared with women aged 25 to 39 years (18%). Gonorrhoea was detected in specimens from five (3%) women who were tested. All five women with gonorrhoea were also found to have a Chlamydia infection.

Five percent of women were found to have 'early' syphilis infections, with the RPR titre of all reactive tests of 1:2. One in eight women (11.9%) was found to have the hepatitis B surface antigen.

There were no confirmed positive HIV test results among the 303 women tested.

Table 19 shows the reported prevalence of Chlamydia by selected demographic and risk factors for SGS conducted in 2005 and 2008. In 2005, there was found to be a significant difference in the prevalence of Chlamydia by age group (19.7% versus 7.3%. chi square 9.7, $p < 0.01$). There was limited power to test for differences due to relatively low numbers of women tested, and no statistically significant differences were identified using chi square tests in 2008 except for concurrent partners in the previous twelve months.

Table 19: Prevalence of Chlamydia by selected demographic and risk factors, Antenatal Women, Vanuatu, 2005 and 2008

	2005		2008	
	N tests	%	N tests	%
Age				
<25 years	137	19.7*	95	29.5
≥ 25 years	151	7.3	71	18.3
Currently married				
Yes	116	4.3	52	25.0
No	170	19.4	113	23.9
Highest level of education				
Never attended	5	20.0	5	60.0
Primary	121	9.1	64	23.4
Secondary	145	16.6	89	24.7
Higher	14	14.3	8	12.5
Age at first sex				
<18 years	100	16.0	74	27.0
>18 years	162	11.1	77	20.8
N of sex partners in life				
One	89	9.0	56	33.9
Two or more	195	15.4	108	19.4
Sex partners in last 12 months				
One	256	11.7	148	23
Two or more	23	30.4	15	46.7
Paid or received money or favours for sex in last 12 months				
Yes	6	50.0	6	33.3
No	281	12.5	160	24.4
Concurrent partner in last 12 months				
Yes	12	25	9	55.6*
No	274	12.8	157	22.9
Ever used a male condom				
Yes	143	17.5	45	15.6
No	142	9.2	121	28.1

**Denotes statistical significance*

Table 20 shows outcomes for United Nations General Assembly Special Session (UNGASS) indicators. This shows a lower proportion of women aged 25 to 49 years reporting sexual intercourse with more than one partner in the last 12 months (4.8 %) compared with women aged 15 to 24 years (9.7%).

Table 20: Outcomes for UNGASS Indicators, Antenatal Women, Vanuatu, 2008

	15 to 24 yrs		25-49 yrs	
	N	%	N	%
7. Percentage of women aged 15-49 who received an HIV test in the last 12 months and who know their results.	0	0	0	0
13. Percentage of antenatal women aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.	33	22.8		
15. Percentage of antenatal women aged 15-24 who have had sexual intercourse before the age of 15 years.	18	12.2		
16. Percentage of antenatal women aged 15-49 who have had sexual intercourse with more than one sexual partner in the past 12 months.	15	9.7	7	4.8
17. Percentage of antenatal women aged 15-49 who have had sexual intercourse with more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse.	5	33.3	3	42.9

Discussion

Although no cases of HIV were detected, the overall prevalence of STIs and blood borne infections among antenatal women was high. The prevalence of Chlamydia was substantially higher in 2008 (25%) compare to the first round of SGS in 2004/05 (13%).¹ One in twenty women (5%) was also found to have an early syphilis infection, which is a serious health risk for both mother and child.⁸ In addition, 12% of women were found to have Hepatitis B, which can have long-term health implications.⁹

Although most women had heard of male condoms (90%), less than half (42%) had ever used one. One in eight women aged 15 to 24 years reported sex before 15 years of age (12%), and one in ten women aged 15 to 24 years (9.7%) and one in twenty women aged 25 to 43 years reported sex with more than one partner in the last 12 months.

Educational campaigns and peer education should target safer sex practises and recommend attendance for regular screening among sexually active women of childbearing age, to increase prevention and/or early detection of these infections.

Only 65% of women correctly identified that having only one faithful partner could reduce the risk of acquiring HIV and only 41% knew that HIV could not be acquired from mosquito bites. In addition, more than half of women reported that they would avoid casual contact with a shopkeeper or vendor if they knew they had HIV suggesting concern about contracting the illness through casual contact and/or fear of discrimination through association with persons who have HIV. This information should be used when revising ongoing HIV educational campaigns run by the MOH.

Although in Vanuatu it is recommended that women attend for their first visit to the antenatal clinic during the first trimester of pregnancy, most women surveyed attended for antenatal care during the second (70%) or third (26%) trimester of pregnancy. Increased awareness of the importance of attending in early pregnancy is recommended to minimise potential complications for women and babies. As one in twenty women was found to have early syphilis, this is an important measure to reduce the risk of congenital syphilis.

Only 38% of women reported that they had planned their pregnancy and of those who did not plan their pregnancy, 50% did not use any contraceptives in the three months prior to becoming pregnant. Identification of barriers to contraceptive use and increased awareness of available contraception would be of value in reducing this trend.

PART 2: BEHAVIOURAL SURVEILLANCE SURVEY OF YOUTH

Survey Methodology

Table 21 provides an overview of the survey methodology used for the survey. Youth were recruited using convenience sampling over a period of a week until the final sample size was reached.

Table 21: Overview of the survey methodology, Youth aged 15 to 24 yrs, Vanuatu, 2008

Methodology	Survey details
Population	Youth aged 15 to 24 years
Survey type	Behavioural survey
Sampling method	Convenience sampling
Inclusion criteria	Youth aged 15 to 24 years
Target sample size	300
Final sample size	301
Interview location	Public places, wharf, youth meeting places
Administration of interview	Interview administered
Type of consent	Verbal
Time required for the interview	25 to 30 minutes
Specimens collected	Nil
Data collection period	10 th to 17 th April 2008

Interviews were conducted in private by trained interviewers and all responses were recorded onto coded interview sheets. Interviewers signed a declaration not to release any information without the participant's approval.

Eligibility criteria

Youth aged between 15 years and 24 years were eligible to be enrolled provided they gave informed verbal consent and they had not been previously interviewed. None of the eligible youth seen declined to take part.

Results

Demographic characteristics

Table 22 shows that a slightly higher proportion of males compared with females participated in the youth survey. Just over half of the participants were aged 15 to 19 years (54%) and the mean age of participants was 19.6 years.

More than half of youth who took part in the survey were born in Shefa province (59%) and the vast majority of youth were Melanesian (99%). All youth resided in urban areas. Just under half of the participants had completed junior high school only (48%) and a further third had completed senior high school or higher (33%). Only two participants (males) were married.

Table 22: Demographic characteristics, Youth aged 15 to 24 yrs, Vanuatu, 2008

	N	%		N	%
Sex			Province of birth		
<i>Female</i>	146	48.5	<i>Malampa</i>	44	14.6
<i>Male</i>	155	51.5	<i>Penema</i>	23	7.6
<i>Total</i>	301	100.0	<i>Sanma</i>	22	7.3
			<i>Shefa</i>	177	58.8
Age Group			<i>Tafea</i>	30	10
<i>15 to 19 yrs</i>	162	53.8	<i>Torba</i>	5	1.7
<i>20 to 24 yrs</i>	139	46.2	<i>Total</i>	301	100.0
<i>Total</i>	301	100.0			
			Highest level of education		
Ethnicity			<i>Never attended school</i>	2	0.7
<i>Melanesian</i>	298	99.0	<i>Primary</i>	56	18.6
<i>Micronesian</i>	2	0.7	<i>Junior High School</i>	144	47.8
<i>Mixed ethnicity</i>	1	0.3	<i>Senior High School</i>	74	28.6
<i>Total</i>	301	100.0	<i>Tertiary</i>	13	4.3
			<i>Total</i>	289	100.0

Sexual behaviours

The mean age of first sexual intercourse was slightly lower for males (16.7 years) compared with females (17.1 years). The age of first sex ranged from 10 to 21 for males and 10 to 22 for females (Table 22).

Table 23: Age at first sex, Youth aged 15 to 24 yrs, Vanuatu, 2008

Age at first sex (years):	Male	Female	Total
Mean age	16.7	17.0	16.9
Median age	17	17	17
Age range	10 to 21	10 to 22	10 to 22

Two thirds of youth who had ever had sex reported that the person they first had sex with was younger or the same age as themselves (Table 24).

Over eight in 10 males (85.3%) and almost three quarters of females (72.3%) reported having sexual intercourse in the previous 12 months. The mean number of sex partners in the last 12 months was 4.1 for males and 2.1 for females. Nearly 7% of respondents reported that they did not know how many sex partners they have had in the last 12 months.

Table 24: Sexual behaviours, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Ever had sexual intercourse	129	83.2	112	76.7	241	80.1
Age of person respondent first had sex with						
<i>Younger/same age</i>	88	68.2	73	65.3	161	66.9
<i>< 5 years older</i>	14	10.9	17	15.1	31	12.9
<i>> 5 years older</i>	15	11.6	18	16.0	33	13.6
<i>Not known</i>	12	9.3	4	3.6	16	6.6
Proportion of youth who had sex in the last 12 months	110	71.0	81	55.5	191	63.5
Proportion of youth who reported 2 or more partners in the last 12 months	82	52.9	40	27.4	122	40.5
Number of partners in the last 12 months	Mean	Range	Mean	Range	Mean	Range
	4.0	1 to 15	2.1	1 to 9	3.1	1 to 15

Table 25 shows reported condom use for youth. One third of males (32.6%) and nearly half of females (45.5%) reported that they had used a condom when they first had sex. Over two thirds of males (70.5%) and females (66.1%) reported that they had ever used

a condom. Male condoms were used almost exclusively, the exception being one male who reported that his partner had used a female condom in the past.

Consistent condom use was not reported by the majority of youth, with only one in eleven males (8.7%) and one in seven females (14.8%) reporting they had used a condom every time they had sex. Three quarters of males (76.9%) and two thirds of females (63%) had sometimes used condoms during the last 12 months.

Two thirds of male (65.7%) and 6 in 10 females (59.3%) reported that they had used a condom at last sex.

Table 25: Reported condom use, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Youth who reported ever having sex:						
1. Used condom when first had sex						
<i>Male condom</i>	42	32.6	51	45.5	93	38.6
<i>Female condom</i>	0	0	0	0	0	0
2. Ever used a condom						
<i>Male condom</i>	91	70.5	74	66.1	165	68.5
<i>Female condom</i>	1	0.8	0	0	1	0.4
Youth who reported having sex in the last 12 months:						
1. <i>Condom use in last 12 months</i>						
Every time	9	8.7	12	14.8	21	11.1
Sometimes	83	79.8	51	63	134	70.9
Never	12	11.5	17	21	29	15.3
2. <i>Used condom at last sexual intercourse</i>						
<i>Male condom</i>	71	65.7	48	59.3	119	63
<i>Female condom</i>	1	0.9	0	0	1	0.5

Information on the prevalence of youth having sexual intercourse with people living outside Vanuatu is of value as this a mode by which HIV and other STIs can be introduced into the community. One third of males (30.3%) males and one sixth of females (17.1%) reported they had been off Efate Island in the last 12 months, and of these 78.7% of males and 44% of females reported having sex while off island.

Transactional sex

Table 26 shows the reported prevalence of transactional sex for youth who reported that they had sexual intercourse in the last 12 months. Transactional sex has been defined

as paying money, goods or favours in exchange for having sex, or receiving money, goods or favours in exchange for sex in the last 12 months.

Table 26: Reported transactional sex in the last 12 months, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Paid money to have sex	Paid goods or favours to have sex	Received money for sex	Received goods or favours for sex
Males				
No.	13	66	35	25
%	11.7	59.5	31.8	22.7
Mean N partners	3.9	2.8	3.6	4.4
Range	1 to 6	1 to 7	1 to 19	1 to 14
Females				
No.	2	13	18	16
%	2.5	16	22.2	19.8
Mean N partners	1	2.2	2.7	2.6
Range	1 to 1	1 to 8	1 to 15	1 to 6
Total				
No.	15	79	53	41
%	7.8	41.1	27.7	21.5
Mean N partners	3.2	2.7	3.3	3.7
Range	1 to 6	1 to 8	1 to 19	1 to 14

Overall, 75 of 109 males (69%) and 24 of 80 females (30%) who had sex in the last 12 months, reported that they had paid or received money, goods or favours in exchange for sex in the previous 12 months.

One in ten sexually active males (11.7%) reported they had paid money to another person in exchange for sex in the last 12 months. However, only two women reported paying money for sex in the last 12 months. The average number of paid partners was four for men and one partner for females.

Paying for sex using goods or favours was more common for both sexes. Over half of males (60%) and one in six females (16%) who were sexually active, reported giving goods or favours in return for sex. The average number of partners was 2.8 for males and 2.2 for females.

One third of sexually active males (32%) and one quarter of females (22%) reported that they had received money in exchange for sex. The average number of partners was 3.6 for males and 2.7 for females.

One fifth of sexually active males (22.7%) and females (21.5%) reported that they had received goods or favours in exchange for sex in the last 12 months. The average number of partners was 4.4 for males and 3.7 for females.

Other sexual behaviours and forced sex

Table 27 shows the prevalence of having more than two sexual relationships at the same time, group sex and condom use during group sex for youth who reported having sex in the last 12 months. The frequency of ever being forced to have sex is all shown for youth who reported ever having sexual intercourse.

Table 27: Other sexual behaviours and forced sex, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
More than two sexual relationships at the same time in last 12 months	28	25.5	14	17.5	42	22.1
Group sex in the last 12 months	22	20.8	9	11.7	31	16.9
Condoms uses by all in group	4	18.2	2	22.2	6	19.4
Ever forced into having sex	39	30.2	75	67.0	114	47.3

Concurrent relationships and group sex were not uncommon among youth who reported having sexual intercourse in the previous 12 months. One quarter of sexually active males (25.5%) and one in six sexually active females (17.5%) reported having a sexual relationship with two or more partners at the same time. In addition, one fifth of sexually active males (20.8%) and 11.8% of sexually active females reported engaging in group sex in the last 12 months. For youth who reported having group sex, only four males (18.2%) and two females (22.2%) reported that they and all partners had used condoms. Relatively high proportions of youth reported that they had ever been forced to have sex. The prevalence of forced sex was more than twice as high for females (67%) compared with males (30.2%). The three most common instigators of forced sex were the same for both sexes: partners (Males: 20%, Females: 33%), friends (Males: 46%, Females: 25%) and strangers (Males: 13%, Females: 20%).

Male to male sex

Male participants who had ever had sex were asked if they had ever had sex with another man. Of the 155 survey participants, 20 (13%) reported that they had ever had anal sex with another male (Table 28). The majority (19) of these, or 17.2% of males who had had sex in the past twelve months, had engaged in insertive sex with a male. The mean number of partners in the last 12 months was 3.8. Seventy percent of the 18 males who responded, reported that they had ever used condoms during anal sex.

However, only 12 of the 17 males (60%) reported that they had used a condom the last time they had sex with another man, and only three males (17.6%) reported always using condoms in the last 12 months.

Table 28: Male to male sex, Youth aged 15 to 24 yrs, Vanuatu, 2008

	N	%
Ever had sexual contact with another man	20	12.9
Number of male partners in last 12 months:		
<i>Mean</i>		3.8
<i>Median</i>		2
<i>Range</i>		1 to 13
Had insertive sex in last 12 months	19	95.0
Reported ever using condoms during anal sex	14	70.0
Used a condom with last male partner	12	60.0
Reasons for not using a condom with last male partner:		
<i>Sex doesn't feel as good</i>	3	15.0
<i>None easily available</i>	2	10.0
<i>Too drunk/high to use one</i>	2	10.0
<i>Partner didn't want to</i>	1	5.0
<i>I didn't want to</i>	1	5.0
Frequency of condom use with male partners in the last 12 months:		
<i>Every time</i>	3	17.6
<i>Sometimes</i>	13	76.5
<i>Never</i>	1	5.9

Alcohol consumption

Most youth reported drinking either 2 to 4 times a month (19.6%) or monthly or less (42.9%). More than twice as many females (40%) compared with males (16%) reported that they had not consumed alcohol in the last 12 months. Figure 4 shows the relative frequency of reported alcohol consumption in the last 12 months for males compared with females.

The average number of standard drinks consumed on a typical drinking occasion was 6.6 for males and 5.4 for females.

Youth were also asked about their frequency of consuming five or more standard drinks at one time. Similar patterns of consumption are shown for both sexes. One quarter of youth reported consuming five or drinks at one time on a weekly basis, and a further third consumed five or more drinks monthly.

Table 29 shows reported frequency and quantities of alcohol consumed in the last 12 months for youth.

Table 29: Alcohol consumption in the last 12 months, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Frequency of alcohol consumption in the last 12 months						
<i>4 or more times a week</i>	4	2.6	1	0.7	5	1.7
<i>2 to 3 times a week</i>	17	11.0	7	4.9	24	8.1
<i>2 to 4 times a month</i>	39	25.3	19	13.4	58	19.6
<i>Monthly or less</i>	69	44.8	58	40.8	127	42.9
<i>Never</i>	25	16.2	57	40.1	82	27.7
Number of standard drinks consumed on a typical drinking occasion						
<i>Mean</i>	6.6		5.4		6.2	
<i>Range</i>	1 to 48		1 to 24		1 to 48	
How often consumed 5 or more alcoholic drinks at one time						
<i>Daily or almost daily</i>	1	0.8	4	5.1	5	2.5
<i>Weekly</i>	31	25.8	14	17.7	45	22.6
<i>Monthly</i>	36	30.0	24	30.4	60	30.2
<i>Less than monthly</i>	40	33.3	33	41.8	73	36.7
<i>Never</i>	12	10.0	4	5.1	16	8.0

Figure 2: Frequency of Alcohol Consumption in the last 12 months by sex, Youth aged 15 to 24 yrs, Vanuatu, 2008



Substance and drug use

Table 30 shows the proportions of males and females who reported ever using tobacco, marijuana, kava, ecstasy and inhalants.

Table 30: Ever used drugs, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Tobacco	91	58.7	40	27.4	131	43.5
Marijuana/cannabis	104	67.1	42	28.8	146	48.5
Kava	92	59.4	54	37.0	146	48.5
Speed/Ice/Ecstasy	19	12.3	5	3.4	24	8.0
Inhalants/Sniffing	25	16.1	8	5.5	33	11.0
At least one drug	135	87.1	82	56.2	217	72.1

For males, marijuana was the most commonly reported drug ever used with two thirds reporting ever use (67%). Almost six in ten males also reported ever using tobacco (59%) and kava (59%). Overall, a large proportion of males (87%) reported using at least one of the drugs/substances shown in Table 28.

For females, less than a third reported that they had ever used marijuana (29%) and just over a third kava (37%). Tobacco was the next mostly commonly reported drug that females had ever tried (27%). Just over half of females (56%) reported using at least one of these drugs/substances.

Table 31 shows the proportions of males and females who reported using tobacco, marijuana, kava, ecstasy and inhalants in the last 30 days.

Table 31: Substance and drug use in last 30 days, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male			Female		
	N	% ever users	% all respondents	N	% ever users	% all respondents
<i>Tobacco</i>	64	70.3	41.3	20	50.0	13.7
<i>Marijuana/cannabis</i>	67	64.4	43.2	25	59.5	17.1
<i>Kava</i>	74	80.4	47.7	38	70.4	26.0
<i>Speed/Ice/Ecstasy</i>	18	94.7	11.6	2	40.0	1.4
<i>Inhalants/Sniffing</i>	19	76.0	12.3	3	37.5	2.1
<i>At least one drug</i>	114	84.4	73.5	56	68.3	38.4

For males, kava (48%), marijuana (43%) and tobacco (41%) were the most commonly used drugs used in the last 30 days. Although ecstasy was less commonly used compared with kava, marijuana and tobacco, almost all 'ever' users of ecstasy reported using this drug in the last 30 days (95%). The majority of all males surveyed (74%) reported using at least one drug in the last 30 days.

For females, kava (26%), marijuana (17%) and tobacco (14%) were also the most commonly reported drugs used in the last 30 days. More than one third of young women (38%) had used at least one these drugs in the last 30 days.

Injecting drug use

Twenty males (12.9%) and two females (1.4%) reported injecting recreational drugs during the previous 12 months. Speed was the most commonly used drug (used by 41% of injecting drug users) and more than half of injecting drug users reported that the needle and syringe was used by another person first (59%).

The prevalence of injecting drug use in the last 12 months is shown in Table 32.

Table 32: Injecting drug use in the last 12 months, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Reported injecting drugs in the last 12 months?	20	12.9	2	1.4	22	7.3
Drugs injected:						
<i>Heroin</i>	5	25	0	0	5	22.7
<i>Coke</i>	3	15	0	0	3	13.7
<i>Speed</i>	8	40	1	50	9	40.9
<i>Unknown drug</i>	4	20	1	50	5	22.7
The needle or syringe was it used by someone else first, last time injected drugs	11	55	2	100	13	59.1
<i>Don't know</i>	9	45	0	0	9	40.9

HIV/AIDS Knowledge, attitudes and beliefs

Table 33 shows outcomes for knowledge of sexual transmission and prevention of HIV, common fallacies and mother to child transmission.

Most youth (97%) had heard of HIV or AIDS, and 60% reported that they knew someone who had HIV or AIDS. High proportions of youth correctly responded to two questions on sexual transmission of HIV, with 79% of youth agreeing that having sex with only one uninfected partner can prevent transmission and 87% agreeing that using condoms correctly can reduce the chance of becoming infected with HIV. The majority of youth was aware that an infected mother can pass on HIV to her unborn baby (89%).

Knowledge that a healthy looking person can have HIV was high (78%) followed by knowledge that HIV cannot be acquired by sharing a meal with an infected person (71%). Less than two thirds of youth, however, knew that HIV cannot be acquired through mosquito bites (62%). Higher proportions of females compared to males correctly answered all questions except 'having sex with only one uninfected partner can prevent transmission'. While relatively small proportions of youth incorrectly responded to most of the questions, the proportions who indicated that they did not know the answers ranged from 8% for knowing that an infected mother can pass on HIV to her unborn baby, to 17% for knowing HIV cannot be acquired from mosquito bites.

Table 33: HIV/AIDS Knowledge, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Have you ever heard of HIV or the disease called AIDS?						
Yes	153	98.7	138	94.5	291	96.7
No	2	1.3	8	5.5	10	3.3
Do you know anyone who is infected with HIV, or who has AIDS or has died from AIDS						
Yes	84	54.9	90	66.2	174	60.2
No	69	45.1	46	33.8	115	39.8
Having sex with only one, uninfected, faithful partner can reduce the chance of getting HIV						
<i>True</i>	125	81.7	103	75.2	228	78.6
<i>False</i>	10	6.5	11	8.0	21	7.2
<i>Don't know</i>	18	11.8	23	16.8	41	14.1
Using condoms correctly can reduce the chance of getting HIV						
<i>True</i>	128	83.7	124	90.5	252	86.9
<i>False</i>	6	3.9	3	2.2	9	3.1
<i>Don't know</i>	19	12.4	11	8.0	30	10.3
A healthy looking person can be infected with HIV						
<i>True</i>	104	68.4	121	87.7	225	77.6
<i>False</i>	29	19.1	7	5.1	36	12.4
<i>Don't know</i>	19	12.5	10	7.2	29	10.0
A person can get HIV from mosquito bites						
<i>True</i>	42	28.0	19	13.9	61	21.3
<i>False</i>	78	52.0	99	72.3	177	61.7
<i>Don't know</i>	30	20.0	19	13.9	49	17.1
A person can get HIV by sharing a meal with someone who is infected with HIV						
<i>True</i>	22	14.5	14	10.2	36	12.5
<i>False</i>	103	67.8	102	74.5	205	70.9
<i>Don't know</i>	27	17.8	21	15.3	48	16.6
A pregnant woman who has HIV or AIDS can pass on HIV to her unborn baby						
<i>True</i>	131	85.6	127	92.0	258	88.7
<i>False</i>	7	4.6	4	2.9	11	3.8
<i>Don't know</i>	15	9.8	7	5.1	22	7.6

Attitudes and beliefs

Outcomes on attitudes and beliefs towards people living with HIV/AIDS are shown in Table 34.

Table 34: HIV/AIDS Knowledge, Attitudes and Beliefs, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Would buy fresh vegetables from a shopkeeper or vendor who has HIV						
Yes	93	60	76	52.1	169	56.1
No	41	26.5	47	32.2	88	29.2
Don't know	21	13.5	23	15.7	44	14.7
If a female teacher has HIV and is not sick, she should be allowed to continue teaching						
Should be allowed	62	40.5	61	41.8	123	41.1
Should not be allowed	61	39.9	63	43.2	124	41.5
Don't know	30	19.6	22	15.1	52	17.4
If a family member became sick with HIV, would be willing to take care of her or him in own household						
Yes	100	64.5	106	72.6	206	68.4
No	35	22.6	26	17.8	61	20.3
Don't know	20	12.9	14	9.6	34	11.3
If a member of your family became ill with HIV, would want it to remain secret						
Yes	44	28.4	42	28.8	86	28.6
No	90	58.1	91	62.3	181	60.1
Don't know	21	13.5	13	8.9	34	11.3
A person should be able to keep his/her HIV status private						
Strongly agree	27	17.5	19	13.2	46	15.4
Agree	51	33.1	33	22.9	84	28.2
Disagree	55	35.7	69	47.9	124	41.6
Strongly disagree	9	5.8	8	5.6	17	5.7
Don't know	12	7.8	15	10.4	27	9.1

Just over half of the respondents reported that they would be willing to have casual contact with a shopkeeper or vendor in their community if they knew the person had HIV (56%). However, only 41% of youth agreed that a female teacher who has HIV and is not sick should be allowed to continue teaching.

In contrast, over two thirds of youth reported that they would be willing to care for a family member who became sick with HIV in their own home (68%). Six in ten youth also indicated that they would not want their relatives' HIV status to remain a secret.

Overall, most youth did not believe that a person should be able to keep their HIV status secret, with only 44% either agreeing or strongly agreeing with the right for privacy.

Attitudes on HIV testing

The majority of youth reported that they thought it was possible to get a confidential HIV test (91%) (Table 35). Approximately one in eight youth had ever had an HIV test and of these most youth had a test within the last 3-12 months (88%). Over half of youth who had ever been tested indicated that they had requested their test (60%) while most of the remainder had their test as part of a medical check (38%). Over 90% of those who had had an HIV test reported that they knew the result.

For the small proportion of youth who reported that they didn't think or were unsure if confidential testing was available, the most common reasons were that the testing site was too public (32%) or too difficult to get to (18%).

Table 35: Attitudes and Beliefs on HIV testing, Youth, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Is it possible for you or anyone else to get a confidential test to find out if you have HIV?						
Yes	136	88.3	138	93.2	274	90.7
No	5	3.2	5	3.4	10	3.3
Don't know	13	8.4	5	3.4	18	6.0
Has ever had an HIV Test	20	13.0	18	12.2	38	12.6
When did you have your last HIV test?						
In the last 3 months	4	23.5	2	11.1	6	17.1
In the last year	10	58.8	15	83.3	25	71.4
Over a year ago	3	17.6	1	5.6	4	11.4
Why did you have an HIV test?						
I asked for it	13	68.4	9	50.0	22	59.5
Medical check	5	26.3	9	50.0	14	37.8
Blood donor	1	5.3	0	0.0	1	2.7
Did you receive the result of your last HIV test?	18	94.7	16	88.9	34	91.9

Participation in HIV/AIDS Prevention activities

The majority of youth reported that they had heard messages about HIV on the radio (92%). Over 70% of youth also indicated that they had read messages about HIV in the newspaper or seen the 'Love patrol' DVD (Table 36).

Less than one third had participated in an HIV educational program (30%) while just over one third had participated in an HIV community event (36%).

Table 36: HIV/AIDS Prevention activities, Youth aged 15 to 24 yrs, Vanuatu, 2008

HIV Prevention Activity	N	%
Heard messages about HIV on radio	278	91.7
Read messages about HIV in newspapers	218	71.9
Has seen "The Love Patrol"	217	71.6
Participated in HIV education program	91	30.0
Attended HIV community event	109	36.0

History of sexually transmitted infections and genital symptoms

Overall, the reported prevalence of ever being diagnosed with an STI was more than two times higher for males (37%) compared with females (14%) (Table 37). Of youth who had been diagnosed with an STI, gonorrhoea was most commonly reported infection (21%). Genital herpes was the next most commonly reported STI (4%), followed by trichomonas (1.3%).

Table 37: Reported history of STIs, Youth aged 15 to 24 yrs, Vanuatu, 2008

History of STIs	Male		Female		Total	
	N	%	N	%	N	%
Ever been diagnosed with a sexually transmitted disease or infection	56	36.6	21	14.4	77	25.8
Infection(s) respondents were diagnosed with:						
<i>Gonorrhoea</i>	49	32.0	15	10.3	64	21.4
<i>Syphilis</i>	0	0	0	0	0	0
<i>Trichomonas</i>	0	0	1	4.8	1	1.3
<i>Genital Herpes</i>	1	1.8	2	9.5	3	3.9
<i>Genital Warts</i>	0	0	0	0	0	0

Table 38 shows the reported prevalence of symptoms for STIs in the last month for youth. Four in ten females (42%) reported having at least one symptom in the last month, compared with three in ten males (28%). The most commonly reported symptom was 'lower abdominal pain in between periods or during sex' for females (33%) and 'burning or pain when you pass urine' for males (28%). The majority of males (92%) and females (99%) indicated that they would go to a health clinic or hospital if they were worried that they had a STI. However, less than one third of females had seen anyone for their symptoms in the last month compared with 93% of males. This suggests that young females may not have knowledge of symptoms for STIs.

Table 38: Reported history of Genital symptoms, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male		Female	
	N	%	N	%
Symptoms in the last month:				
<i>Lower abdominal pain in between periods or during sex</i>			48	32.9
<i>Genital or anal discharge</i>	31	20	31	21.2
<i>Rash, ulcer or sore around the genitals</i>	24	15.5	14	9.6
<i>Burning or pain when you pass urine</i>	40	25.8		
At least one symptom	43	27.9	61	42.1
Has you seen anyone for treatment of symptoms	40	93	19	31.7
If worried you had an STI where would you go for help:				
<i>Traditional healer</i>	11	7.1	0	0
<i>Faith healer</i>	2	1.3	1	0.7
<i>Health clinic</i>	72	46.8	74	51.4
<i>Hospital</i>	69	44.8	69	47.9

UNGASS indicators

Table 39 shows results for UNGASS indicators for youth.

Table 39 UNGASS Indicators, Youth aged 15 to 24 yrs, Vanuatu, 2008

	Male 15 to 24 yrs		Female 15 to 24 yrs	
	N	%	N	%
<i>7. Percentage of women and men aged 15-24 who received an HIV test in the last 12 months and who know their results.</i>	13	8.4	15	10.3
<i>13. Percentage of young women and men aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission*</i>	36	23.2	62	42.5
<i>15. Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15</i>	15	9.7	7	4.8
<i>16. Percentage of women and men aged 15-24 who have had sexual intercourse with more than one sexual partner in the past 12 months</i>	82	52.9	40	27.4
<i>17. Percentage of women and men aged 15-24 who have had sexual intercourse with more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse*</i>	54	65.9	23	57.5
<i>19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner</i>	12	60.0		

Discussion

Four fifths of youth (80.1%) reported that they had ever had sex and of these one third (38.6%) reported using a condom at first sex and two-thirds reported ever using a condom (69%).

Nearly two thirds of youth (63%) reported having sex in the last 12 months, and of these 11% reported always using a condom and 70% had used a condom sometimes during the last 12 months. The average number of partners in the last 12 months was four for males and two for females.

These suggest there is a need for active condom promotion activities in Vanuatu as these findings suggest that a significant proportion of youth are sexually active and at high risk for acquiring STIs.

One third of males (30.3%) and one sixth of females (17.1%) reported they had been off Efate Island in the last 12 months, and off these 78.7% of males and 44% of females reported having sex while off island. This is relatively high number of young people engaging sex in off island and further surveys should investigate where youth are travelling to as they are engaging in risky sexual behaviour while off island.

Twenty males (13%) reported that they had ever had sex with another man and of these, 95% reported having insertive sex with a man in the last 12 months. Seventy percent of these males reported ever using a condom with another man, while 60% reported using a condom the last time that they had sex with another male.

Although knowledge of HIV prevention and transmission was generally high, common misconceptions about HIV transmission were still apparent with 38% of youth either not knowing or believing that HIV can be acquired from mosquito bites and 29% not knowing or believing HIV can be acquired through sharing a meal with a person who has HIV. These findings should be taken into consideration when revising educational programs targeting youth.

One in eight youth (13%) reported that they had ever been tested for HIV, mainly because they had requested testing or been tested as part of a medical check. Approximated nine in ten of those tested reported they had received the result of the test. As the proportion of youth tested is low, interventions to increase testing among youth are also recommended.

Two in five females (42%) and one in four males (28%) reported having at least one STI symptom in the last month. However only one third of females who reported having a symptom also reported that they had sought treatment (32%) compared with 93% of males. This suggests that young women may require increased knowledge of the range of symptoms that can indicate the presence of a STI.

Approximately one quarter of males (27%) and females (23%) who reported that they had consumed alcohol in the last 12 months, also reported that they consumed 5 or more drinks during a session at least weekly, which can increase the likelihood of high risk behaviours.¹⁰ Significant proportions of males (43%) and females (17%) also reported using marijuana in the last 30 days and tobacco use was also relatively common with 41% of males and 14% of females reporting use in the previous 30 days. Because of detrimental health effects associated with these drugs, development of relevant strategies which discourage use of these substances are recommended.

PART 3: HSS SURVEY of STI CLINIC CLIENTS

Survey Methodology

Table 40 provides an overview of the survey methodology used for the STI prevalence survey conducted for clients attending with sexually transmitted infections at the Wan Smol Bag Clinic in Port Vila, Vanuatu. Participants were enrolled consecutively between April 21 and July 29, 2008. The survey methodology is summarised in Table 39.

Table 40: Overview of the survey methodology in STI Clinic Patients

Methodology	Survey details
Population	Male and female patients attending with symptoms of STIs
Survey type	HIV Prevalence and Sexual Behaviour survey
Sampling method	Convenience sampling
Inclusion criteria	Patients willing to take part in the survey
Target sample size	200
Final sample size	205 (74 males and 131 females)
Interview location	STI Clinic at Wan Smol Bag, Port Vila, Vanuatu
Administration of interview	Questionnaire administered by trained interviewers
Type of consent	Verbal. Interviewers signed a declaration not to release any information without the participants approval
Time required for the interview	25 to 30 minutes
Specimens collected	Blood
Data collection period	April 21 to July 29, 2008

Interviews were conducted in private by trained health staff of the Wan Smol Bag Clinic and all responses were recorded on coded interview sheets.

Eligibility criteria

Clients were eligible to take part in the survey if they were aged between 15 and 49 years, had given verbal consent and they had not previously been interviewed.

Of the 213 clients who were seen during the study period, 205 clients agreed to take part in the survey. Reasons for not taking part in the survey included not wanting to have a blood test (six clients), personal reasons (one client) and not having time (one client). All the clients who declined to take part in the survey were aged between 15 and 24 years, seven were male and 1 was female.

Results

Demographic characteristics

Table 41 shows the demographic characteristics of clients who took part in the survey. There were a higher proportion of females (64%) compared with males (36%), and the majority of participants were aged 16 to 24 years (68%).

The mean age of participants was 23.5 years and the age of participants ranged from 16 to 44 years. All participants were Melanesian and all from urban areas. The largest proportions of respondents were from the Shefa (43%) and Malampa (21%) provinces.

Table 41: Reported demographic characteristics, STI Clinic Clients, Vanuatu, 2008

	N	%		N	%
Sex			Age Group		
<i>Female</i>	130	63.7	<i>16 to 24 yrs</i>	138	67.6
<i>Male</i>	74	36.3	<i>25 to 44 yrs</i>	66	32.4
<i>Total</i>	204	100.0	<i>Total</i>	204	100.0
			Ethnicity		
			<i>Melanesian</i>	204	100
Province of birth			Highest level of education		
<i>Shefa</i>	87	43.3	<i>Never attended school</i>	2	1.0
<i>Malampa</i>	42	20.9	<i>Primary</i>	65	31.9
<i>Tafea</i>	37	18.4	<i>Junior High School</i>	70	34.3
<i>Penema</i>	17	8.5	<i>Senior High School</i>	52	25.5
<i>Sanma</i>	15	7.5	<i>Tertiary</i>	15	7.4
<i>Torba</i>	3	1.5	<i>Total</i>	204	100.0
<i>Total</i>	201	100.0			

Only two male participants reported that they had not completed primary school education. Two thirds of participants had completed at least junior high school or higher

(67%). Approximately one third of males (32%) reported they were unemployed compared with half of females (53%). The most common occupations reported were labourers (19%) for males and housewife/home duties (21%) for females.

Table 42: Marital status and living arrangements, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Marital Status						
<i>Currently married</i>	9	12.3	26	19.8	35	17.2
<i>Ever married</i>	7	9.6	21	16.0	28	13.7
Living Arrangements						
<i>Living with your spouse</i>	10	13.7	20	15.3	30	14.7
<i>Living with a sex partner (non-married)</i>	4	5.5	39	29.8	43	21.1
<i>Not living with any sex partner</i>	59	80.8	72	55	131	64.2

Table 42 shows reported marital status and living arrangements for the STI Clients. Relatively few males (12%) and females (18%) reported that they were currently married and overall, two thirds of participants were not living with any sex partner (64%).

Sexual behaviours

Table 43 shows the prevalence of ever having sexual intercourse and age at first sex for participants. Only one male reported that he had never having sexual intercourse. The average age of first sex was 16.9 years for males and 17.4 years for females.

Table 43: Reported sexual history, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Ever had sexual intercourse	73	98.6	131	100	204	99.5
Had sexual intercourse in the last 12 months	68	93.2	120	91.6	188	92.2
Age at first sex:						
<i>Mean</i>	16.9		17.4		17.2	
<i>Range</i>	11 to 21		13 to 27		11 to 27	
Number of sex partners in the last 12 months:						
<i>Mean</i>	4.2		2.0		2.9	
<i>Range</i>	1 to 25		1 to 20		1 to 25	

Findings for reported condom use are shown in Table 44.

Table 44: Condom use, STI clinic patients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Respondents who have ever had sex:						
1. Used a condom first time had sex	13	17.8	27	20.6	40	19.6
2. Ever used a condom:						
<i>Male condom</i>	41	56.2	73	55.7	114	55.9
<i>Female condom</i>	0	0.0	0	0.0	0	0.0
Used a condom at last sex	11	16.2	15	12.6	26	13.9
Respondents who have had sex in the last 12 months:						
Condom use in past 12 months						
<i>Every time</i>	3	4.4	2	1.7	5	2.7
<i>Sometimes</i>	47	69.1	69	57.5	116	61.7
<i>Never</i>	18	26.5	49	40.8	67	35.6

Approximately one fifth and males (18%) and females (21%) reported using a condom at first sex. Almost equal proportions of males and females reported that they had ever used a male condom (56%).

Only three male and two female participants reported that they had used a condom every time that they had sex in the last 12 months. Most males reported only using a condom sometimes (69%), and just over a quarter reported never using a condom (27%). For female youth 58% reported using a condom sometimes, but over 40% reported never using a condom.

Other sexual behaviours

Table 45 shows the results for other high risk sexual behaviours and the prevalence of forced sex for STI Clinic attendees.

Table 45: Other sexual behaviours, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
More than two sexual relationships during the same time period, in the last 12 months	29	50.0	11	11.2	40	25.6
Sex with more than 2 people at the same time (group sex) in the last 12 months	12	21.1	0	0	12	7.7
Been off-island in the last 12 months	20	33.9	20	19.0	40	24.4
Had sex with someone (other than partner) while off-island	13	35.0	7	35.0	20	50.0
Ever forced to have sex against will	25	42.4	65	61.9	90	54.9

Overall, one quarter of respondents reported having two or more sexual relationships during the same time during the last 12 months, and was more commonly reported by males (50%) compared to females (11%).

While none of the female respondents reported that they had engaged in group sex, 12 males (21.1%) reported that they had engaged in group sex in the last 12 months. Only one male reported that all partners in the group sex activity had used condoms.

Travel off island was relatively common with 20 females (19%) and 22 male respondents (37.3%) reporting that they had travelled off Efate Island during the last 12 months. Of these, 7 females (35%) and 13 males (59.1%) reported they had sex with someone other than their partner while off island.

Of participants that responded, 65 females (61.9%) and 25 males (42.4%) reported ever having been forced to have sex against their will. The most commonly reported instigators of forced sex were partners (37%), family friends (35%) and strangers (15.4%) for females and strangers (40%), and relatives (24%) for males (See Figures 3 and 4).

Figure 3: Forced sex, Male STI Clinic Clients, Vanuatu, 2008

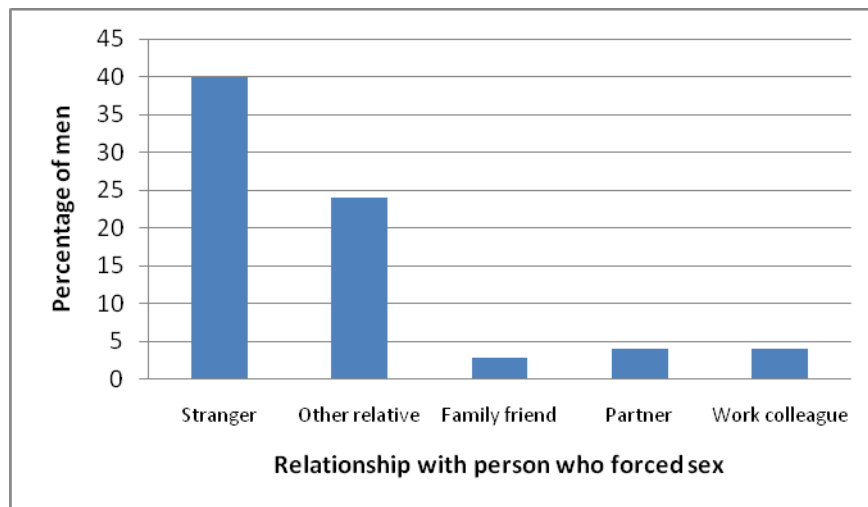
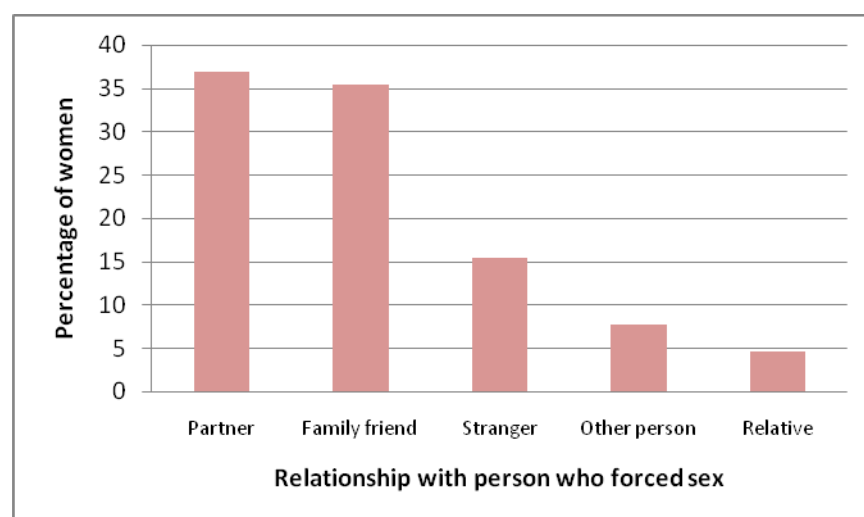


Figure 4: Forced sex, Female STI Clinic Clients, Vanuatu, 2008



Transactional sex

Seven females (7%) and 11 males (18%) reported that they had received money, goods or favours in exchange for sex in the last 12 months (Table 46). The reported prevalence of paying for sex was less common, with only two females (1.5%) and 8 males (10.8%) reporting that they had given money, favours or goods in exchange for sex.

Nearly three quarters of males (71%) and over half of females (55%) reported that they did not use a condom when they paid or received money for sex in the last 12 months.

Table 46: Reported sexual history, Transactional sex, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Received money or goods/favours for sex in last 12 months	12	17.6	7	6.7	19	10.2
Paid money or given goods/favours for sex in last 12 months	8	10.8	2	1.5	10	4.9
Frequency of condom use for those reporting transactional sex						
<i>Every time</i>	1	7.1	0	0	1	3.6
<i>Sometimes</i>	3	21.4	5	45.5	8	28.6
<i>Never</i>	10	71.4	6	54.5	16	57.1

Male to male sex

Male participants were asked whether they had ever had sexual contact with another man. Four males (5.4%) reported ever having sexual contact with another man. All four men reported having insertive sex in the last 12 months. Two males reported ever using a condom and two males reported using a condom with their last male partner.

Alcohol consumption

Table 47 shows reported frequency and quantities of alcohol consumed in the last 12 months for STI clinic attendees.

Table 47: Alcohol consumption in the last 12 months, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Frequency of alcohol use:						
<i>Daily or almost daily</i>	1	1.4	1	0.8	2	1
<i>Weekly</i>	10	13.5	5	3.8	15	7.3
<i>Monthly</i>	13	17.6	11	8.4	24	11.6
<i>Less than monthly</i>	33	44.6	52	39.7	85	41.5
<i>Do not drink</i>	17	23.0	62	47.3	79	38.5
Number of standard drinks usually consumed:						
<i>1 to 2</i>	16	28.1	32	37.6	48	33.8
<i>3 to 4</i>	7	12.3	14	16.5	21	15.0
<i>5 to 9</i>	14	24.6	16	18.8	30	21.1
<i>10 or more</i>	20	35.1	23	27.1	43	30.3
<i>Mean</i>		9.7		4		6.6
<i>Range</i>		2 to 48		1 to 20		1 to 48

Approximately half of the females (47%) and one quarter of the males (23%) reported that they do not consume alcohol.

The majority of females who consumed alcohol in the last 12 months reported consuming less than once a month (40%) or monthly (8%). Less than 5% of females consumed alcohol on a weekly or daily basis.

Most males also reported consuming alcohol less than monthly (45%) and one in six males reported consuming alcohol once per month (18%). More regular alcohol consumption was less common, with one in seven males reporting consuming on a weekly or daily basis (15%).

Just under half of females (46%) reported that they normally consumed more than five standard drinks (e.g. a can of beer or glass of wine) on a typical drinking occasion compared with 60% of males. Overall, the average amount of alcohol consumed was four standard drinks for females and 10 standard drinks for males.

Substance and drug use

Reported ever use of substances and drugs, and use in the previous 30 days for males and females is shown in Table 48.

Table 48: Substance and drug use, STI Clinic Clients, Vanuatu, 2008

	Ever used		Used in last 30 days		
	N	% of all respondents	N	% of all respondents	% of ever users
Males					
Tobacco	58	78.4	43	58.1	74.1
Kava	51	68.9	41	55.4	80.4
Marijuana/cannabis	40	54.1	19	25.7	47.5
Inhalants/sniffings	4	5.4	1	1.4	25.0
Speed/Ice/Ecstasy	1	1.4	0	0.0	0.0
Females					
Tobacco	87	66.4	48	36.6	55.2
Kava	64	48.9	42	32.1	65.6
Marijuana/cannabis	27	20.6	9	6.9	33.3
Inhalants/sniffings	0	0	na	na	na
Speed/Ice/Ecstasy	0	0	na	na	na

Tobacco was the most commonly reported drug used by both sexes. Over half of males and one third of females (37%) had used tobacco in the last 30 days.

Kava was also commonly used with over half of males (55%) and one third of females (32%) reporting use in the last 30 days.

One quarter of males (26%) and 7% of females also reported using marijuana in the last 30 days.

Only one male reported using inhalants in the last 30 days and no males reported using speed/ice/ecstasy. No females reported using inhalants or speed/ice/ecstasy in the last 30 days.

HIV/AIDS Knowledge, attitudes and beliefs

Outcomes for participant's responses to questions assessing knowledge, attitudes and beliefs about HIV and AIDS are shown in Table 49.

Table 49 HIV/AIDS Knowledge, Attitudes and Beliefs, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Have ever heard of HIV or the disease called AIDS	74	100	130	99.2	204	99.5
Having sex with only one, uninfected, faithful partner can reduce the chance of getting HIV						
<i>True</i>	56	75.7	92	71.3	148	72.9
<i>False</i>	5	6.8	9	7.0	14	6.9
<i>Don't know</i>	13	17.6	28	21.7	41	20.2
Using condoms correctly can reduce the chance of getting HIV						
<i>True</i>	72	97.3	112	86.2	184	90.2
<i>False</i>	1	1.4	6	4.6	7	3.4
<i>Don't know</i>	1	1.4	12	9.2	13	6.4
A healthy looking person can be infected with HIV						
<i>True</i>	67	90.5	102	77.9	169	82.4
<i>False</i>	2	2.7	8	6.1	10	4.9
<i>Don't know</i>	5	6.8	21	16.0	26	12.7
A person can get HIV from mosquito bites						
<i>True</i>	11	15.1	28	21.5	39	19.2
<i>False</i>	44	60.3	67	51.5	111	54.7
<i>Don't know</i>	18	24.7	35	26.9	53	26.1
A person can get HIV by sharing a meal with someone who is infected with HIV						
<i>True</i>	5	6.8	15	11.5	20	9.8
<i>False</i>	59	80.8	106	80.9	165	80.9
<i>Don't know</i>	9	12.3	10	7.6	19	9.3
A mother can pass HIV to her baby during pregnancy, delivery or breastfeeding:						
<i>True</i>	67	90.5	116	90.6	183	90.6
<i>False</i>	5	6.8	4	3.1	9	4.5
<i>Don't know</i>	2	2.7	8	6.3	10	5.0

The prevalence of ever having heard of HIV/AIDS was almost universal, with all males and 99% of females indicating that they had heard of this condition. Overall, nearly three quarters of respondents (73%) agreed that having sex with only one uninfected partner

would reduce the chance of acquiring HIV and nearly 90% agreed that using condoms correctly can reduce the chance of acquiring HIV.

Four in five respondents were aware that a healthy looking person could be infected with HIV (82%) and that HIV cannot be acquired by sharing a meal with a person who is infected with HIV (81%).

Knowledge that HIV can be transmitted from a mother to her baby during childbirth or breast feeding was highest, with approximately 90% of males and females correctly responding to this question.

Of note, there were significant proportions of respondents who indicated that they did not know the answer to these questions. Approximately one fifth of respondents (20%) reported that they did not know if having one uninfected partner could reduce the likelihood of acquiring HIV and one quarter (26%) did not know if HIV could be acquired through mosquito bites.

Attitudes and beliefs

Knowledge, attitudes and beliefs regarding HIV/AIDS are shown in Table 50.

Table 50: HIV/AIDS Knowledge, Attitudes and Beliefs, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Would buy fresh vegetables from a shopkeeper or vendor if you knew that this person had HIV	49	66.3	71	54.2	120	58.5
In your opinion, if a female teacher has HIV and is not sick, should she be allowed to continue teaching in the school?						
<i>Should be allowed</i>	34	46.6	60	46.2	94	46.3
<i>Should not be allowed</i>	21	28.8	38	29.2	59	29.1
<i>Don't know / not sure / depends</i>	18	24.7	32	24.6	50	24.6
Would be willing to take care in their own household of a member their family who is sick with HIV	62	83.8	97	74.0	159	77.6
If a member of your family became ill with HIV, would want it to remain secret	25	33.8	51	38.9	76	37.1
A person should be able to keep his/her HIV status private						
<i>Strongly agree</i>	15	20.3	27	20.6	42	20.5
<i>Agree</i>	7	9.5	10	7.6	17	8.3
<i>Disagree</i>	44	59.5	68	51.9	112	54.6
<i>Strongly disagree</i>	1	1.4	4	3.1	5	2.4
<i>Don't know</i>	7	9.5	22	16.8	29	14.2

Nearly 60% of respondents reported that they would be willing to have casual contact with a shopkeeper or vendor in their community if they knew the person had HIV. However, less than half of respondents (48%) agreed that a female teacher who has HIV and is not sick should be allowed to continue teaching.

Over third quarters of respondents reported that they would be willing to care for a family member who became sick with HIV in their own home (78%). Seven in ten respondents (73%) also indicated that they would not want their relatives' HIV status to remain a secret.

Attitudes towards HIV testing

Table 51 shows that the majority of respondents reported that they believed that they it is possible to get a confidential HIV test (95%). Four percent of respondents reported that they did not know if it was possible. The main reasons given for not believing that confidential testing was available were that 'everyone would find out' (1.5%) and that the testing site was too public (1%).

Table 51: HIV/AIDS Knowledge: HIV Testing, STI Clinic Clients, Vanuatu, 2008

	Male		Feme		Total	
	N	%	N	%	N	%
Believe it is possible to get a confidential test to find out if you have HIV:						
Yes	72	97.3	123	93.9	195	95.1
No	1	1.4	1	1.8	2	1
Don't know	7	5.3	7	5.3	8	3.9
Why can't you get a confidential HIV test result:						
<i>HIV testing is not available</i>	0	0	0	0	0	0
<i>Testing site is too public</i>	1	1.4	1	0.8	2	1
<i>Everyone will find out</i>	0	0	3	2.3	3	1.5
<i>Testing site is too difficult to get to</i>	0	0	0	0	0	0
<i>Opening hours are not convenient</i>	0	0	1	0.8	1	0.5

Participation in HIV/AIDS Prevention activities

Table 52 summarises the responses for HIV/AIDS awareness and prevention activities. The majority of respondents reported they had had heard messages about HIV/AIDS on the radio (93%) and a large proportion had read messages in the newspapers (80%). The serial "Love Patrol" was seen by over 70% of the participants.

Approximately half of the participants had participated in an HIV education program (49%), attended a peer education program (51%) and a HIV community event (56%).

Table 52: HIV/AIDS Knowledge, Attitudes and Beliefs, Prevention activities, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Heard messages about HIV on radio	70	94.6	121	92.4	191	93.2
Read messages about HIV in newspapers	65	87.8	98	74.8	163	79.5
Has seen "The Love Patrol" series	60	81.1	89	67.9	149	72.7
Participated in HIV education program	42	56.8	58	44.3	100	48.8
Participated in HIV peer education program	41	56.4	63	48.1	104	50.7
Attended HIV community event	41	55.4	73	55.7	114	55.6

History of sexually transmitted infections

Over one third of females (35.1%) and males (39.2%) reported that they had ever been diagnosed with STIs. As for antenatal women and youth, gonorrhoea was the most commonly reported STI (see Table 52). Less than a third of partners were reported to have been treated.

Table 53: History of STIs, STI Clinic Clients, Vanuatu, 2008

	Male		Female		Total	
	N	%	N	%	N	%
Ever diagnosed with a sexually transmitted infection by a doctor or health worker	29	39.2	46	35.1	75	36.6
Infection(s) respondents were diagnosed with						
<i>Gonorrhoea</i>	25	33.8	16	12.2	41	20.0
<i>Trichomonas</i>	2	2.7	10	7.6	12	5.9
<i>Syphilis</i>	0	0.0	1	0.8	1	0.5
<i>Genital Herpes</i>	0	0.0	0	0.0	0	0.0
<i>Genital Warts</i>	0	0.0	0	0.0	0	0.0
<i>Don't know</i>	2	2.7	19	14.5	21	10.2
Sexual partner(s) were also treated	11	37.9	13	28.3	24	32

Results of STI tests performed

Table 54 shows the results of Hepatitis B, Syphilis and HIV testing for the STI clinic clients.

Table 54: Results of Laboratory Tests Performed, STI Clinic Clients, Vanuatu, 2008

	N detected	N tested	%	LCI	UCI
Males					
<i>Hepatitis B (Antigen)</i>	14	74	18.9	10.7	29.7
<i>Syphilis</i>	5	74	6.8	2.2	15.1
<i>HIV</i>	0	74	0	-	-
Females					
<i>Hepatitis B (Antigen)</i>	12	130	9.2	84.4	95.1
<i>Syphilis</i>	1	130	0.8	0	4.2
<i>HIV</i>	0	130	0	-	-
Persons					
<i>Hepatitis B (Antigen)</i>	26	204	12.7	8.5	18.1
<i>Syphilis</i>	6	204	2.9	1.1	6.3
<i>HIV</i>	0	204	0	-	-

Twenty six of the STI clinic clients (12.7%) were found to have the Hepatitis B surface antigen on blood testing. The prevalence was higher in the males when compared with females (18.9% versus 9.2%). Though the numbers are small, more than 60% of infections were among clients aged less than 25 years.

One female and five males were found to have early syphilis, giving an overall prevalence of 2.9% for clients attending the STI clinic. The RPR titre in all the reactive tests was 1:2.

No STI clients were found to have HIV.

UNGASS Indicators

Table 55 shows results for UNGASS indicators for STI Clinic Clients.

Table 55: UNGASS Indicators, STI Clinic Clients, Vanuatu, 2008

	Male				Female			
	15 to 24 yrs (N=50)		25-49 yrs (N=24)		15 to 24 yrs (N=88)		25-49 yrs (N=42)	
	N	%	N	%	N	%	N	%
<i>13. Percentage of young women and men aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.</i>	20	40.0			21	23.9		
<i>15. Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15 years.</i>	7	14.0			6	6.8		
<i>16. Percentage of women and men aged 15-49 who have had sexual intercourse with more than one sexual partner in the past 12 months.</i>	37	74.0	17	70.8	33	37.5	13	31.0
<i>17. Percentage of women and men aged 15-49 who have had sexual intercourse with more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse.</i>	6	16.2	2	11.8	6	18.2	0	0
<i>19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner.</i>	0	0	2	66.7				

DISCUSSION

The survey conducted with patients attending the STI Clinic at Wan Smol Bag in Port Vila revealed findings similar to those already discussed for antenatal women and youth.

A number of high risk behaviours were identified in this group. Eighty four percent of males and 42% of females reported having more than one sex partner in the last 12 months, with an average of four partners for males and two partners for females.

While more than half of the participants reported they had ever used condoms (56%), only 16.2% of males and 12.5% females reported using condoms at the time of last sex.

As for youth, transactional sex was more commonly reported by males compared with females. Approximately one in six males reported receiving money, goods or favours in exchange for sex compared with one in fifteen females. In contrast, only 11% of males and 1.5% of females reported paying money, goods or favours in exchange for sex. Over sixty percent of females and 42% of males surveyed reported ever having been forced to have sex.

Blood tests detected early syphilis in one female (0.8%) and five males (6.8). There was also a high prevalence of hepatitis B virus surface antigen positivity (Males: 18.9%, Females: 9.2%). No cases of HIV were detected among either sex.

Knowledge of HIV prevention was generally very high, although lower proportions of females correctly answered a number of questions compared to males. This trend was not observed among youth and maybe a product of chance associated with the relatively small sample sizes for both sexes. Irrespective of relatively high levels of knowledge of transmission, many respondents reported a reluctance to have casual contact with a person with HIV. In addition, only 56% of respondents agreed/strongly agreed that a person should be able to keep their HIV status private. These findings should be taken into consideration when revising educational programs to help increase acceptance and reduce stigma associated with a persons HIV status.

Approximately three quarters of males (77%) and half of females (53%) reported consuming alcohol in the last 12 months, and the average amount consumed was 9.7 standard drinks for males and 4 standard drinks for females. Tobacco use was highly prevalent with 58% of males and 37% of females reporting use in the last 30 days. Marijuana use was also prevalent for males in particular, with 26% reporting use in the last 30 days.

REFERENCES

- ¹ Second Generation Surveillance Surveys of HIV, other STIs and Risk Behaviours in six Pacific Island Countries. World Health Organization, 2006
- ² Behavioural Surveillance Surveys BSS. Guidelines for repeated Behavioural Surveys in Populations at High Risk of HIV. Family Health International, 2000.
- ³ Cliff SJ, Tabrizi S and Sullivan EA. Chlamydia in the Pacific Region, the Silent Epidemic. Sexually Transmitted Diseases. 2008 Dec, Vol 35, No12.
- ⁴ Secretariat of the Pacific Community. The Pacific Regional Strategy on HIV/AIDS 2004-2008. Noumea, New Caledonia: Secretariat of the Pacific Community, 2005
- ⁵ HIV/AIDS in Asia and the Pacific region 2003. Geneva: World Health Organization, 2004.
- ⁶ Laga M, Manoka A, Kivuvu M, et al. Non-ulcerative sexually transmitted diseases as risk factors for HIV-1 transmission in women: Results from a cohort study. AIDS 1993; 7:1202-1203.
- ⁷ Tabrizi S, Chen S, Tapsall J, Garland S. Evaluation of opa-based real-time PCR for detection of Neisseria gonorrhoeae. Sexually Transmitted Diseases
- ⁸ McFarlin BL, Bottoms SF, Dock BS, Isada NB. Epidemic syphilis: maternal factors associated with congenital infection. Am J Obstet Gynecol. 1994 Feb; 170(2):535-40.
- ⁹ Chronic Hepatitis B infections - <http://www.mydr.com.au/gastrointestinal-health/chronic-hepatitis-b-infection-reduce-your-viral-load>
- ¹⁰ Australian Alcohol Guidelines: Health Risks and Benefits. Downloaded from the NHMRC website: <http://www.nhmrc.gov.au/publications/synopses/ds9syn.htm>