

# Second Generation Surveillance Survey of Akavaine and MSM in Cook Islands 2009

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# List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
BSS	Behavioural Surveillance Survey
CT	Chlamydia trachomatis
FHI	Family Health International
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
MDG	Millennium Development Goals
MOH	Ministry of Health
NG	Neisseria gonorrhoea
NGO	Non-Government organization
NRL	National Reference Laboratory
PCR	Polymerase Chain Reaction
PICTs	Pacific Island Countries and Territories
PLWHA	People living with HIV or AIDS
SGS	Second Generation HIV Surveillance
SPC	Secretariat of the Pacific Community
STI	Sexually transmitted infection
UNGASS	United Nations General Assembly Special Session
VCCT	Voluntary Confidential Counselling & Testing

## Executive summary

The Cook Islands is a very small Pacific island country, both in terms of geography and population. HIV is practically unknown in the Cook Islands, with only two cases of HIV infection ever reported and no residents currently living with HIV. However, previous Second Generation Surveillance (SGS) surveys have documented high rates of STI infection, especially Chlamydia, among antenatal women and youth in 2006. In 2008 young people under 24 years reported high levels of risky sexual behavior, including multiple and concurrent partners and low levels of condom use.

This report documents the findings from a Second Generation Behavioral Surveillance Survey (BSS) which was conducted among akavaine and men who have sex with men (MSM) in the Cook Islands in 2009. Information was collected on risk behaviors, knowledge and attitudes toward HIV, and access to HIV and STI testing and STI treatment.

The key findings of the MSM survey were:

- 52% reported their age of first sex as under 15 years
- Of the respondents who had ever had sex with an akavaine partner (n=24), more than half had oral (58%) or anal (54%) sex with an akavaine partner in the six months prior to the survey
- Of the respondents who had ever had sex with a male partner (n=64), almost all had oral (86%) or anal (73%) sex with a male partner in the previous 6 months
- Less than 2/3 (61%) of respondents reported using a condom the last time they had anal sex with an akavaine partner
- A similar proportion (55%) reported using a condom the last time they had anal sex with a male partner
- Of the sexually active respondents:
  - 59% had ever had sex with a female partner
  - 40% reported having concurrent sex partners in the previous six months
  - 27% reported having group sex in the previous six months

- 21% reported having been forced to have sex in the previous six months
- More than 2/3 of respondents typically had 5 or more drinks on a single occasion when they consumed alcohol, in the past six months
- Of those who reported drinking in the past six months, almost half said they binge drank weekly or more frequently
- Almost two-thirds (63%) correctly answered all five questions about HIV prevention and transmission
- Only 43% of participants reported having ever been tested for HIV, of which over half were tested more than 12 months ago



# Introduction

## HIV epidemiology in the Pacific region

Most Pacific Island Countries and Territories (PICT) other than Papua New Guinea have been classified as low prevalence settings by the World Health Organization (WHO)<sup>i</sup>. HIV Cases have now been reported in every PICT apart from Niue, Tokelau and Pitcairn Island, with 29,631 cumulative HIV infections reported up to December 2008<sup>ii</sup>. HIV infections in PNG account for over 90% of these cases. Excluding PNG, a total of 486 AIDS cases including 313 AIDS-related deaths have been reported in the Region; however, this is likely an underestimate of the true burden, as diagnosis of AIDS in the Pacific faces a number of challenges. Heterosexual transmission accounts for the majority of HIV infections in PICTs. Epidemiological data in the region has several limitations, including poor accessibility and uptake of testing for most-at-risk populations.

## HIV epidemiology in country

The Cook Islands comprises 15 islands in two main groups, with a land area of 240 square kilometers of the South Pacific. Cook Islands has a total population of 19,569 (2006 census) with almost ¾ (14, 153) residing on the largest island, Rarotonga in the Southern Group. According to the 2001 census, approximately 2/3 of the population (67.6%) lives in urban environments. The fertility rate is 3.1% and the crude birth rate is 22 per 1000 population. Life expectancy at birth for Cook Islanders is 71.0 years.

Cook Islands has reported only 2 HIV cases (locally diagnosed) since reporting commenced in the region, but currently there is no one living with HIV who resides in the Cook Islands. Routine HIV testing is conducted for blood donors, for Cook Islands immigration requirements, and antenatal (ANC) women.

Although reported HIV prevalence is low, other sexually transmitted infections are more common: a second-generation surveillance survey of ANC women in Cook Islands, undertaken in 2005-06, did not detect any HIV infections but documented a chlamydia prevalence of 19.8%, trichomonas prevalence of 8%, and gonorrhoea prevalence of 2.2%<sup>iii</sup>. A concern stemming from this survey was the high number of STIs for those under the age of 25 compared to the older participants: 38% vs 4% for chlamydia, and 46% vs 16% with any STI.

## SGS background

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

Recommended frequency and type of surveillance differs according to the level of the HIV epidemic. HIV epidemics can be broadly classified into three levels:

Low: HIV is present in 'high risk' population subgroups, such as sex workers, injecting drug users, and men who have sex with men. HIV may have present in these groups for sometime, but prevalence remains low and stable.

Concentrated: There has been a rapid increase of HIV in high risk population sub-groups, but HIV is not yet prevalent within the general community.

Generalised: While high risk groups have a disproportionately high prevalence, HIV is also established within the general population. <sup>iv</sup>

### **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 activities in low-level epidemics typically include

- cross-sectional behavioral surveys
- surveillance of STIs
- HIV serosurveillance
- HIV and AIDS case reporting
- screening donated blood

SGS behavioural surveys involve participants completing a questionnaire which provides information on demographic characteristics, sexual risk behaviours, alcohol and other drug use, HIV knowledge, attitudes and access to testing, and STI history.

## Surveys Conducted in Country

In 2005-2006 there were two SGS surveys conducted in Cook Islands: (1) SPS with antenatal (ANC) Women and (2) BSS with Youth. The ANC and Youth report has been published previously. In 2009, a BSS was conducted among akava'ine and men who have sex with men (MSM). This report summarizes the results from the akava'ine / MSM surveys. "Akava'ine" is a local Cook Islands term for a 'third sex' sexual minority, commonly understood as transgender males who do not identify with or live according to their biological or birth gender.

# Behavioural Surveillance Survey of MSM

## Methods

### Development of the questionnaire

The questionnaire was based on the Family Health International standard, with modifications made for use in the Cook Islands to ensure relevance for the population of interest. Using standard questions to measure key indicators enables results to be compared across countries. A copy of the questionnaire appears in Appendix A.

### Recruitment and sampling

Respondent Driven Sampling was initially identified as the best method to access participants who were 'hidden' in the community. Potential respondents were approached to participate, and subsequently asked to recruit up to three other people that they knew who were part of the transgendered or MSM community in the Cook Islands, in order to maximize the scope of recruitment. After several weeks of RDS, participation was low, and a 'snowball' method of recruiting participants was employed. That is, survey leaders approached any community members who might be eligible and invited them to take part in the study. This enabled recruitment of a greater number of participants, but limited the engagement of those who were not so obvious, or open about their behaviours, in the community.

### Data collection tools

Data was collected in this survey using a novel method in the Pacific: computer-assisted personal interviews (CAPI) using portable, handheld personal digital assistants (PDAs). Responses were entered directly into the PDAs by respondents, and later downloaded and compiled into an Excel spreadsheet by a consultant from the University of New South Wales, Australia, who was engaged to support the implementation of this technology.

Due to the data collection method, hard copy questionnaires were not created for data quality verification, as has been undertaken with other SGS surveys. However, the use of PDAs to capture responses removed the need for data entry, and obviated second-party data entry errors.

Data from the Excel spreadsheet was imported into SPSS 11.0 for analysis and the generation of descriptive statistics.

## Survey Methodology overview

Table 1 provides an overview of the methodology of the MSM survey.

**Table 1: Overview of the Survey Methodology**

Methodology	Survey details
Population	<i>Men who identify as akavaine OR have had sex with men</i>
Survey type	<i>Behavioural Surveillance Survey (BSS)</i>
Sampling method	<i>Respondent driven sampling (RDS), snowball sampling</i>
Inclusion criteria	<i>Males 15 years of age or older, who identify as akavaine or who have ever had sex with a man</i>
Target Sample Size	100
Final Sample Size	84
Interview location(s)	<i>Some interviews undertaken at the Public Health Tupapa Clinic. Due to the PDA technology other interviews were done in a variety of settings e.g. homes, cafes, beaches</i>
Administration of the survey	<i>Self-administered via handheld computer</i>
Type of consent	<i>Verbal OR via PDA</i>
Time required for interview	<i>Approximately 20 minutes</i>
Data collection period	<i>May – July 2009</i>

The study protocol determined a maximum sample size of 100 participants. This cap was due to the survey budget in the context of using respondent-driven sampling (RDS) as well as the view that the population of akavaine and MSM in Rarotonga would likely not greatly exceed this figure. It was anticipated that difficulties may be experienced in achieving the target sample size, because (1) the population of MSM and akavaine might be smaller than expected, and/or (2) sampling may prove to be difficult in these sub-population groups. While the results are still important and useful, this limit on sample size does restrict the statistical power of this survey to detect differences between groups. For this reason, some results with very small numbers

have not been further analysed, and the results of this survey are primarily presented in descriptive tables without additional comparisons.

### Eligibility criteria

Males who identified themselves as: 1) 15 year of age or older; and 2) akavaine; or 3) having ever had sex with another man, were invited to participate.

A hard copy eligibility and informed consent document, signed by the interviewer, was available for 64 of 84 electronically completed surveys. As the PDAs provided an option for respondents to indicate that they understood the terms of the survey and consented to participate, it was deemed that any respondent who indicated informed consent either electronically or via consent form was eligible to be included for analysis.

## Results

### Demographic characteristics.

A total of 84 people were surveyed, of whom 64% identified themselves as male, and more than a quarter (26.6%) who identified themselves as transgender, intersex or akavaine. Another 6 % identified themselves as female. Although 21 of 60 respondents on the hard copy consent/eligibility form self-identified as akavaine, “akavaine” was not provided as a gender option for the multiple-choice question, although respondents were provided with a free-text field to specify if they selected “other”. Of the respondents who chose “other”, one self-identified as akavaine, one as ‘bisexual’ and one as ‘cross-dresser’. In the sexual identity/orientation question, 6/9 respondents who chose “other” self-identified as “akavaine”. Due to the small sample size, data is not disaggregated by gender.

Fewer than one-third (30.5%) of the survey participants were aged between 15 and 24 years, with a mean age for all participants of 30.2 years (median 28 years). Almost all of the participants had at least some secondary school, and more than one-third (39.3%) reported at least some post-secondary education. Presumably related to the high overall level of education in this group of respondents, only 14.1% reported that they were currently unemployed. The largest proportion of respondents indicated that they worked in the hospitality and tourism industries.

**Table 2:        Reported Demographic Characteristics**

	N asked (missing or no response)	N responses [denominator]	%
Gender	84 (1)	[83]	
<i>Male</i>		53	63.9
<i>Other, including Akavaine</i>		30	36.1
Sexual orientation	84 (0)	[84]	
<i>Gay or homosexual</i>		33	39.3
<i>Bisexual</i>		17	20.2
<i>Queer</i>		13	15.5
<i>Heterosexual</i>		12	14.3
<i>Other</i>		9	10.7
Age group (years)	84 (2)	[82]	
15 to 24		25	30.5
25 – 49		53	64.6
50+		4	4.9
Ethnicity	84 (0)	[84]	
<i>Polynesian</i>		63	75.0
<i>Melanesian</i>		11	13.1
<i>Mixed ethnicity</i>		5	6.0
<i>Other ethnicity</i>		5	6.0
Education	84 (0)	[84]	
<i>Never attended school</i>		1	1.2
<i>Primary school</i>		1	1.2
<i>Some secondary</i>		36	42.9
<i>Completed secondary</i>		13	15.5
<i>Higher education</i>		33	39.3
Occupation	84 (6)	[78]	
<i>Hospitality &amp; tourism</i>		29	37.2
<i>Other</i>		13	16.7
<i>Not employed</i>		11	14.1
<i>Professional</i>		7	9.0
<i>Clerical/office</i>		7	9.0
<i>Transport</i>		3	3.8
<i>Fisherman/seafarer</i>		3	3.8
<i>Construction/landscaping</i>		3	3.8
<i>Home duties</i>		2	2.6

Table 3 below summarizes the marital status and living arrangements of the survey participants. Nearly all (94%) of the participants had never been or were not currently married, and more

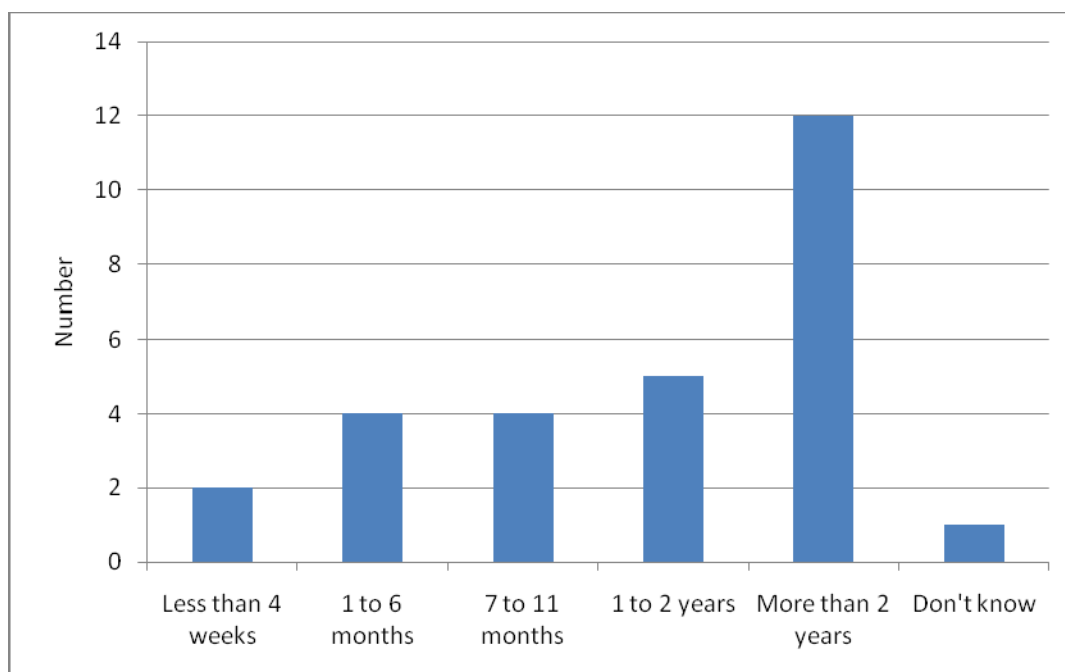
than half (50/84 or 59.5%) were living with family or other relatives. Less than half (41.7%) of the participants reported living away from home for one month or more in the past year.

**Table 3: Reported Marital Status and Living Arrangements**

	N asked (missing or no response)	N responses [Denominator]	%
Ever been married to a woman	84 (2)	[82]	
No		77	93.9
Yes		5	6.1
Currently married/ in a regular relationship with a woman	7 (1)	[6]	
No		2	33.3
Yes		4	66.6
Living arrangements	84	[84]*	%*
With family		41	48.8
With other relatives		9	10.7
With peers/friends		21	25.0
Alone		16	19.0
Other		4	4.8
Has spent time away from home for 1 month or more in past 12 months	84	[84]	
No		49	58.3
Yes		35	41.7

\* Respondents could provide yes/no answers to multiple categories in the “Living arrangements” question, so responses add up to more than 84/ 100%

Of the respondents who had ever had sex (n=75), 28 or 37.3% reported that at the time of the survey, they had a regular male or akavaine partner (‘boyfriend’ or ‘girlfriend’). The reported duration of these relationships (for the 28 respondents who reported having a current, regular partner) is presented in Figure 1, below.



**Figure 1:** Duration of relationship with regular male or akavaine partner

## Sexual behaviours

Table 4 below summarizes the sexual history of the survey participants. Most of the respondents (89.3%) reported that they had been sexually active. Further analysis on sexual history below is restricted to those respondents who reported that they had had sex (n=75). The mean age at first sex was 14.5 years with more than half (56%) of the participants reporting first sexual intercourse below 15 years.

**Table 4:** Reported Sexual History

	N asked (missing or no response)	N responses [Denominator]	%
Ever had sex (with M, F, or Akavaine partner)	84 (1)	[83]	
No		8	9.5
Yes		75	89.3
Sex before the age of 15	75 (2)	38 [73]	52.1
Age at first sex	Mean	Range	
	14.5	5 to 21	



Table 5 shows the reported knowledge of condoms and condom use. Most of the participants (90%) had heard of a male condom and many (74%) had heard of a female condom. Less than a third (29%) of participants reported using a condom the first time they had sex, but almost half (45%) used one the last time they had sex. The majority (84%) of participants reported having ever used a male condom, and 8% had ever used a female condom.

**Table 5:        *Reported Knowledge of Condoms and Condom Use***

	N asked (missing or no response)	N responses [Denominator]	%
Heard of male condom	84 (8)	72 [76]	90.0
Heard of female condom	84	56 [76]	73.7
Used a condom first time had sex	84 (11)	21 [73]	28.8
Used a condom the last time had sex	84 (9)	34 [75]	45.3
Ever used a female condom	84 (11)	6 [73]	8.2
Ever used a male condom	84 (11)	61 [73]	83.6

Table 6 presents results pertaining to sex with akavaine partners. Of those respondents with sexual experience, 32% reported having ever had sex with an akavaine partner. Half of these respondents indicated that they had had one akavaine partner in their lifetime, while half reported multiple lifetime akavaine partners. Of those who had ever had sex with an akavaine partner, most (66.7%) had some sexual contact with an akavaine partner in the 6 months prior to the survey period.

Amongst respondents who had sexual contact with an akavaine partner in the previous six months, similar proportions reported oral and anal intercourse during that period (87.5% and 81.3%): The mean number of regular akavaine anal sex partners in the previous six months was 5.5 (median 1) and the mean number of casual akavaine anal sex partners was 2.6 (median 2). The mean number of akavaine oral sex partners (no distinction between regular or casual) in the previous 6 months was 2 (median 2).

Of those who reported oral or anal sex with an akavaine partner in the past six months, about one-third (34.7%) used a condom at last oral intercourse, and just over half (61.5%) reported using a condom at last anal intercourse with an akavaine partner.

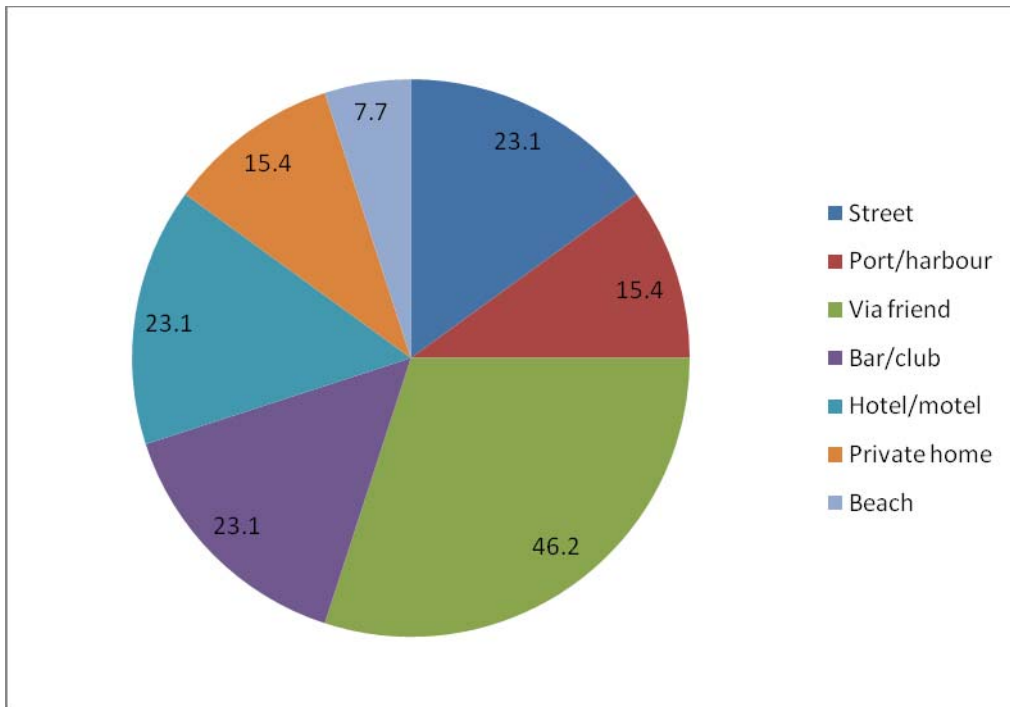
**Table 6:        *Sex with Akavaine partners***

	N asked (missing or no response)	N responses [Denominator]	%
Ever had sex with an akavaine partner	75	24 [75]	32.0
Number of lifetime akavaine	24 (0)		

partners			
One		12 [24]	50.0
2 to 5		4 [24]	16.7
6 to 10		2 [24]	8.3
11 to 20		3 [24]	12.5
21 to 49		3 [24]	12.5
Sex with an akavaine partner in past 6 months	24	16 [24]	66.7
Oral sex with an akavaine partner in past 6 months	16	14 [16]	87.5
Used a condom at last oral intercourse with akavaine partner	14	5 [14]	34.7
Anal sex with an akavaine partner in past 6 months	16	13 [16]	81.3
Used a condom at last anal intercourse with akavaine partner	13	8 [13]	61.5

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Figure 2, below, shows the distribution of responses to the question of where respondents met or looked for akavaine partners in the previous six months. Respondents could choose more than one category. While some participants indicated that they met or looked for partners in public or commercial venues (street, bar), the largest proportion of respondents indicated that they met akavaine partners through friend networks.



**Figure 2:** Meeting places for akavaine partners in past 6 months

Table 7, below, summarizes respondents sexual histories with male partners (not including akavaine). Most of the sexually experienced respondents to this survey (85.3%) indicated that they had had sex with a male partner in their lifetime, and almost all reported multiple male partners in their lifetime, with about 14% of the respondents who had had sex with male partners reporting that they had more than 100 lifetime partners.

The mean number of male oral sex partners reported in the previous 6 months was 5.1 (median 3); the mean number of male anal sex partners was 3.4 (median 2). While just over half (55.3%) reported using a condom at last anal intercourse with a male partner, a relatively fewer 16.4% reported that they used a condom at last oral intercourse.

**Table 7:** Sex with Male Partners (not including akavaine)

	N asked (missing or no response)	N responses [Denominator]	%
Ever had sex with a male partner	75	64 [75]	85.3
Number of lifetime male partners	64 (1)		
One		2 [63]	3.2
2 to 5		10 [63]	15.9
6 to 10		12 [63]	19.1

11 to 20		14 [63]	22.2
21 to 49		10 [63]	15.9
50 to 100		6 [63]	9.5
100+		9 [63]	14.3
Sex with a male partner in past 6 months	64 (2)	55 [62]	88.7
Oral sex with a male partner in past 6 months	55	55 [55]	100.0
Used a condom at last oral intercourse with male partner	55	9 [55]	16.4
Anal sex with a male partner in past 6 months	55 (1)	47 [54]	87.0
Used a condom at last anal intercourse with male partner	47	26 [47]	55.3

Respondents were also queried about their sexual histories with female partners and these results are summarized in Table 8, below. Over half (58.7%) of the participants in this survey reported that they had had sex with a female partner, and almost half of those (45.5%) reported multiple female partners in the 6 months prior to the survey. Amongst those who had ever had sex with a female partner, two-thirds (66.7%) said that they used a condom at last intercourse. Only 8 respondents answered that they did not use a condom the last time they had sex with a woman, so reasons for not using a condom were not analysed further.

**Table 8:** *Sex with Female Partners*

	N asked (missing or no response)	N responses [Denominator]	%
Ever had sex with a female partner	75	44 [75]	58.7
Number of female partners in last 6 months	Mean 4.1	Range 0 - 40	
Used a condom at last intercourse with female partner	44 (20)	16 [24]	66.7

Participants in this survey answered a number of questions about their experience with transactional sex, either giving or receiving money, goods or favours in exchange for sex. Of the respondents who indicated that they had had anal sex with an akavaine partner (n=13), 41.7% reported that they had given or received money, goods or favours for anal sex and only 40% of those (n=2) indicated that they had used a condom the last time they had anal sex with an akavaine partner whom they gave or received money or other incentive. Because the number of

respondents who reported transactional anal sex with an akavaine partner was so small, further analysis on partner numbers and characteristics was not continued.

Of the respondents who had had anal sex with a male partner in the past 6 months (n=47), 4 reported that they had given or received money or goods for anal sex with a male partner. Three of the four reported that they used a condom at last anal intercourse with a male partner. Two additional respondents reported that they had given money to a man to have sex with them in the past 6 months. Because this number was so small, no further analysis was undertaken.

**Table 9: Reported Transactional Sex/ Group Sex**

	N asked (missing or no response)	N responses [Denominator]	%
<b>Gave or received money/goods</b> for anal sex with akavaine partner past 6 months	13 (1)	5 [12]	41.7
Used a condom last anal sex with akavaine transactional partner	5	2 [5]	40.0
<b>Gave or received money/goods</b> for anal sex with male partner past 6 months	47 (0)	4 [47]	8.5
Used a condom last anal sex with male transactional partner	4	3 [4]	75.0
<b>Paid money</b> to have anal intercourse with a male partner past 6 months	47 (0)	2 [47]	4.3
	Mean	Range	
<b>Number</b> of akavaine transactional anal sex partners past 6 months	4.6	1 to100*	
<b>Group sex</b> with two or more men and/or akavaine at the same time in past 6 months	75 (0)	20 [75]	26.7
<b>Concurrent</b> sexual relationships in the past 6 months (includes male, akavaine or female partners)	75 (0)	30 [76]	39.5
<b>Forced</b> to have sex by any partner in past 6 months	75 (0)	16 [76]	21.1

Behavioural surveillance surveys ask about transactional sex because it is generally regarded as a higher-risk activity. However, other forms of consensual and non-consensual sex may be riskier, especially if condoms are not used by all partners. More than one-quarter of sexually active respondents reported that they had experienced group sex with two or more male or akavaine partners in the past 6 months. Almost 40% of sexually active respondents indicated

that they had concurrent sexual relationships with men, women, or akavaine partners in the 6 months prior to the survey. (Note: concurrent sex is defined as have two or more overlapping sexual *relationships* during the same time period; group sex is defined as having sex with 2 or more people at the same time). Finally, more than 1 in 5 respondents to this survey (21.1%) had been forced to have sex in the past 6 months.

## Substance use

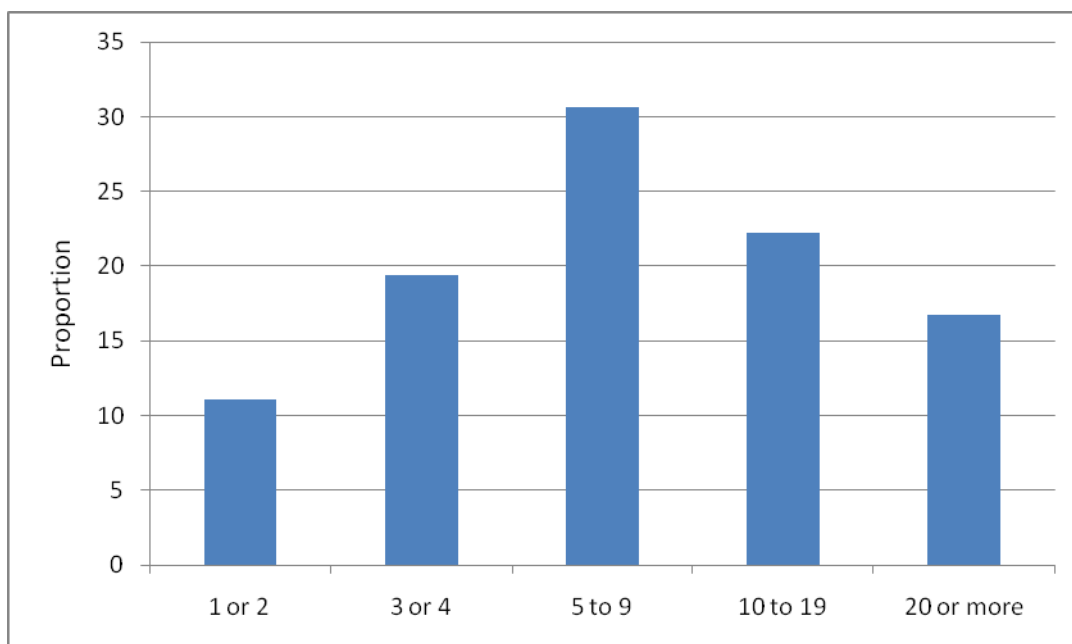
Alcohol consumption was common amongst the survey participants with only 9.5% reporting that they did not drink in the previous 6 month period. Almost half (48.8%) reported drinking 1 to 4 times a month in the past 6 months, and 41.7% reported drinking at least twice a week. Those who reported consuming alcohol in the previous 6 months engaged in heavy drinking: binge drinking (5 or more drinks on a single drinking occasion) in the past 6 months was reported by more than two-thirds (69.4%) of participants, with almost 17% reporting that they typically consumed 20 or more drinks. Almost half (47.4%) of respondents indicated that they engaged in binge drinking at least weekly.

**Table 10: Reported Frequency and Consumption of Alcohol**

	N asked (missing or no response)	N responses [Denominator]	%
Frequency of alcohol use in past 6 months	84		
<i>Never</i>		8 [84]	9.5
<i>Monthly or less</i>		14 [84]	16.7
<i>2 to 4 times a month</i>		27 [84]	32.1
<i>2 to 3 times a week</i>		30 [84]	35.7
<i>4 or more times a week</i>		5 [84]	6.0
Number of standard drinks usually consumed	76 (4)		
<i>1 or 2</i>		8 [72]	11.1
<i>3 or 4</i>		14 [72]	19.4
<i>5 to 9</i>		22 [72]	30.6
<i>10 to 19</i>		16 [72]	22.2
<i>20 or more</i>		12 [72]	16.7
Frequency of drinking 5 or more standard drinks in past 6 months	76		
<i>Never</i>		3 [76]	3.9
<i>Less than monthly</i>		23 [76]	30.3

Monthly	14 [76]	18.4
Weekly	34 [76]	44.7
Daily or almost daily	2 [76]	2.6

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**Figure 3:** *Number of Drinks Consumed on a Typical Occasion*

Table 11 summarizes recreational substance use amongst the survey participants. A substantial proportion of all respondents (57.1%) were recent tobacco users; while a large proportion had ever used marijuana, about a quarter (27.4%) of all survey respondents reported that they had used it in the past 30 days. Other drugs were less common, although one-third of all respondents indicated that they had ever used inhalants, and about 1/3 of ever users had used inhalants in the past 30 days. The wording of this question may have been problematic: inhalant usage is not commonly seen in the Cook Islands and respondents may have interpreted the question as referring to smoking tobacco or marijuana. While only 4 of the survey respondents reported that they had used any drugs by injection in the past 6 months, most (3/4) reported that they injected with gear previously used by someone else, on the last occasion when they injected drugs.

**Table 11: Reported Recreational Drug Use**

Drug	Ever used		Used in last 30 days	
	Number	Percentage	Number	% of ever users
Tobacco	64	76.2	48	75.0
Marijuana/cannabis	59	70.2	23	38.9
Kava	44	52.4	16	36.4
Speed/Ice/Ecstasy	25	29.8	6	24.0
Cocaine	19	22.6	3	15.8
Heroin	9	10.7	4	44.4
Inhalants	28	33.3	8	28.6
Injected any drugs in the past 6 months	4	4.8		
Last time injected drugs using a needle/syringe previously used	3	75.0		

## HIV knowledge and attitudes

Table 12 summarizes HIV prevention and transmission knowledge of the participants surveyed. All participants except for one had heard about HIV. Almost two-thirds (63%) of participants who had heard of HIV correctly answered all five questions about HIV prevention and transmission. Over half (52%) of participants correctly answered all six of these questions about HIV transmission and prevention.

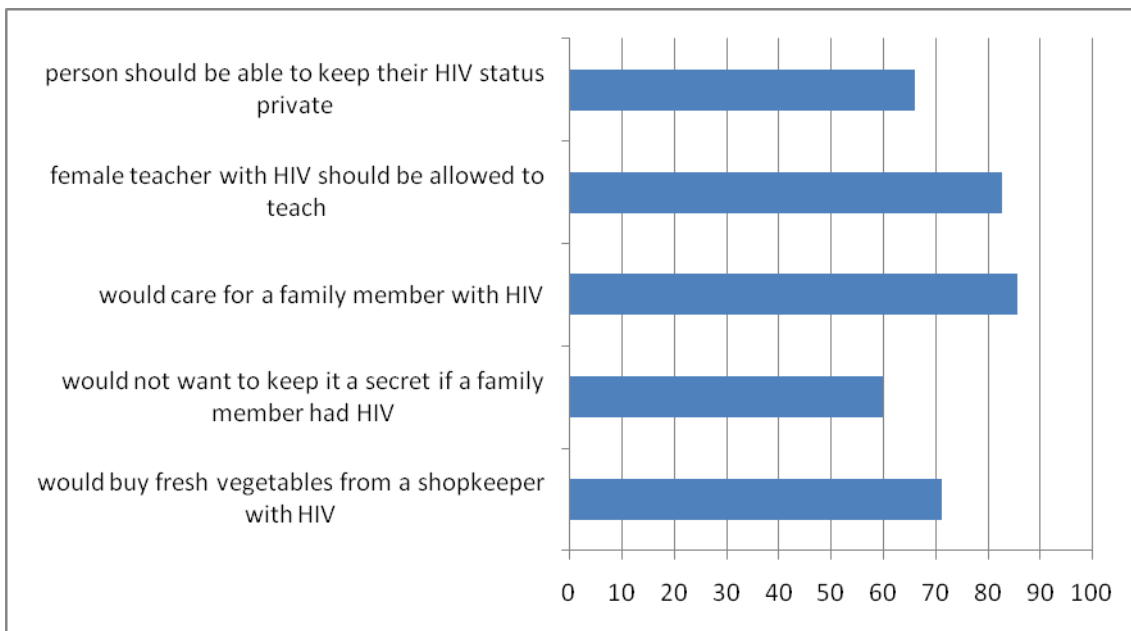
**Table 12: HIV Knowledge**

Knowledge Questions (Correct response)	N asked (don't know or no response)	N responses [Denominator]	%
Heard of HIV	84 (0)	83 [84]	98.8
Know someone with HIV, AIDS or died of AIDS	83 (0)	47 [83]	56.6
Having sex with only one, uninfected, faithful partner can reduce the chance of getting HIV [True]	83 (0)	71 [83]	85.5
Using condoms correctly can reduce the chance of getting HIV [True]	83 (0)	75 [83]	90.4
A healthy looking person can be infected with HIV [True]	83 (0)	73 [83]	88.0
A person can get HIV from mosquito bites[False]	83 (4)	70 [79]	88.6



A person can get HIV by sharing a meal with someone who is infected with HIV [False]	83 (1)	71 [82]	86.6
A mother can pass HIV to their baby during pregnancy [True]	83 (6)	65 [77]	84.4
<i>Overall knowledge</i>			
Correct response to the first five knowledge questions [UNGASS indicator #14]	83 (0)	52[83]	62.7
Correct response to all six questions		43 [83]	51.8

Figure 4 below summarizes the responses to five statements measuring attitudes towards people living with HIV. Accepting attitudes range from 60% to 85% across the five statements. Overall, the proportion of participants showing accepting attitudes towards people living with HIV was calculated by the percentage of participants with positive responses to all of the following statements: I would buy fresh vegetables from a shop keeper with HIV; I would not want to keep it a secret if a family member had HIV; I would care for a family member with HIV; and A female teacher with HIV should be allowed to teach. Based on this calculation, 42.5% of participants showed accepting attitudes towards people living with HIV.



**Figure 4:** *Attitudes and beliefs about HIV*

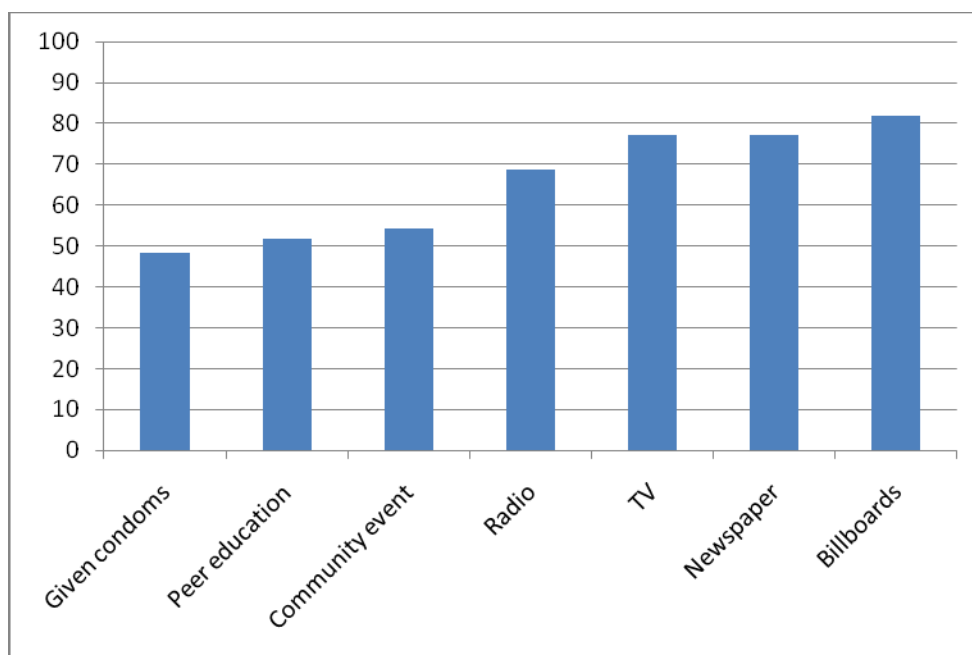
**Table 13:** *Attitudes towards Those Living with HIV*

Attitude questions	N asked (don't know or no response)	N responses [Denominator]	%
1. I would buy fresh vegetables from a shopkeeper with HIV	84 (1)	59 [83]	71.1
2. I would not want to keep it a secret if a family member had HIV	84 (2)	49 [82]	59.8
3. I would care for a family member with HIV	84 (0)	72 [84]	85.7
4. A female teacher with HIV should be allowed to teach	84 (3)	67 [81]	82.7
5. A person should be able to keep their HIV status private [strongly agree/agree]	84 (2)	54 [82]	65.9
Accepting attitudes	84 (4)	34 [80]	42.5

\*Having accepting attitudes was measured by reporting positive responses to all of the first 4 statements in the table.

## Prevention and Awareness Activities

Awareness of prevention activities was very high with almost all participants (99%) reporting that they were aware of at least one of the activities shown in figure 5. Passive forms of communication, such as billboards (82%), newspapers (77%) and television (77%) were the most common source of HIV information reported by participants. In contrast, just over half (52%) of respondents reported taking part in a peer education program and 48% reported that they had been given condoms through an outreach service, health clinic or drop-in centre.



**Figure 5:** *Reported sources of HIV information and awareness*

## Access to testing

**Table 14:** *Reported Access to HIV Testing*

	N asked (missing or no response/ don't know)	N responses [Denominator]	%
Believe it is possible for someone in the community to get a confidential test	84 (7)	49 [77]	60.5
Reasons why you can't get a confidential test			
<i>Testing not available</i>	28 (1)	4 [27]	14.8
<i>Testing site too public</i>	28 (1)	13 [27]	48.1
<i>Everyone will find out</i>	28 (1)	23 [27]	85.2
<i>Testing site too difficult to get to</i>	28 (1)	0 [27]	0
<i>Opening hours not convenient</i>	28 (1)	3 [27]	11.1
Ever been tested for HIV	84 (1)	36 [83]	43.4
When did you have your last HIV test	36 (1)		
<i>Over a year ago</i>		20 [35]	57.1
<i>Between 3 and 12 months ago</i>		7 [35]	20.0
<i>In the last 3 months</i>		7 [35]	20.0
<i>Don't know</i>		1 [35]	2.9

Why did you have your last HIV test?	36 (1)		
<i>Medical check</i>		22 [35]	62.9
<i>Thought I might be at risk</i>		6 [35]	17.1
<i>Other reason</i>		4 [35]	11.4
<i>Blood donor</i>		3 [35]	8.6
Received result of HIV test	36 (2)	34 [36]	94.4

More than half (61%) of the participants believed that it was possible to get a confidential HIV test in their community. The majority (85%) of those who believed that confidential HIV testing was not possible said it was because everyone would find out, and almost half (48%) said the HIV testing site was too public.

Only 43% of participants reported having ever been tested for HIV, of which over half were tested more than 12 months ago. Of this small number, most (63%) were tested as part of a medical checkup or screening, and almost all (94%) knew the result of their HIV test. Among those who sought HIV testing because they thought they might be at risk (n=6), the reasons that respondents considered themselves at risk were all related to unsafe sex. Among those who reported “other” reasons for having an HIV test (n=4), two respondents did not disclose their reason.

### Awareness of STIs

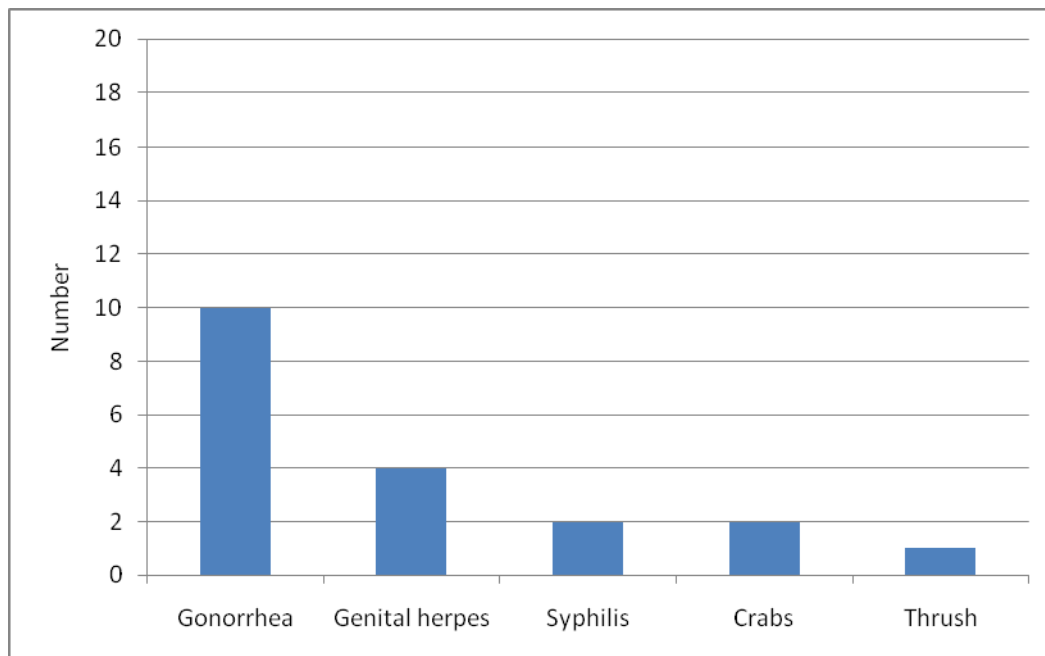
Participants in this survey were not offered testing for sexually transmitted infections. Table 15 reports the experience of STI symptoms or previous diagnoses amongst the survey participants. Almost all (94%) of participants reported some awareness of STIs, and almost a quarter of those (24%) had ever been diagnosed with an STI.

Almost eighteen percent of survey participants (n=15, 17.9%) reported experiencing an STI symptom within the past one month. The most common symptoms reported were unusual genital discharge, or rash or sore in the genital area, which were each reported by about 15% of those who had experienced recent symptoms. Thirteen respondents (15.5%) indicated that they had sought treatment, but this number includes participants who did not actually report experiencing symptoms. Among the 15 who reported any symptoms in the past month, only 5 (33%) indicated that they sought treatment for their STI symptoms.

**Table 15: Self Reported History and Symptoms of STIs**

	N asked (missing or no response)	N responses [Denominator]	%
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Ever heard of sexually transmitted infections (STIs)?	84 (1)	78 [83]	94.0
Ever been treated for an STI by a doctor or health worker?	79 (1)	19 [78]	24.4
Infection(s) respondents were diagnosed with	19		
<i>Gonorrhoea</i>		10 [19]	52.6
<i>Genital herpes</i>		4 [19]	21.1
<i>Syphilis</i>		2 [19]	10.5
<i>Crabs</i>		2 [19]	10.5
<i>Thrush</i>		1 [19]	5.3
STI symptoms in past 1 month		15 (84)	17.9
<i>Unusual genital discharge</i>	84 (36)	7 [48]	14.6
<i>Rash, ulcer or sore around your genitals</i>	84 (36)	7 [48]	14.6
<i>Stinging, burning or pain when you pass urine</i>	84 (36)	3 [48]	6.2
<i>Unusual anal discharge</i>	84 (36)	1 [48]	2.1



**Figure 6:** Previous lifetime STI diagnoses

## UNGASS indicators

**Table 16** UNGASS indicators, most at risk group

	15 to 24 <sup>†</sup>		25+ <sup>†</sup>	
	N	%	N	%
8. Percentage of most-at-risk-populations, who received an HIV test in the last 12 months and know their results.	5 [5]	100.0	8 [8]	100.0
9. Percentage of most-at-risk populations who have been reached with HIV prevention programs <sup>‡</sup>	16 [25]	64.0	21 [57]	36.8
14. Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	12 [25]	48.0	39 [57]	68.4
19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner <sup>‡</sup>	11 [25]	44.0	21 [57]	36.8
23. Percentage of most-at-risk populations who are HIV infected	?		?	0.0

<sup>†</sup> age information missing for 2/84 respondents

<sup>‡</sup> Percentage of respondents who have been given condoms through an outreach service, health clinic or drop-in centre in the past 12 months

<sup>‡</sup> combined responses for last anal sex with male OR akavaine partner

## Discussion

The results of the survey indicate high levels of risky sexual behavior amongst men who have sex with men as indicated by early age of sexual debut, multiple akavaine and male anal sex partners in the past 6 months, and high incidence of concurrent partnerships and group sex. The current survey found that less than half of respondents reported using a condom the last time they had sex with any partner. Consistent condom use is an important strategy for protection against STI and HIV from high risk sexual activity. Added to these risk behaviors is the finding that more than 1/5 of participants reported being forced to have sex by any partner in the past six months. Of the survey respondents under 25 years of age, almost half (44%) of reported that they had recently (within the previous six months) been forced to have sex. By comparison, of youth 15-24 who participated in a previous SGS survey in the Cook Islands, about 27% reported that they had ever been forced to have sex in their lifetimes. All of these behaviors are placing men who have sex with men at high risk of STIs including HIV.

Alcohol consumption may be an important factor associated with unsafe sexual behaviours amongst men having sex with men. Reported levels of alcohol consumption were high, with most participants drinking at least once per week in the past 6 months. Of those who reported drinking in the past 6 months, almost half (47%) said they binge drank weekly or more frequently, and more than a third (39%) reported consuming 10 or more drinks on a typical drinking occasion. A large proportion of respondents reported ever or recently using a range of recreational drugs: almost 30% had ever used speed/ice/ecstasy, and almost ¼ had ever used cocaine. A troubling 1/3 of participants had ever used inhalants, and many of these had used within the 30 days prior to the survey. While the number of respondents who had injected drugs in the past 6 months was small (n=4), it is important to note that ¾ reported that they used a needle or syringe previously used by someone else the last time they injected. Sharing injecting equipment is the highest-risk means for transmitting HIV and other bloodborne infections, and awareness of risks associated with injecting drugs, and safer injecting practices, may be low in this community.

Over a third (37%) of the men who responded to this survey indicated that they have a regular male or akavaine boyfriend/girlfriend, and many of these relationships were of long duration. However, a similar proportion (39%) indicated that they had concurrent relationships with male, akavaine or female partners in the past 6 months. Males who participate in high risk sexual activity with other men may put female partners at risk of infection, and act as a 'bridge' between sexual networks. In the current survey, most (59%) participants said that they had ever had sex with a woman, of which 2/3 reported using a condom the last time they had sex with a

female partner. Ensuring protected male to male and male to female sex has important implications for protecting all partners, particularly amongst males with a regular or live-in partner, where condom use is likely to be low.

HIV prevention and transmission knowledge was high amongst the survey participants. Responses to the questions about how HIV is transmitted or prevented compared favourably with the results obtained among both antenatal women and youth in the 2005-06 SGS survey in Cook Islands<sup>1</sup>. Over half of participants in the current survey correctly answered all prevention and transmission questions, and rejected common misconceptions about HIV. However, awareness does not translate directly into safer behavior: despite this knowledge, men who have sex with men in Cook Islands are still participating in high risk sexual activity. One explanation for the discord between knowledge and practice is that HIV is not at all visible in the Cook Islands. Indeed, there is no known HIV-positive person currently living in the Cook Islands. In this context HIV may be seen by these men as something that affects other countries, but not the Cook Islands. And these perceptions are currently correct. However HIV epidemiology could change at any time and could particularly affect populations such as MSM and akavaive where there are large partner numbers, concurrent partners, and low condom use. The challenge therefore for HIV prevention work is in instilling a vigilant attitude towards safe sex practices in the context of a low level HIV epidemic. Working closely with community groups on how best to deal with these challenges is likely to bear the most fruit.

About a quarter of respondents reported having ever been diagnosed with an STI, and almost 1/5 (18%) indicated that they had possibly experienced an STI symptom in the past month. However, only a small proportion of those indicated that they had sought treatment. These survey participants in the Cook Islands expressed strong reservations about the confidentiality of HIV testing: Almost 40% believed it was not possible to get a confidential HIV test and of those, 85% said it was not possible because people would find out. If populations at risk for STIs including HIV are not assured of confidentiality, they will be reluctant to seek medical attention for symptoms, or diagnostic testing when they suspect exposure.



## Indicators UNGASS and MDG

This is a list of relevant UNGASS indicators

Indicators		
<b>National Commitment and Action</b>		
<b>National Programmes: blood safety, antiretroviral therapy coverage, prevention of mother-to-child transmission, co-management of TB and HIV treatment, HIV testing, prevention programmes, services for orphans and vulnerable children, and education.</b>		
7. Percentage of women and men aged 15-49 who received an HIV test in the last 12 months and who know the results		Population-based survey
8. Percentage of most-at-risk populations that have received an HIV test in the last 12 months and who know the results		Behavioural surveys
9. Percentage of most-at-risk populations reached with HIV/AIDS prevention programmes		Behavioural surveys
<b>Knowledge and Behaviour</b>		
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*		Population-based survey
14. Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission		Behavioural surveys
15. Percentage of young women and men who have had sexual intercourse before the age of 15		Population-based survey
16. Percentage of adults aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months		Population-based survey
17. Percentage of adults aged 15–49 who had more than one sexual partner in the past 12 months who report the use of a condom during their last intercourse*		Population-based survey
18. Percentage of female and male sex workers reporting the use of a condom with their most recent client		Behavioural surveys
19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner		Behavioural surveys
20. Percentage of injecting drug users who reported using sterile injecting equipment the last time they injected		Special survey

21. Percentage of injecting drug users who report the use of a condom at last sexual intercourse		Special survey
<b>Impact</b>		
22. Percentage of young women and men aged 15–24 who are HIV infected*		HIV sentinel surveillance and population-based survey
23. Percentage of most-at-risk populations who are HIV infected		HIV sentinel surveillance

\*Millennium Development Goals indicator

## References

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<sup>i</sup> Second generation surveillance surveys of HIV, other STIs and risk behaviours in 6 Pacific Island Countries (2004-2005). World Health Organization Western Pacific Regional Office, the Secretariat of the Pacific Community, the University of New South Wales, Australia. 2006.  
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<sup>ii</sup> Secretariat of the Pacific Community, Cumulative reported HIV, AIDS and AIDS deaths: cases, incidence rates and gender, plus cases with missing details; All Pacific Island Countries and Territories to December 2008 [http://www.spc.int/hiv/index2.php?option=com\\_docman&task=doc\\_view&gid=249&Itemid=148](http://www.spc.int/hiv/index2.php?option=com_docman&task=doc_view&gid=249&Itemid=148)

<sup>iii</sup> Cook Islands Ministry of Health, Second generation surveillance surveys of antenatal women and youth, Cook Islands 2005-06.  
[http://www.spc.int/hiv/index.php?option=com\\_docman&task=cat\\_view&gid=76&Itemid=148](http://www.spc.int/hiv/index.php?option=com_docman&task=cat_view&gid=76&Itemid=148)

<sup>iv</sup> UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, Guidelines for Second Generation HIV Surveillance, 2000