

# GAPSS 2004

Findings from the Gay Auckland Periodic Sex Survey

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NEW ZEALAND AIDS FOUNDATION  
TE TUUAAPAPA MATE AARAIKORE O AOTEAROA

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**November 2004**

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# GAPSS 2004

## Executive summary

This report contains the basic results of the 2004 Gay Auckland Periodic Sex Survey (GAPSS) undertaken in Auckland during the week of 8<sup>th</sup>-15<sup>nd</sup> February 2004. Of the 1220 men enrolled, 68.3% of the sample was recruited at the Big Gay Out fair day, 13.4% at gay bars, and 18.3% at gay saunas or sex-on-site venues. The age, ethnicity, education and sexual identity characteristics of the sample were broadly similar to those of the 2002 sample.

The following figures have been rounded from those presented in the rest of the report.

### HIV testing and HIV status

- Had ever tested for HIV:
  - 73% (71% in 2002).
- Had tested for HIV in the previous six months:
  - 26% (24% in 2002).
- Had tested HIV positive:
  - 4% of the total sample (5% in 2002);
  - 6% of those who had ever tested for HIV (6% in 2002).
- Believed they were currently “definitely HIV negative”:
  - 59% of those who had never tested for HIV (59% in 2002);
  - 67% of those who had last tested negative (66% in 2002).

### Attitudes to the HIV epidemic:

- “HIV/AIDS is a less serious threat than it used to be because of new treatments”:
  - 19% agreed/strongly agreed (19% in 2002).
- “Condoms are OK as part of sex”:
  - 89% agreed/strongly agreed (95% in 2002).
- “I don’t like wearing condoms because they reduce sensitivity”:
  - 35% agreed/strongly agreed (40% in 2002).
- “I would sometimes rather risk HIV transmission than use a condom during anal sex”:
  - 9% agreed/strongly agreed (13% in 2002).

- “New HIV treatments are simple and have few side effects”:
  - 18% agreed/strongly agreed
- “I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments”:
  - 4% agreed/strongly agreed
- “A man who knows he has HIV would tell me he was positive before we had sex”:
  - 22% agreed/strongly agreed
- “If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”:
  - 54% agreed/strongly agreed

### Sexual relationships

- The most common number of sexual partners over the previous six months:
  - Between 2 and 5
- Any sex with casual or regular partners in the previous six months:
  - 72% had engaged in sex with a regular sex partner (68% in 2002);
  - 63% had engaged in sex with a casual sex partner (64% in 2002).
- Were in a regular sexual relationship with a man at the time of survey:
  - 55% (49% in 2002).
- Lived with their current regular partner:
  - 52%
- Description of current regular partner:
  - 75% described them as a “boyfriend, long-term lover, life partner, or husband” (75% in 2002);
  - 20% described them as a “fuckbuddy” (20% in 2002).
- Duration of current relationship to date:
  - 21% had been together for less than six months (25% in 2002);
  - 28% had been together for five years or longer (26% in 2002).
- Had also engaged in sex with another man during the previous six months:
  - 56% of those who were currently in a regular relationship of more than six months duration (56% in 2002);
  - 23% of the total 2004 GAPSS sample (20% in 2002).

### Sex and condom use with current regular partner

- Had anal sex with current regular partner in the previous six months:
  - 80% (80% in 2002).
- Respondents who reported *at least once* not using a condom during anal sex with their current regular partner in the previous six months:
  - 320. This equates to:
  - 63% of those having anal sex with regular partner (65% in 2002);
  - 50% of those who had a current regular partner (52% in 2002);
  - 26% of the total GAPSS 2004 sample (25% in 2002).
- Respondents who reported *low* rates of condom use (i.e who either never or very rarely used condoms during anal sex):
  - 243. This equates to:
  - 48% of those having anal sex with regular partner (45% in 2002);
  - 38% of those who had any sex with a current regular partner (37% in 2002);
  - 20% of the total GAPSS 2004 sample (18% in 2002).
- Reporting *at least once* not using a condom was higher among respondents who:
  - Were recruited at the Big Gay Out and gay bars as opposed to saunas/sex-on-site venues;
  - Were aged 15-24;
  - Lived together;
  - Were in a current relationship of one year or longer duration;
  - Described their partner as a “boyfriend, etc” as opposed to a “fuckbuddy”;
  - Had both receptive and insertive anal sex as opposed to receptive only or insertive only;
  - Had last tested HIV negative and their partner had last tested HIV negative;
  - Believed that both they and their partner were currently “definitely HIV negative”;
  - Had not had sex with another man other than their partner in the last six months;
  - Disagreed with the statement “condoms are OK as part of sex”;
  - Agreed with the statement “I don’t like wearing condoms because they reduce sensitivity”;
  - Agreed with the statement “I would sometimes rather risk HIV transmission than use a condom during anal sex”.



### Sex and condom use with casual partners

- Had anal sex with casual partner/s in the previous six months:
  - 72% (68% in 2002).
- Respondents who reported *at least once* not using a condom during anal sex with a casual partner/s in the previous six months:
  - 174. This equates to:
    - 34% of those having anal sex with a casual partner/s (33% in 2002);
    - 24% of those who had any sex with a casual partner/s (23% in 2002);
    - 14% of the total GAPSS 2004 sample (14% in 2002).
- Respondents who reported *low* rates of condom use (i.e who either never or very rarely used condoms during anal sex):
  - 11. This equates to:
    - 2% of those having anal sex with a casual partner/s (5% in 2002);
    - 2% of those who had any sex with a casual partner/s (3.0% in 2002);
    - 1% of the total GAPSS 2004 sample (2% in 2002).
- Reporting *at least once* not using a condom during casual sex was higher among respondents who:
  - Identified as NZ European/Pakeha;
  - Had no school qualifications or whose highest qualification was school certificate or six form certificate;
  - Were unemployed;
  - Had six or more male sexual partners in the previous six months;
  - Had both receptive and insertive anal sex as opposed to receptive only or insertive only;
  - Believed they were currently “probably HIV negative” as opposed to “definitely HIV negative”;
  - Disagreed with the statement “condoms are OK as part of sex”;
  - Agreed with the statement “I don’t like wearing condoms because they reduce sensitivity”;
  - Agreed with the statement “I would sometimes rather risk HIV transmission than use a condom during anal sex”.

## Introduction

The Gay Auckland Periodic Sex Survey (GAPSS) 2004 is the second study undertaken in Auckland as part of a regular behavioural programme on HIV risk practices among men who have sex with men (MSM). GAPSS 2004 surveyed a broad cross-section of MSM about sexual practices, HIV testing and attitudes to the epidemic with a view to monitoring changes in these behaviours and attitudes since the inaugural GAPSS survey in 2002. GAPSS 2004 was conducted over one week during the annual "Hero" festival, which in 2004 occurred in February.

This second community report is a summary of the main findings from the 2004 survey and presents the latest results alongside those found in 2002. Further analysis of data from 2004, as well as comparisons with 2002, will follow this report and be available from the New Zealand AIDS Foundation website ([www.nzaf.org.nz](http://www.nzaf.org.nz)). An important feature of the initial analysis and dissemination process for the GAPSS project is to feed key results back to the communities that participated in the research as well as MSM community stakeholders such as HIV and sexual health service providers. Thus, in addition to aiding decisions regarding the best use of limited health promotion resources for this population, another important feature of this reporting process is to stimulate interest and debate for further research such as in-depth interview work (qualitative research) to explore the basic findings in more detail, or further quantitative research to explore the relationship between variables that have not been presented in this report. The GAPSS research team welcomes all approaches to this end.

The 2004 GAPSS survey was a joint project involving the Research, Analysis and Information Unit of the New Zealand AIDS Foundation (NZAF) in Auckland and the AIDS Epidemiology Group (AEG) based in the Department of Preventive and Social Medicine at the University of Otago Medical School in Dunedin. It was funded by Public Health Intelligence, Ministry of Health and received ethical approval from the Auckland Ethics Committee.

### ***Behavioural surveillance***

The United Nations Joint Programme on HIV/AIDS (UNAIDS) considers behavioural surveillance to be a key component of national surveillance of the HIV/AIDS epidemic (UNAIDS/WHO 2000). Periodic behavioural surveillance - undertaking similar studies conducted at regular intervals - has three main aims:

- to enable changes in the overall level of risk in a specific population to be traced and to provide early warning of possible changes in the epidemic;
- to help identify sub-groups in which higher-risk activities are evident or emerging, allowing prevention programmes to be properly targeted;
- to help generate a sustained community response to the epidemic by encouraging public engagement in the results of behavioural surveillance.

Although the Ministry of Health's Health Behaviour Surveys utilise random national telephone sampling to generate participants, obtaining large numbers of participants in this way who are MSM is costly due mainly to the low prevalence of homosexuality in the population and thus the high number of calls that would need to be made. In order to generate a large sample of MSM, the GAPSS project instead employed non-random techniques that target venues and events that attract large numbers of MSM, a technique that is described as "opportunistic" research.

When using non-random sampling in this way, behavioural surveillance must use methods that encourage participation amongst a wide variety of individuals if it is to generalise the findings beyond an otherwise biased group of participants. For results to be comparable from period to period, recruitment strategies also need to be consistent each time so that biases between each of the study samples are minimised. The inclusion of questions on demographic characteristics in each successive survey period helps to assess whether samples drawn from consecutive time periods are broadly similar or not, and this is important when interpreting whether a change in the results reflects an actual change or merely the characteristics of a different "slice" of the target population. Issues relating to the conduct of the GAPSS 2004 survey and the characteristics of the study participants are therefore described in more detail in the next two chapters.

The GAPSS project fulfils some of the goals set out in two national strategic documents: The New Zealand Health Monitor and The HIV/AIDS Action Plan: Sexual and Reproductive Health Strategy. The New Zealand Health Monitor notes in "Section 2: Health information" that "You cannot manage what you do not measure" (Ministry of Health, 2002: 6) and highlights the importance of quality information streams when making evidence-based decisions in health promotion. The HIV/AIDS Action Plan also lists the objective of better understanding the behaviours driving HIV infection and the trends in populations at highest risk of HIV infection (Ministry of Health, 2003: 40). The GAPSS project is an initial response to these needs for the specific issue of HIV and among the population group of men who have sex with men in New Zealand.

### ***Aims and objectives***

The aim of GAPSS 2004 was to obtain follow-up information on behaviours and attitudes of a sample of MSM that was selected in a manner similar to the baseline survey in 2002.

The specific objectives were to:

- Obtain a sample of MSM attending a number of different sites in a similar way to 2002;
- Collect information from this sample on demographic characteristics, sexual practices, HIV testing and status, and attitudes to HIV and safe sex behaviour;
- Present the 2004 data with a focus on identifying change since 2002;
- Present information collected on new aspects of the HIV epidemic not measured in 2002;
- Communicate the findings in ways that increase their uptake in policy and health promotion planning.

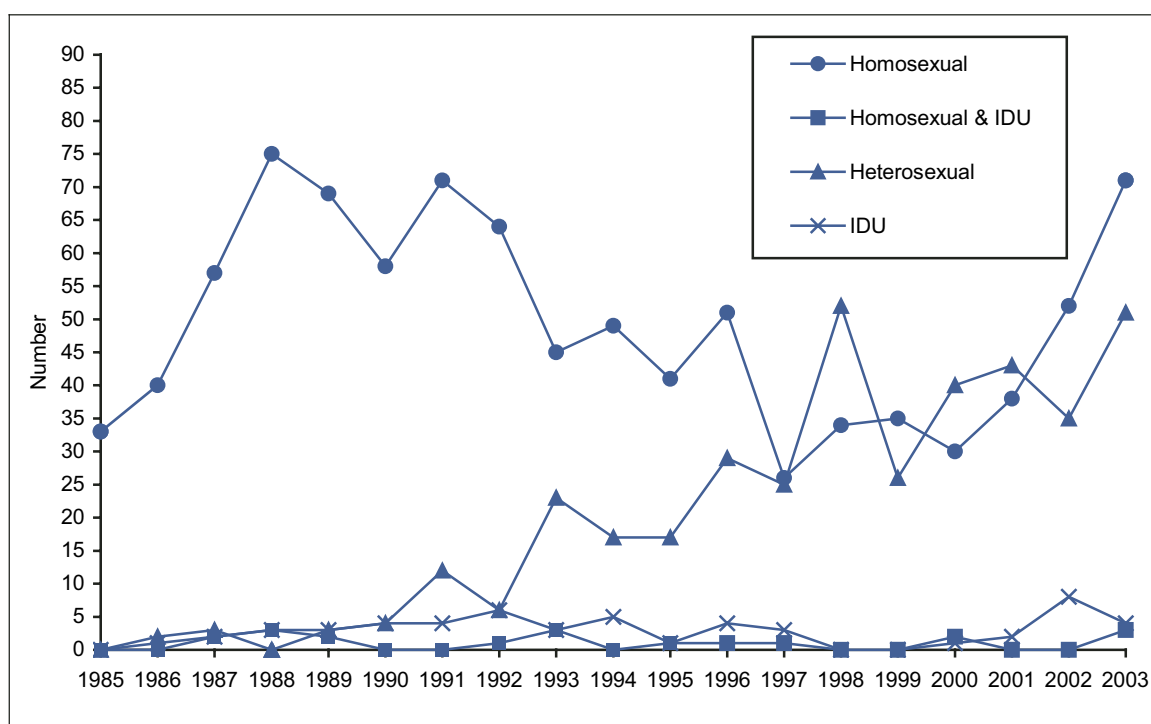
## Epidemiology of HIV in New Zealand

Part of the rationale behind conducting periodic behavioural risk surveillance is to help explain or predict trends in the epidemiology of HIV - the monitoring of HIV diagnoses. Although AIDS is a notifiable condition in New Zealand, the advent of Highly Active Anti-Retroviral Therapies (HAART) has made AIDS diagnoses less useful as a means of tracking the HIV epidemic. HIV is not notifiable in New Zealand, but since 1996 an enhanced surveillance system for newly reported HIV diagnoses has provided detailed information on HIV diagnoses and improved understanding of patterns in HIV infection (Paul et al. 2000).

AIDS diagnoses peaked in 1989 and have generally declined since then. New Zealand was one of the first countries in the world to experience a decline in AIDS incidence (Sharples et al. 1996), and the major factors for this are likely to have been the reduction in HIV infection amongst men who have sex with men in the mid-1980s, and the effective prevention of epidemics in other population subgroups. Since the mid-1990s, AIDS incidence has also reduced in part due to the availability of antiretroviral therapies that have delayed the progression of HIV infection to AIDS.

In the two years since the 2002 survey was conducted there have been dramatic increases in the number of MSM diagnosed with HIV in New Zealand. As Fig 1 shows, the number of HIV diagnoses among MSM rose from 38 in 2001, to 52 in 2002, to 71 in 2003, giving 2003 the highest number of HIV diagnoses since 1991 among this group. The number of HIV diagnoses as a result of heterosexual transmission has also been rising, with the equal highest number recorded in 2003 (52 HIV diagnoses – the same as in 1998). Overall, 2003 had the highest number of total HIV diagnoses across all transmission categories (154) since reporting began in New Zealand (AIDS Epidemiology Group, 2004).

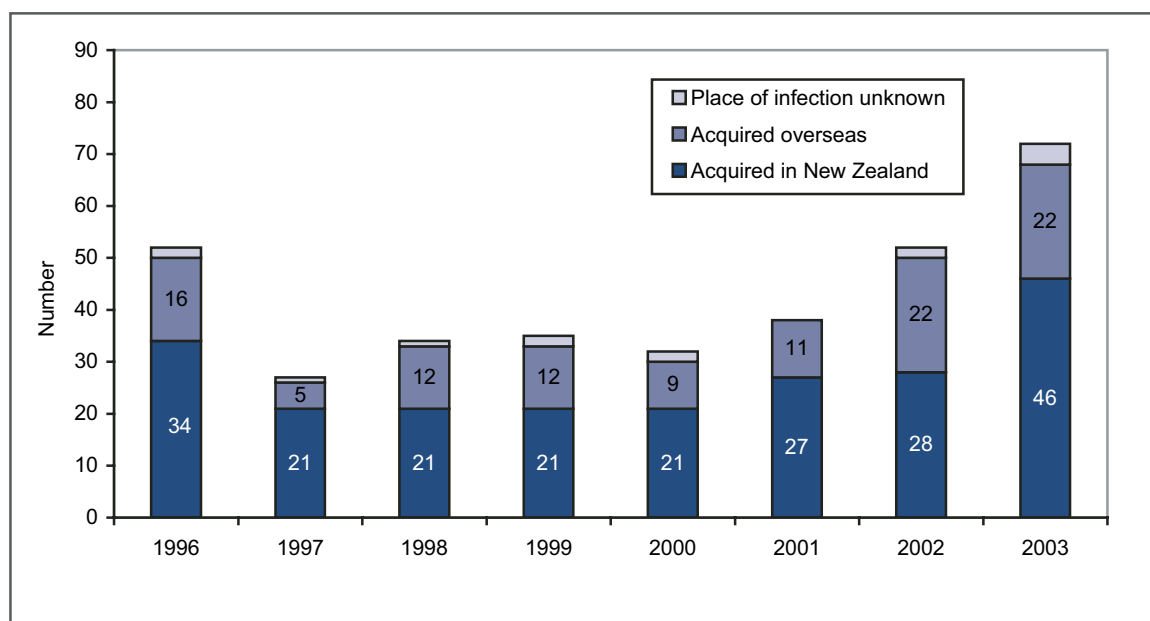
**Figure 1. Annual number of diagnosed HIV infections in New Zealand by risk category**



Source: AIDS Epidemiology Group.

The epidemic of diagnosed HIV infection is quite distinct across different transmission categories. In the last five years, only around 16% of the HIV diagnoses due to heterosexual transmission were the result of infections that were acquired in New Zealand – the majority having been acquired overseas. For diagnoses among MSM, however, around two-thirds had acquired HIV in New Zealand. In 2003, for example, 46 out of the 71 (65%) diagnoses of HIV among this group had become infected in this country, whereas 31% had acquired HIV overseas (Fig 2).

**Figure 2. Place of infection for HIV infections diagnosed in New Zealand where the likely mode of transmission was homosexual contact**



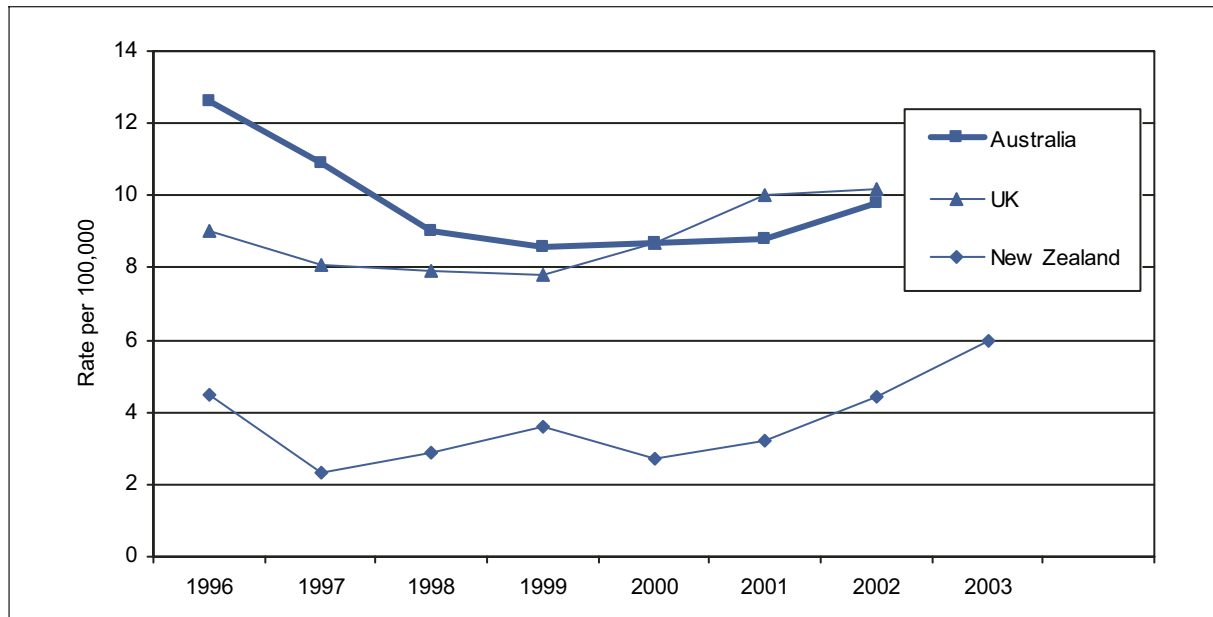
Source: AIDS Epidemiology Group

The different pattern of infections acquired inside and outside New Zealand between heterosexual and homosexual transmission means that, while homosexual transmission accounts for just under half of all recent HIV diagnoses recorded in New Zealand, it accounts for the majority of HIV diagnoses that result from infections *acquired* in New Zealand.

In 2003 for example, 71 out of the 154 total diagnoses were the result of sexual transmission between men (46%), but the 46 diagnoses among MSM where transmission occurred in New Zealand (Fig 2) represented 74% of the diagnoses across all groups that were acquired in New Zealand.

Although there has been a recent rise in HIV diagnoses in New Zealand among MSM, the absolute and relative number of diagnoses remains low by international standards. As Fig 2 illustrates, between 1997 and 2000 there were just 21 annual diagnoses of HIV among MSM which were acquired in New Zealand, and Fig 3 (overleaf) shows New Zealand's recent epidemiology of HIV among MSM in relation to Australia and the United Kingdom.

**Figure 3. Rates of diagnosed HIV among men who have sex with men (per 100,000 men aged 15-59)**



Source: AIDS Epidemiology Group.

It is also important to consider this international context when seeking to explain the recent increase in HIV diagnoses among MSM in New Zealand.

## **Study recruitment**

### ***Sample selection***

The GAPSS study surveyed MSM attending: (1) the Big Gay Out (an annual gay pride fair/picnic at a park); (2) four saunas and 'sex-on-site' venues frequented by MSM; and (3) six bars specifically frequented by gay men.

Men at these sites were invited to take part in the survey by trained recruitment staff. Participants were given a clipboard with a cover, which they could close over their questionnaire for privacy if they wished. The clipboards had a pen, a questionnaire and an information sheet attached to them and respondents were instructed to complete the survey themselves. Magnification sheets were available at all venues for those with sight impairments.

Secure return boxes for the completed questionnaires were provided beside the recruitment staff, and when finished, respondents were requested to place their questionnaire into these boxes themselves in order to ensure the confidentiality of their responses. Completion of the questionnaire generally took five to ten minutes. In 2004, participants were offered the opportunity to enter a separate prize draw for double tickets to the HERO party that occurred at the end of the recruitment period. For more details on the GAPSS 2004 recruitment phase see Saxton (2004).

### ***Questionnaire***

The questionnaire consisted of a series of core questions focusing on anal intercourse, use of condoms, sexual partnerships, HIV testing and serostatus, aspects of social attachment to the gay community, and a range of demographic items including age, education, ethnicity, and area of residence. These core questions will be retained in each study to provide information that can be compared over time.

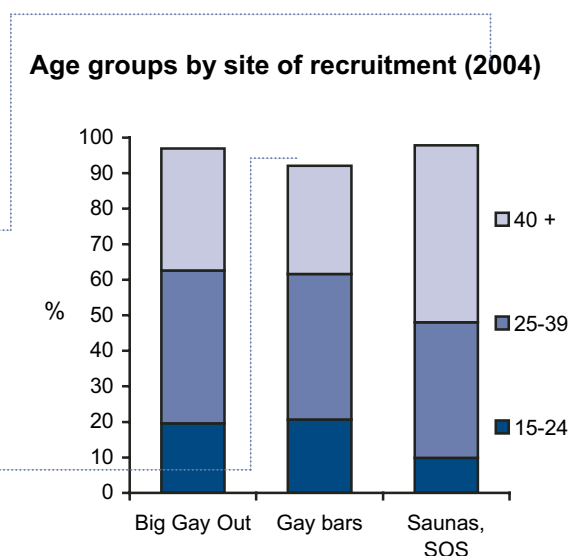
Additional questions formulated in consultation with NZAF's Gay Men's Health Programme and other key stakeholders were also included and may change in future surveys based on the priorities identified by these groups and by emerging questions in the field of HIV prevention. In 2004, new questions were added on cohabitation with a current regular partner, places men went most to socialise with other gay men, places where men went most to find a male sexual partner, and four new attitudinal statements on adherence and tolerance to new HIV treatments, perceptions of reduced infectivity among HIV positive men on new treatments, perceptions of an HIV positive man's likely disclosure of his HIV status before sex, and the respondent's hypothetical reaction to such disclosure from an HIV positive man. The questionnaire was limited to a double-sided A4 sheet and was pilot-tested during development with a small group of MSM recruited by NZAF.

## Presentation of the data in this report

Since the GAPSS sample was composed of respondents who were enrolled at three different types of site, and because men with different characteristics might attend these locations, the key findings are reported by site as well as for the total sample. It is particularly important to bear in mind the composition of the total GAPSS sample when drawing conclusions about changes in key results over time.

Graphs in this report are usually placed on the left or right hand side of a page. Those on the left present comparisons between 2002 and 2004, whereas those on the right present sub-analyses from the 2004 survey.

Column graphs in this report each total to 100%. Where the vertical bars fall short of 100% the difference is due to missing data or incomplete responses, unless otherwise stated.



Note: 'Not stated' not shown.  $P < 0.001$ .

The example here presents results from the 2004 survey only, and shows the age distribution of respondents recruited at the three different sites. It shows that a lower proportion of respondents recruited at the saunas/sex-on-site venues were younger (aged 15-24), and conversely that a higher proportion were aged 40 and over, when compared with respondents recruited from the Big Gay Out or the gay bars.

## Statistical analysis

Statistical comparisons have been made to determine if behaviours or attitudes differ significantly between two or more groups of respondents: usually between sites of recruitment and also between respondents exhibiting different demographic characteristics (e.g. men of different age groups). These have been done using chi-squared ( $\chi^2$ ) tests of proportions. The smaller the value of the 'p-value' derived from the test, the more likely proportions are to be truly different, and not a chance finding. By convention, if there is a prior reason to expect a difference, and the p-value for the comparison is less than 0.05, then the finding is said to be 'statistically significant'. In the example above, the p-value of  $p < 0.001$  signifies that the difference in age groups between the three sites is statistically significant. (Note that 'p=ns' will denote a non-statistically significant result i.e.  $p > 0.05$ ).

The statistical tests used in this report only test for associations between two different variables, and do not control for the potential impact of other variables in the survey. For example, if a significant association is found between unprotected sex and site of



recruitment, this finding might be influenced by the fact that the average age at each site of recruitment is different, and thus the finding in part reflects the effect of age on unprotected sex. Separating out the influence of each variable on a given behaviour is possible by using more complex statistical techniques that may be performed on the data in the future, but are not presented here. The identification of statistically significant results in this report may therefore best be used in the targeting of groups via health promotion, rather than necessarily “explaining” why the behaviour varies in that way.

Similarly, comparisons between the studies in 2002 and 2004 need to be interpreted cautiously as in some instances there may have been some differences in the make up of the two samples.

At the end of the report the results of statistical tests for association are given for selected sections. Statistical analysis of the data in this report omits ‘not stated’ responses from calculations.

## Characteristics of the sample

Overall, 1236 questionnaires were completed and placed in the secure return boxes in 2004. Sixteen participants did not answer the majority of the questions and these responses have been removed, leaving 1220 questionnaires that were included in the analysis. This represents a 50% increase in the number of questionnaires completed compared to 2002, and reflects a more extensive recruitment strategy used in the follow-up survey.

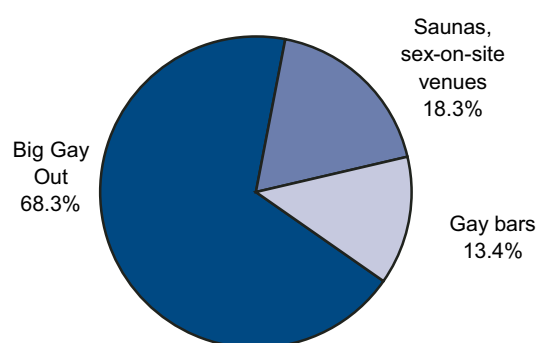
### Composition of the sample and response rate

The majority of the 1220 respondents in 2004 were recruited from the Big Gay Out fair day (68.3%) (Fig 4). In general, the sources of recruitment in 2004 mirrored those in the inaugural survey (Table 1).

**Table 1. Responses by site of recruitment and survey**

Site	2002		2004	
	n	%	n	%
Big Gay Out	577	71.1	833	68.3
Gay bars	96	11.8	164	13.4
Saunas/ sex-on-site	139	17.1	223	18.3
Total	812	100.0	1220	100.0

**Figure 4. Composition of the sample (2004)**



The response rate was determined from records kept by the recruitment staff, who filled in a schedule noting whether men who were approached agreed to participate, declined, had already completed a survey, were not eligible, or were not capable of completing a questionnaire (e.g. were obviously intoxicated). Even though there were more recruitment staff at the Big Gay Out in 2004, the volume of participants at the Big Gay Out in 2004 was even higher than anticipated and the recruitment staff were unable to keep complete records of response rates for this site. Given the higher levels of participation as well as other factors, the researchers believe that the response rate from the Big Gay Out was equivalent to 2002, and estimate it to be around 82% (Saxton, 2004).

Complete response rates for the other two sites were however able to be kept. The response rate for the saunas/sex-on-site venues remained about the same: 71% compared to 73% in 2002; but the response rate for gay bars was down: 62% compared to 76% in 2002. The lower rate recorded for the gay bars might be partially explained by the extension of hours used to recruit men in these sites, thus raising the overall numbers of participants from gay bars (a 71% increase and the highest proportional increase for any site type) but lowering the rate at which men were happy to participate (rates tended to drop when the site became very

busy). Overall, and using the estimate of 82% for the Big Gay Out, response rates for 2004 were 76% as compared to 80% in 2002.

## Age

The age profile of the 2004 sample was slightly older than that of 2002. Overall 18.0% of the sample were under 25 years old, but proportionately fewer were in the category 25-39 than in 2002 and conversely more were in the age category of 40 and over (Table 2). These differences were statistically significant between the two years.

**Table 2. Age group by survey**

	2002		2004	
	n	%	n	%
15-24	134	16.5	219	18.0
25-39	395	48.6	510	41.8
40 and over	265	32.6	447	36.6
Not stated	18	2.2	44	3.6
Total	812	100.0	1220	100.0

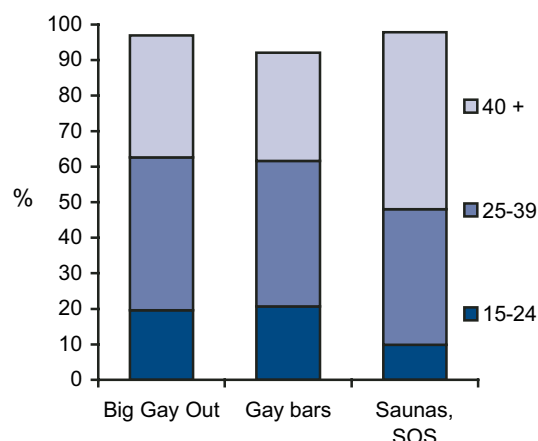
P<0.05 over time.

There were statistically significant differences between the age distribution of men recruited at the three sites (Fig 5).

Half the men recruited at the saunas/sex-on-site venues were aged 40 or over, compared to around a third of men at the other two sites.

Men at the Big Gay Out and the gay bars were almost twice as likely to be aged under 25 than were the men at the gay saunas.

**Figure 5. Age group by site of recruitment (2004)**



Note: 'Not stated' not shown. P<0.001.

## Ethnicity

Participants were offered the opportunity to indicate more than one ethnicity. Those who indicated multiple ethnicities were classified by first prioritising 'Maori', then 'Pacific island', and then 'other'.

Just under three-quarters of the 2004 sample reported that they were Pakeha or NZ European, 9.4% reported that they were Maori, 3.8% were of a Pacific Island ethnicity and 6.4% reported one of a number of Asian ethnicities (Table 3). The proportion of men who were either Maori or Pacific Island ethnicity was higher in 2004 than 2002, however these differences were not statistically significant.

**Table 3. Ethnicity by survey**

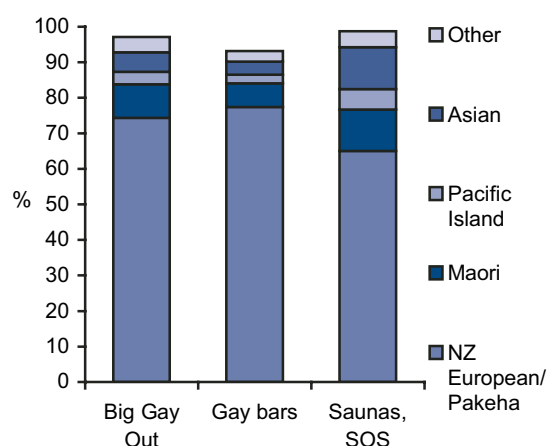
	2002		2004	
	n	%	n	%
NZ European/Pakeha	630	77.6	892	73.1
Maori	65	8.0	115	9.4
Pacific Island	26	3.2	46	3.8
Asian*	-	-	78	6.4
Other	76	9.4	51	4.2
Not stated	15	1.8	38	3.1
Total	812	100.0	1220	100.0

\*Note: Asian ethnicity was not separately identified in 2002. P=ns over time.

There were statistically significant differences between the ethnicity of men recruited at the three sites (Fig 6).

Gay bars had the lowest proportion of respondents claiming a Maori, Pacific, and Asian ethnicity compared to men from the other two sites. Conversely, gay saunas/sex-on-site venues had the highest proportion of men reporting these ethnicities, with an equal proportion of Maori (11.7%) and Asian (11.7%) respondents at this site, and 5.8% of MSM from this site reporting a Pacific ethnicity.

**Figure 6. Ethnicity by site of recruitment (2004)**



Note: 'Not stated' not shown. P=0.006.

## Education

As in 2002, the education profile of the 2004 sample was high, with two out of five having some form of university degree (Table 4).

**Table 4. Highest education qualification by survey**

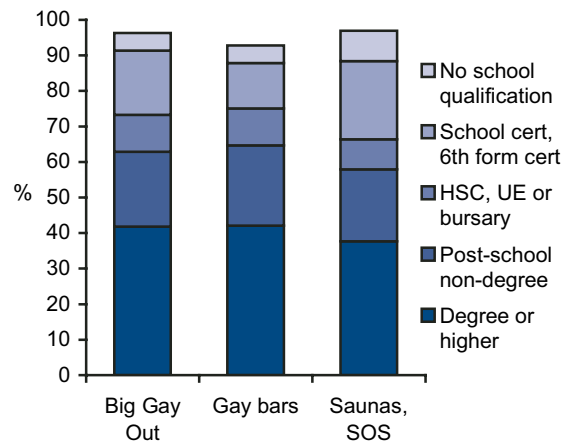
	2002		2004	
	n	%	n	%
Degree or higher	338	41.6	501	41.1
Post-school non-degree	182	22.4	258	21.1
HSC, UE or bursary	106	13.1	123	10.1
School cert, 6 <sup>th</sup> form cert	118	14.5	221	18.1
No school qualification	42	5.2	68	5.6
Not stated	26	3.2	49	4.0
Total	812	100.0	1220	100.0

P=ns over time.

Highest education qualification did not differ significantly by site of recruitment in 2004 (Fig 7).

Approximately equal proportions of respondents from the Big Gay Out, gay bars and gay saunas/sex-on-site venues reported having a tertiary degree or higher qualification.

**Figure 7. Highest education qualification by site of recruitment (2004)**



Note: 'Not stated' not shown. P>0.05.

**Area of residence**

In 2004, fewer respondents lived in Auckland’s “gay district” compared to 2002.<sup>1</sup>

**Table 5. Area of residence by survey**

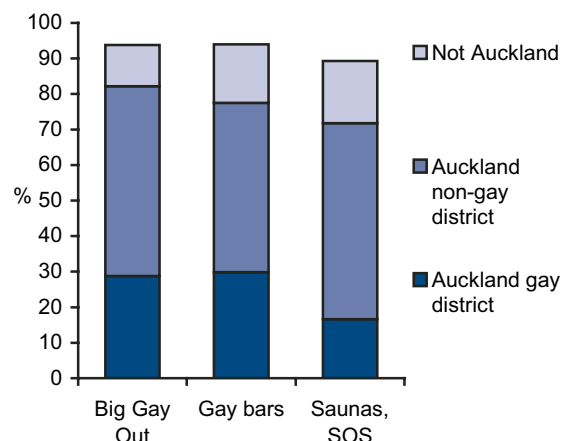
	2002		2004	
	n	%	n	%
Auckland gay district	252	31.0	326	26.7
Auckland non-gay district	477	58.7	646	53.0
Not Auckland	79	9.7	163	13.4
Missing	4	0.5	85	7.0
Total	812	100.0	1220	100.0

P<0.05 over time.

Just under 30% of respondents recruited from the Big Gay Out and the gay bars lived in the Auckland gay district, compared to 16.6% of respondents recruited from the gay saunas/sex-on-site venues.

Respondents recruited from gay bars and gay saunas/sex-on-site venues were more likely to currently live outside Auckland compared to those recruited at the Big Gay Out.

**Figure 8. Area of residence by site of recruitment (2004)**



Note: 'Not stated' not shown. P<0.01.

<sup>1</sup> Using census area unit definitions, the ‘gay district’ comprised of: Herne Bay, St Mary’s Bay, Auckland Central, Ponsonby West, Ponsonby East, Freeman’s Bay, Westmere, Grey Lynn West, Grey Lynn East, Newton, Grafton, Surrey Crescent, Arch Hill, Eden Terrace, Newmarket, and Kingsland.

## Sexual identity

The majority of the sample identified as gay or homosexual, with 10% identifying as bisexual (Table 6). Included in the “other” category were 6 respondents who identified as takataapui, 12 who identified as queer, and 6 respondents who identified as fa’afafine. A significantly higher proportion on the 2004 sample identified as gay compared to 2002.

**Table 6. Sexual identity by survey**

	2002		2004	
	n	%	n	%
Gay/homosexual	659	81.2	1050	86.1
Bisexual	82	10.1	126	10.3
Heterosexual	11	1.4	5	0.4
Other	55	6.8	35	2.9
Not stated	5	0.6	4	0.3
Total	812	100.0	1220	100.0

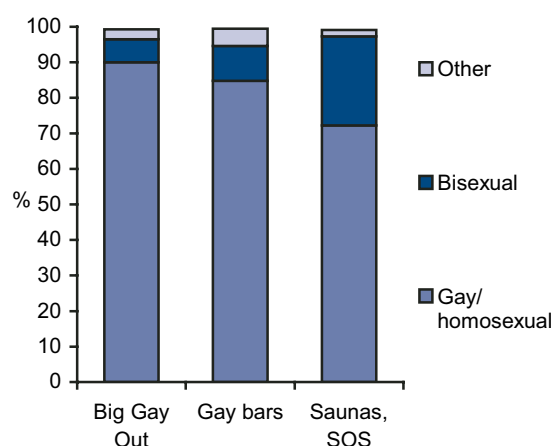
P<0.001 over time.

There were significant differences between the sexual identities reported by men recruited at the three sites (Fig 9).

Around 90% of men recruited at the Big Gay Out and 85% of men recruited at the gay bars identified as gay, whereas this was true for only 72% of men recruited at the gay saunas/sex-on-site venues.

Instead, a quarter (25%) of respondents from the saunas/sex-on-site venues identified as bisexual.

**Figure 9. Sexual identity by site of recruitment (2004)**



Note: 'Not stated' not shown. P<0.001.

## Amount of free time spent with gay men

As in 2002, half the respondents stated that they spent “a lot” of their free time with other gay or homosexual men (Table 7). One in eight respondents indicated that they spent “none” or only “a little” of their free time with gay men, significantly fewer than in 2002.

**Table 7. Amount of free time spent with gay men by survey**

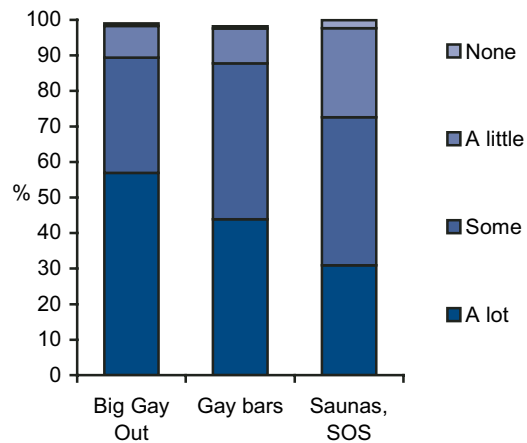
	2002		2004	
	n	%	n	%
A lot	411	50.6	615	50.4
Some	264	32.5	436	35.7
A little	115	14.2	146	12.0
None	19	2.3	12	1.0
Not stated	3	0.4	11	0.9
Total	812	100.0	1220	100.0

P<0.05 over time.

There were statistically significant differences in the amount of free time spent with gay men according to site of recruitment (Figure 10).

While more men recruited at the Big Gay Out stated that they spent “a lot” as opposed to “some” of their free time with other gay or homosexual men, exactly equal proportions of men recruited at the gay bars reported either of these two options. Continuing this trend, more men recruited at the saunas/sex-on-site venues reported spending “some” rather than “a lot” of their free time with other homosexual men. A quarter (25%) of the latter group reported spending only “a little” of their free time with other homosexual men.

**Figure 10. Free time spent with gay men by site of recruitment (2004)**



Note: 'Not stated' not shown. P<0.001.

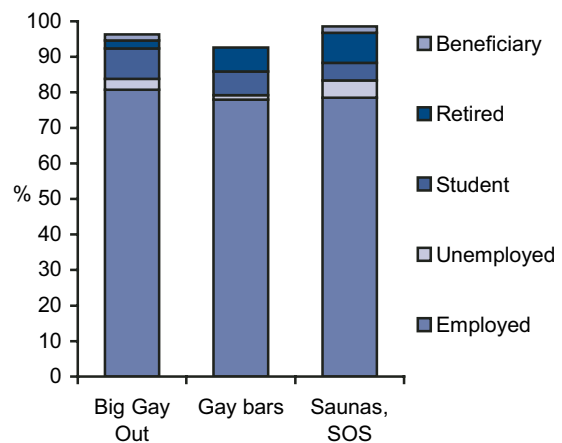
### Workforce status

Information gathered for the first time in 2004 showed that the majority of respondents (80%) were employed at the time of survey. Just 3.1% were unemployed, 1.5% described themselves as a “beneficiary”, and 7.7% of the sample were students (Table 8).

**Table 8. Workforce status**

	2004	
	n	%
Employed	976	80.0
Unemployed	38	3.1
Student	94	7.7
Retired	48	3.9
Beneficiary	18	1.5
Not stated	46	3.8
Total	1220	100.0

**Figure 11. Workforce status by site of recruitment (2004)**



Note: 'Not stated' not shown. P<0.001.

There were statistically significant differences in workforce status according to site of recruitment (Figure 11).

Although the majority of respondents from all sites (over 80%) were employed, the proportion of respondents who were either retired or a beneficiary was highest at the saunas/sex-on-site venues (around 10%) and lowest at the Big Gay Out (4%).

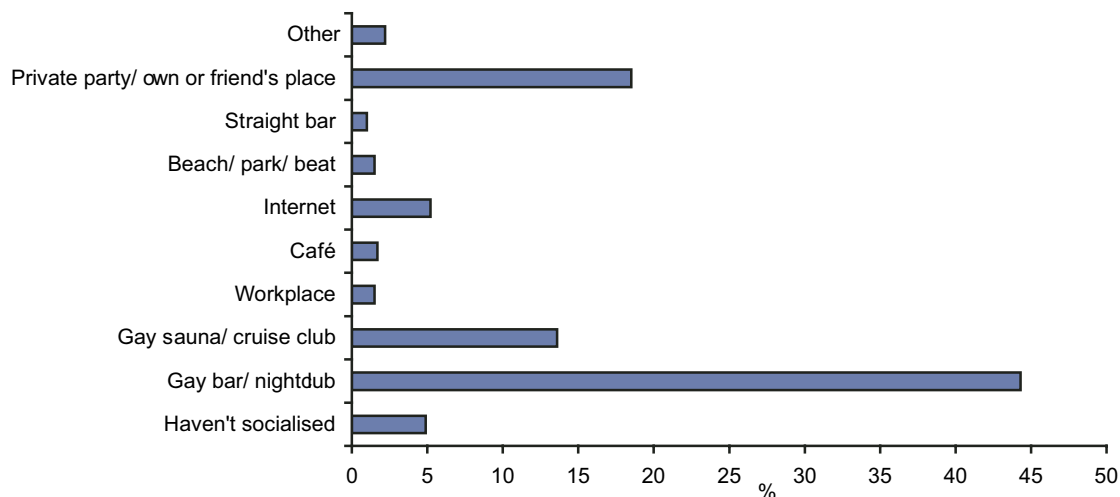
## Places to meet other men

In 2004 two new questions were included in the survey that asked men where they went to socialise with other gay men and where they went to find male sexual partners. The GAPSS survey asked respondents to prioritise the venue that they used the *most*, and separately asked about socialising and finding a sexual partner (these are not, of course, mutually exclusive pursuits). A question on sexual partnering via the Internet was also repeated in 2004 giving a comparison with the first GAPSS survey.

### Place visited most to socialise with other gay men

The most popular places to socialise with other gay men in the six months prior to survey were a gay bar or gay nightclub (44.3%), followed by a private party, their own or a friend's place (18.5%), a gay sauna or cruise club (13.6%) and the Internet (5.2%) (Fig 12).

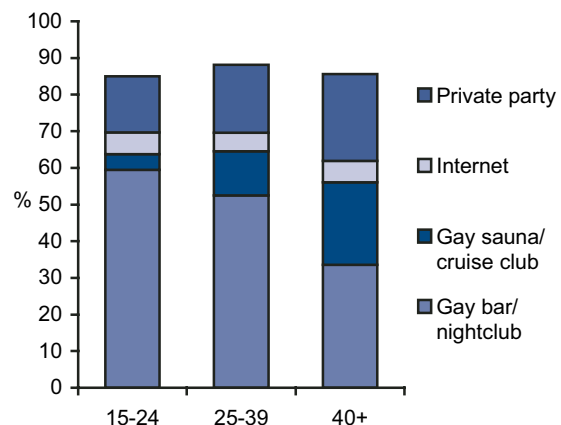
**Figure 12. Place visited the most to socialise with other gay men in previous six months (2004)**



Places visited most to socialise with other MSM differed significantly by age (Fig 13).

Younger respondents were most likely to identify a gay bar or gay nightclub as their most popular venue for socialising in (59.5%). Respondents aged 40 and over were also more likely to list a gay bar or nightclub as their preferred venue to socialise with other gay men (33.6%), although were equally likely to specify gay saunas (22.5%) and private parties (23.7%). The Internet was most popular with a similar proportion of men across all age groups.

**Figure 13. Place most visited to socialise by age group (2004)**



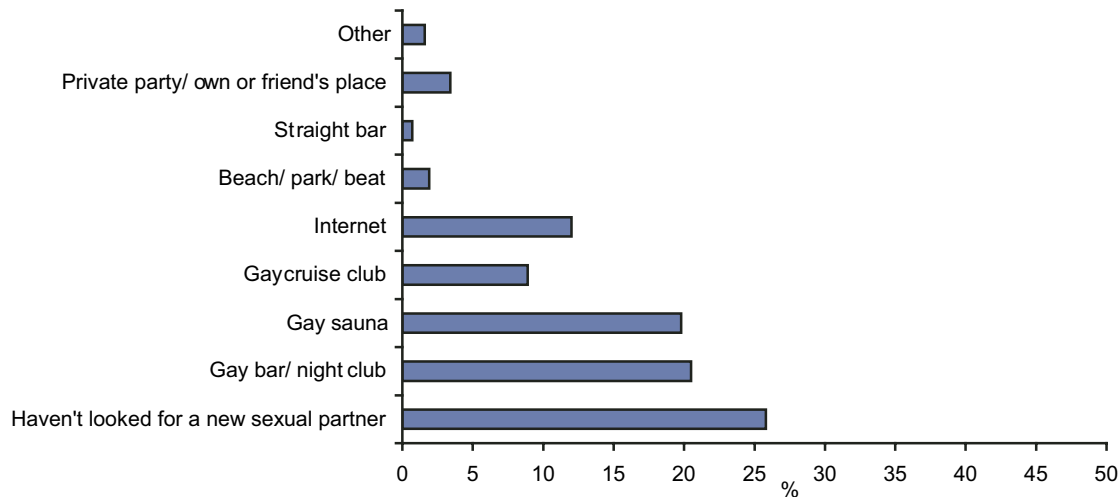
Note: 'Not stated' and other places not shown. P<0.001.



### Place visited most to find male sexual partner/s

Fig 14 shows that there was no one place favoured most by all GAPSS respondents to look for a male sexual partner. The most popular places overall were a gay bar or gay nightclub (20.5%) and a gay sauna (19.8%), followed by the Internet (12.0%) and a gay cruise club (8.9%). Notably, a quarter of all respondents (25.8%) stated that they had not looked for a (new) sexual partner in the six months prior to survey.

**Figure 14. Place visited most to find male sexual partner in previous six months (2004)**

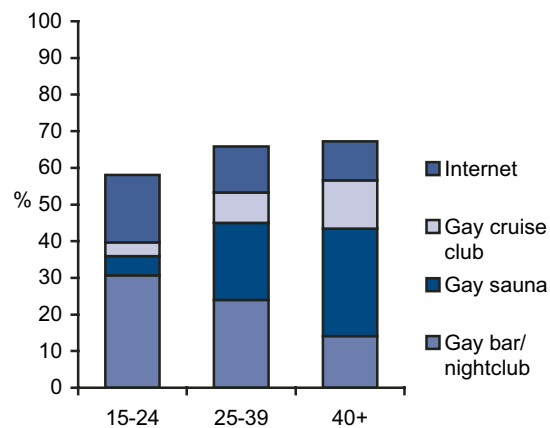


As with the most popular socialising venues, there were significant differences in the type of venue preferred to find male sexual partners depending on age group (Fig 15). Younger respondents were much more likely to cite a gay bar or gay nightclub as their most frequented venue to look for male sexual partners (30.7%), followed by the Internet (18.4%).

Conversely, respondents aged 40 and over were most likely to cite a gay sauna (29.3%), with gay bars/ gay nightclubs (14.1%) and cruise clubs (13.2%) cited by more respondents in this age group than the Internet (10.6%).

Again, it is important to remember that the results described above relate to respondents' preferred venue – the one they went to the most – and do not necessarily mean that other venues were not frequented. As is true of heterosexually-active men, MSM use a variety of venues to look for sexual partners that are not limited to commercial sites such as bars, but also include public spaces and other mainstream commercial or recreational spaces (such as shopping malls, public swimming pools, beaches, parks).

**Figure 15. Place visited most to find male sexual partner by age group (2004)**



Note: 'Not stated' and other places not shown. P<0.001.

## Sex with a man whom the respondent met via the Internet

In 2002 and 2004 the GAPSS project included a question on sex and the Internet. Although there are a variety of issues raised in relation to sexuality and the Internet, and different options for phrasing questions on these topics, the space restrictions on the questionnaire meant that we focussed on the act of having sex with someone the respondent had met via the Internet in the previous six months. The results from this question therefore highlight not just the use of the Internet for “looking” for sexual partners, or for providing personal sexual satisfaction, but the proportion of respondents who had actually obtained sexual partners via the Internet within a given time period (six months).

As Table 9 below shows, the proportion of GAPSS respondents who had had sex with a man whom they met via the Internet in the six months prior to survey increased dramatically from 25.1% in 2002 to 42.0% in 2004.

**Table 9. Sex with a man whom the respondent met via the Internet in previous six months by survey**

Had sex with a man whom the respondent met via the Internet in the last 6 months	2002		2004	
	n	%	n	%
Yes	204	25.1	513	42.0
No	520	64.0	633	51.9
No sex with a man/ not stated	88	10.8	74	6.1
Total	812	100.0	1220	100.0

P<0.001.

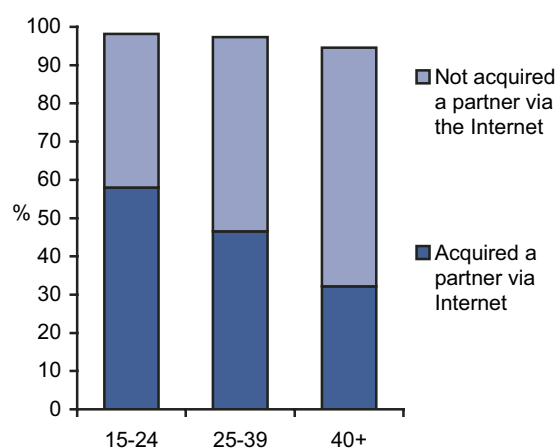
Acquiring a sexual partner via the Internet differed significantly according to age group (Fig 16).

Over half (58.0%) of respondents aged 15-24 had had sex with someone they met via the Internet in the previous six months, whereas a third (32.2%) of those aged 40 and over had done so.

In addition to age, sexual identity and free time spent with other gay men were significantly related to sex via the Internet.

Respondents who identified as bisexual were less likely to have acquired a sexual partner via the Internet (31.7%) compared to those identifying as gay (43.2%) or some other identity (51.4%). Respondents who spent “a lot” of their free time with other gay men were also more likely to have met a sexual partner via the Internet (47.0%) compared to those who spent “some” (40.1%), “a little” (31.5%) or “none” (16.7%) of their free time with gay men.

**Figure 16. Sex via the Internet by age group (2004)**



Note: 'Not stated' not shown. P<0.001.

## HIV testing and HIV status

### HIV testing

In the questionnaire, respondents were asked if they had ever had an “HIV antibody test to detect infection with the virus that causes AIDS”.<sup>2</sup> Those who had tested in the past were asked when the last test was undertaken, and what the result was.

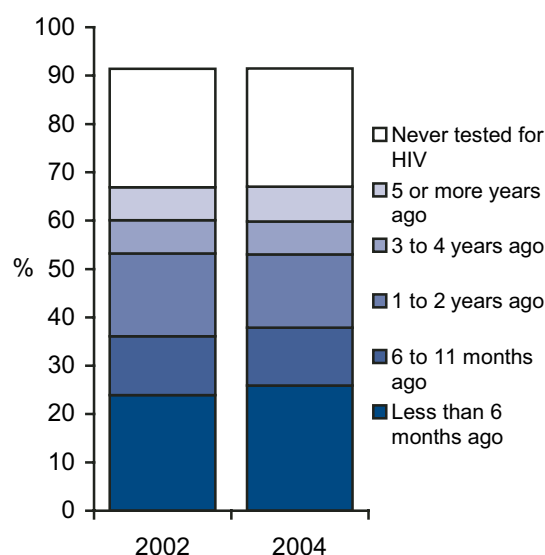
Overall, 72.5% of the 2004 sample reported that they had tested for HIV at least once in their life (Table 10). A quarter (24.5%) reported that they had never tested for HIV.

**Table 10. Ever tested for HIV by survey**

	2002		2004	
	n	%	n	%
Tested for HIV at least once in lifetime	577	71.1	885	72.5
Never tested for HIV	199	24.5	299	24.5
Not stated	36	4.4	36	3.0
Total	812	100.0	1220	100.0

As HIV testing has been available in New Zealand since 1985, whether a man has ever tested for HIV may not provide useful information on current HIV testing behaviours nor a participant’s current HIV status.

**Figure 17. Time since last HIV test by survey**



Note: In 2002 and 2004, ‘not stated’ n=36, 36; tested but did not provide information on when this occurred n=34, 68.

Fig 17 shows the timing of the most recent HIV test among respondents in 2002 and 2004.

In 2004, 25.9% of the entire GAPSS sample had tested for HIV in the six months prior to survey, 37.9% had tested for HIV in the previous year, and 53.0% had tested within the last two years.

As in 2002, around 14% of the total 2004 sample, or 19% (one-fifth) of those who had tested for HIV at least once in their life, had last tested three or more years ago.

<sup>2</sup> The question was worded in this way to avoid confusion with viral load tests, which measure the amount of HIV virus in an HIV positive person’s bloodstream.

There were no demographic differences in timing of last HIV tests between 2002 and 2004. However, there were significant differences according to age, ethnicity, place of residence and sexual identity in 2004.

As Fig 18 shows, respondents aged 15-24 were less likely to have ever tested for HIV in their lifetime than older respondents, with 60.7% having tested compared to 77.5% of those aged 25-39 and 77.4% of those aged 40+. However, among those who had tested at least once, proportionately more younger respondents had tested recently (within the two years prior to survey) than had respondents who were older.

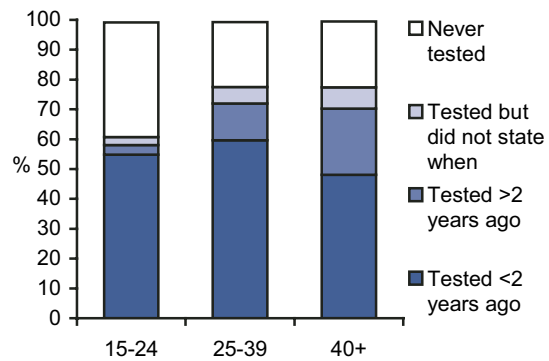
As Fig 19 shows, respondents who were NZ European were most likely (77.8%) to have ever tested for HIV compared to Maori (67.8%), Asian (64.1%) and Pacific respondents (56.5%).

Maori respondents were, however, the most likely to have tested for HIV recently, with 57.4% of all Maori having last tested within the last two years.

Respondents who currently lived in the Auckland gay district were most likely to have tested for HIV within the last two years (62.3%), compared to respondents who lived elsewhere in Auckland (48.0%) and those who lived outside Auckland (54.0%) (Fig 20).

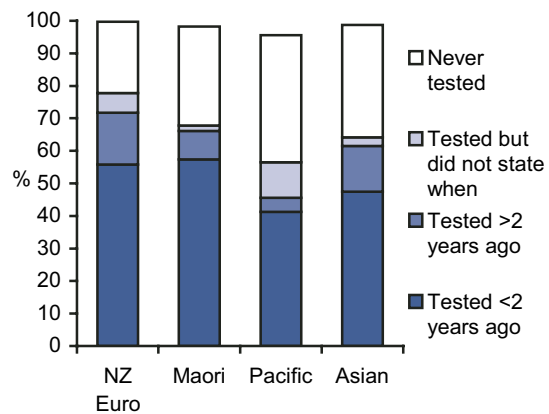
Similarly, respondents living in the gay district were most likely to have ever tested for HIV compared to those who did not live in the Auckland gay district.

**Figure 18. Timing of last HIV test by age group (2004)**



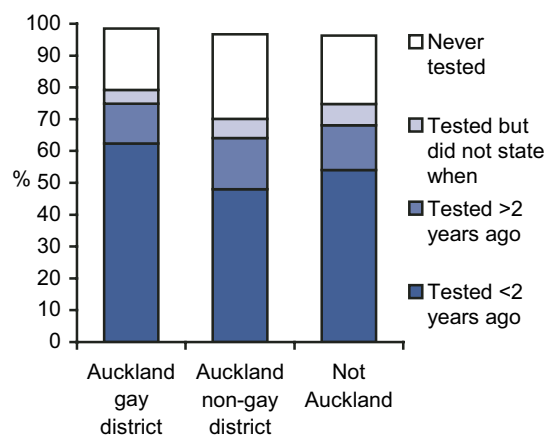
Note: 'Not stated' n=36. P<0.001.

**Figure 19. Timing of last HIV test by ethnicity (2004)**



Note: 'Not stated' n=36. P<0.001.

**Figure 20. Timing of last HIV test by place of residence (2004)**



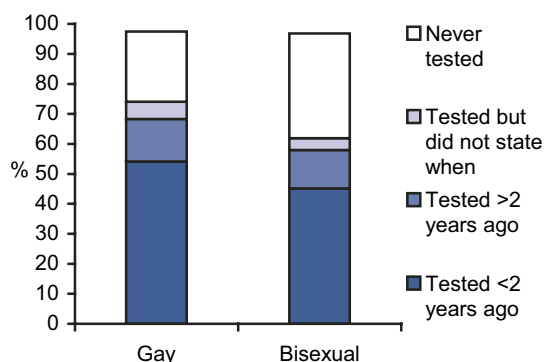
Note: 'Not stated' n=36. P<0.01.

Sexual identity was also associated with time since last HIV test (Fig 21).

Respondents who identified as gay were more likely to have tested in the last two years (54.1%) compared to those who identified as bisexual (45.2%).

Respondents who identified as bisexual were more likely to have never tested for HIV (34.9%) compared to those who identified as gay (23.4%).

**Figure 21. Timing of last HIV test by sexual identity (2004)**



Note: 'Not stated' n=36. P<0.05.

### HIV status

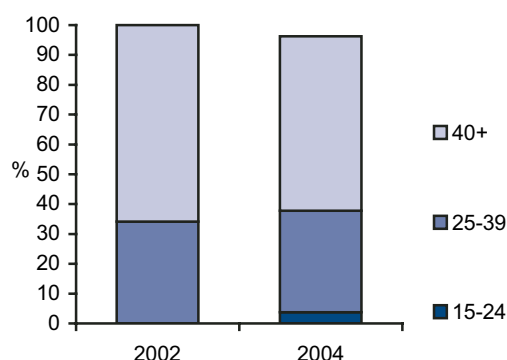
All participants who stated they had tested for HIV at least once were asked the result of their last test, and also what they believed their HIV status was “at present”. Overall, 53 participants in 2004 who reported they had ever tested, had tested HIV positive, representing 6% of those who had ever tested for HIV or 4.3% of the entire 2004 GAPSS sample.

**Table 11. HIV test status by survey**

	2002		2004	
	n	%	n	%
HIV negative at last test	514	63.3	756	62.0
Tested HIV positive	38	4.7	53	4.3
Never tested/ No result yet	205	25.2	307	25.2
Not stated	55	6.8	104	8.5
Total	812	100.0	1220	100.0

This is likely to underestimate the actual prevalence of HIV infection among all participants. This is because some men had never tested for HIV, and some may have been infected with HIV in the time since they received their last negative HIV test result.

**Figure 22. Age group of respondents who had tested positive by survey**

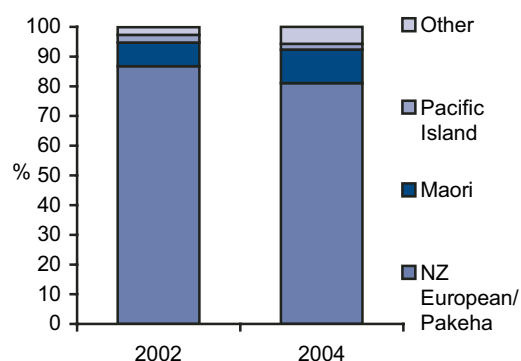


Note: In 2004, age 'not stated' n=2.

Among respondents in the 2004 survey who had tested HIV positive, the majority were in the age group 40 and over (58.5%).

A third of those who had tested positive were aged 25-39, and a small number were aged 15-24 (3.8%).

The age distribution of men tested HIV positive was roughly the same in 2002 and 2004 (Fig 22).

**Figure 23. Ethnicity of respondents who had tested positive by survey**

The ethnicity of respondents in 2004 who had tested HIV positive was similar to that of the total 2004 GAPSS sample. Most identified as NZ European/Pakeha (81.1%), 11.3% identified as Maori, 1.9% as Pacific Island and 5.7% as some other ethnicity.

Compared to 2002, proportionately more respondents in the 2004 survey who had tested HIV positive were non-NZ European/Pakeha (Fig 23).

Respondents were also asked what they believed their current HIV status was. Table 12 shows the results for respondents' current belief about HIV status among those who had either tested HIV negative at their last test or who had never tested for HIV/ not received their last test result (i.e. excluding those who had received an HIV positive test result).

**Table 12. Belief about current HIV status by test status and survey (excludes those tested HIV positive)**

	2002				2004			
	Tested HIV negative		Not tested/ No result		Tested HIV negative		Not tested/ No result	
	n	%	n	%	n	%	n	%
Definitely HIV negative	340	66.1	121	59.0	503	66.5	179	58.3
Probably HIV negative	156	30.4	53	25.9	218	28.8	72	23.5
Probably HIV positive	1	0.2	2	1.0	1	0.1	5	1.6
Definitely HIV positive	0	0.0	2	1.0	2	0.3	4	1.3
Don't know	11	2.1	16	7.8	24	3.2	34	11.1
Missing	6	1.2	11	5.4	8	1.1	13	4.2
Total	514	100.0	205	100.0	756	100.0	307	100.0

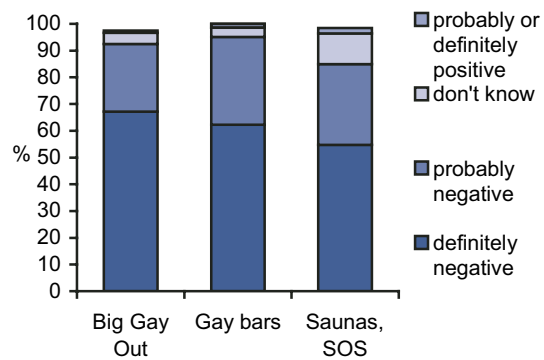
As in 2002, two-thirds (66.5%) of respondents in 2004 who had tested negative at their last HIV test believed they were "definitely HIV negative". Less than one percent believed that they were either "probably" or "definitely" HIV positive. Slightly lower proportions of men in 2004 who had never tested for HIV thought they were "definitely negative" (58.3%), with proportionately more believing that they might be HIV positive (about 3%) and 11.1% stating that they "didn't know" their current HIV status.

In contrast to the findings for HIV testing and timing of last HIV test, respondents' perceptions of their current HIV status did not differ according to age or ethnicity. Similar proportions of all age groups, ethnicities, sexual identities and educational backgrounds believed they were "definitely HIV negative".

The only demographic variable associated with beliefs about one's own HIV status was site of recruitment (Fig 24). Respondents recruited from saunas or sex-on-site venues were least likely to believe they were

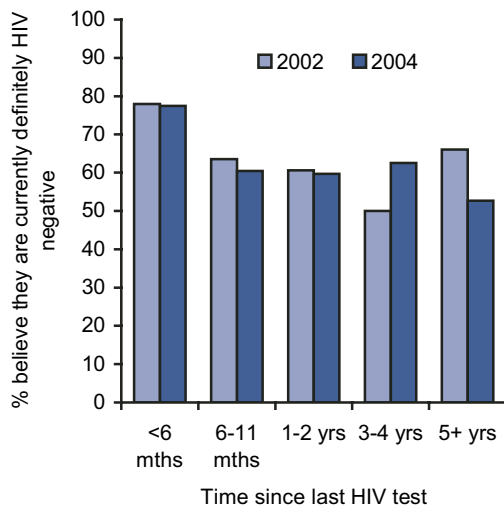
"definitely" negative and more likely than other respondents to state that they "don't know" their current HIV status.

**Figure 24. Belief about current HIV status by site of recruitment (2004)**



Note: 'Not stated' n=21. P<0.001.

**Figure 25. Current belief about HIV status by time since last HIV test and survey**



Note: P<0.001 in 2002 and 2004.

Figure 25 shows that beliefs about current HIV status were also associated with the time since a respondent's last HIV test.

Unsurprisingly, the proportion believing they were currently "definitely negative" was highest when the respondent had last tested less than six months ago (77.5% in 2004) and lowest when the respondent had last tested five or more years ago (52.7%). The associations in 2004 were similar to those found in 2002 (Fig 25).

## Sexual relationships

GAPSS 2002 confirmed previous findings indicating that sexual behaviour - including strategies to avoid HIV infection such as condom use - differs according to the type of relationship between sexual partners. We therefore repeated the questionnaire format used in 2002 and asked separately about sexual behaviour and safe sex practices with regular and with casual sex partners. New questions on cohabitation with a current regular partner and sex with regular partners other than the respondent's main current regular partner (if they had them) were also added to the 2004 questionnaire.

The questionnaire included definitions of several key concepts. The term "sex" was defined as meaning "any physical contact that you felt was sexual". The definitions of casual and regular sex partners given (see footnote) differentiated between the partner types by the quantity of sexual interaction as opposed to the emotional nature of the relationship.<sup>3</sup>

Respondents were asked how many regular male sexual partners they had had sex with in the six months prior to survey, whether they currently had a regular male partner at the time of survey, how long they had been in a regular relationship with the current partner, whether they currently lived with this partner, and what best described the nature of their relationship (e.g. boyfriend, fuckbuddy, someone who I pay to have sex with etc...). If a respondent currently had more than one regular male partner, they were asked to focus on the partner they had the most sex with.

### ***Number of sexual partners***

The most common number of male sexual partners recorded in 2004 was 2 to 5 (28.9%), with 53.6% having between 1 and 5 male sexual partners and a small number having greater than 50 sexual partners in the previous six months (4.3%) (Table 13).

**Table 13. Number of male sexual partners in the previous six months by survey**

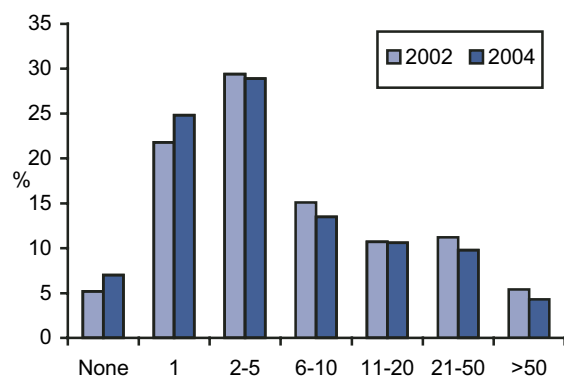
	2002		2004	
	n	%	n	%
None	42	5.2	85	7.0
One	177	21.8	302	24.8
2 to 5	239	29.4	352	28.9
6 to 10	121	14.9	165	13.5
11 to 20	87	10.7	129	10.6
21 to 50	91	11.2	119	9.8
More than 50	44	5.4	52	4.3
Missing	11	1.4	16	1.3
Total	812	100.0	1220	100.0

P=ns over time.

<sup>3</sup> The questionnaire provided the following definitions: "Sex: Any physical contact you felt was sexual"; "Casual partner: Men you've had sex with 3 times, twice or once in the last 6 months"; "Regular partner: These are men you've had sex with 4 or more times in the last 6 months. They could be boyfriends, life partners, fuckbuddies etc...".



**Figure 26. Number of male sexual partners in the previous six months by year of survey**



Note: No statistically significant differences by year of survey.

In 2004, the number of male sexual partners differed significantly according to site of recruitment and age group but not by ethnicity or other demographic variables.

A quarter (24.7%) of men recruited at the gay saunas/sex-on-site venues had had more than 20 male sexual partners in the previous six months, compared to 11.5% of respondents recruited from the Big Gay Out and 12.2% of respondents recruited from gay bars (Fig 27).

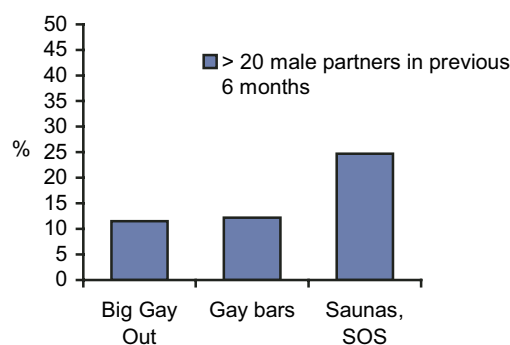
Younger respondents (aged 15-24) were least likely to have more than 20 male partners in the previous six months (8.2%).

In contrast, one in seven respondents aged 25-39 (14.3%) and one in six respondents aged 40+ (16.6%) reported more than 20 male partners (Fig 28).

As Fig 26 shows, the distribution of number of male sexual partners in the previous six months was similar between 2002 and 2004.

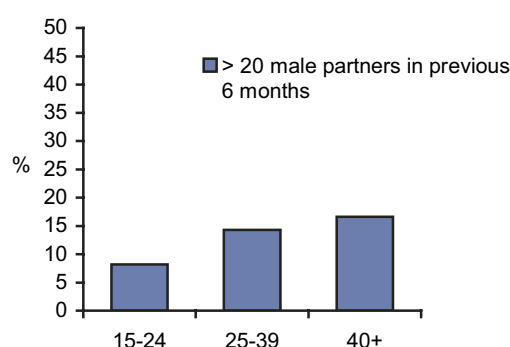
In 2004, only a few respondents (6.1%) reported having had sex with a female partner in the previous six months. This was highest among respondents who identified as "bisexual", with 37.3% of such men reporting at least one female sexual partner over this period.

**Figure 27. More than 20 male sexual partners by site of recruitment**



Note:  $P < 0.001$ .

**Figure 28. More than 20 male sexual partners by age group**



Note:  $P < 0.001$ .

### **Types of sexual relationships over the previous six months**

Table 14 and Fig 29 combine the responses given to a number of questions on casual and regular sex partners to show the types of relationships men reported in the past six months.

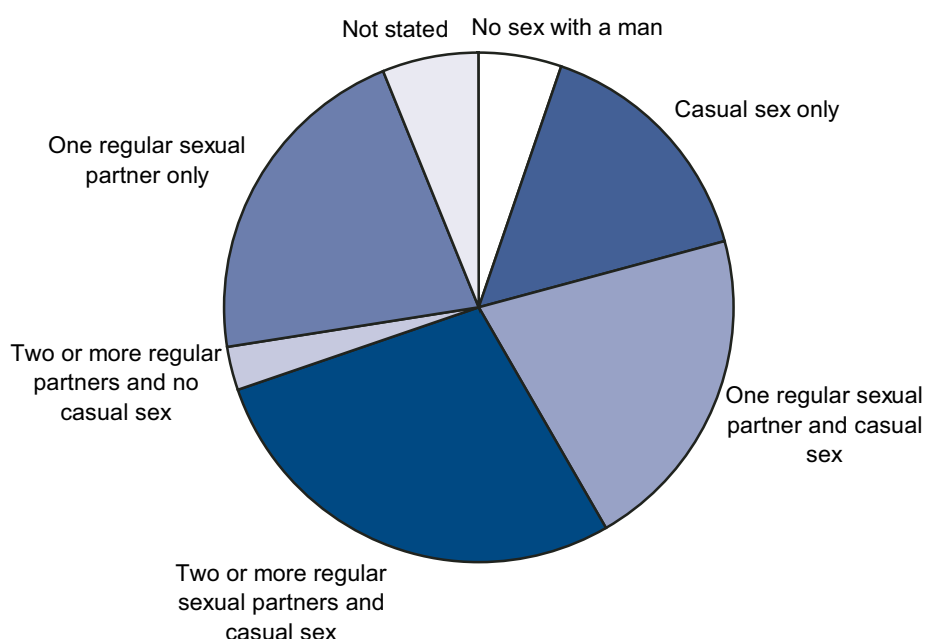
**Table 14. Types of sexual relationships with men over the previous six months by survey**

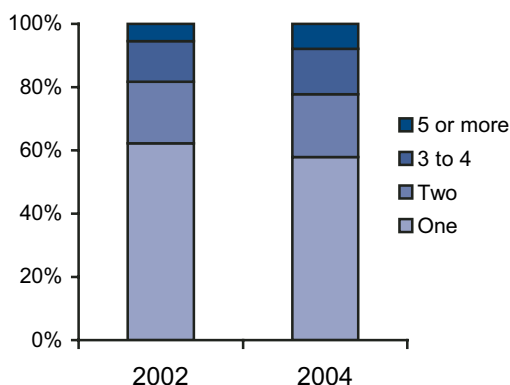
	2002		2004	
	n	%	n	%
No sex with a man	42	5.2	85	7.0
One regular sex partner only	164	20.2	257	21.1
Two or more regular sex partners and no casual sex	20	2.5	32	2.6
One regular sex partner and casual sex	183	22.5	250	20.5
Two or more regular sex partners and casual sex	187	23.0	338	27.7
Casual sex only	149	18.3	185	15.2
Not stated/ incomplete information	67	8.3	73	6.0
Total	812	100.0	1220	100.0

The overall patterning of sexual relationships over the previous six months was generally similar in 2002 and 2004, although a higher proportion of the 2004 sample had had sex with at least one regular partner in this period (71.9%) than had done so in the 2002 survey (68.2%). Similar proportions in both surveys had engaged in sex with a casual male partner (63.4% in 2004 and 63.9% in 2002).

As stated in the 2002 report, the variety evident in Table 14 does not necessarily imply simultaneous sexual partnering. For example, within the six-month period a regular sexual relationship may have ended and the respondent may have had sex, casual or regular, with other men after this occurred.

Of the entire 2004 sample, 21.1% reported having sex with one regular partner only and 15.2% reported only casual sex. Sex with both regular and casual partners within the last six months period was reported by just under half the entire 2004 sample (48.2%) (Fig 29).

**Figure 29. Sexual relationships with men over the previous six months (2004)**

**Figure 30. Number of regular male partners over the previous six months by survey**

Note: Only includes men who reported at least one regular sex partner in the previous six months.

Fig 30 shows the number of regular partners respondents had had over the previous six month period by year of survey.

Most respondents from 2004 who had sex with a regular male partner reported having one regular partner over this time (57.8%).

Proportionately more respondents in 2004 reported two or more regular male partners over this period (30.9% of all 1220 respondents) than did those who participated in 2002 (26.2% of all 812 respondents), although this difference was not significant.

### Current regular sex partner

The survey limited questions about sexual practices, protective behaviours and HIV test status to a respondent's *current* regular sex partner. Respondents with multiple current regular sexual partners were asked to focus on the partner who they had the *most* sex with.

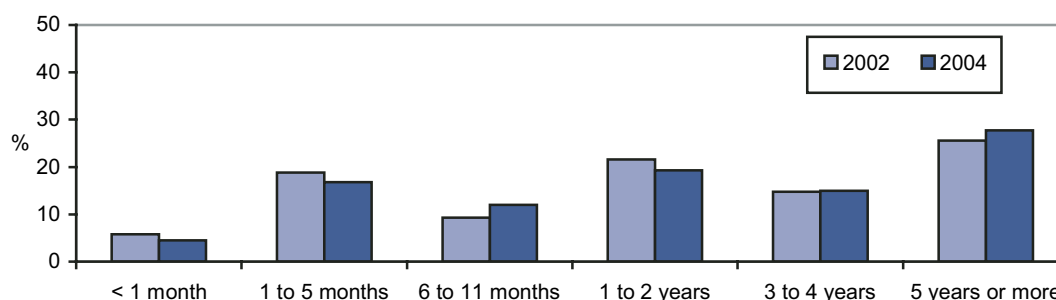
Whereas 877 respondents had engaged in sex with a regular sex partner over the six months prior to survey in 2004, 668 respondents or 54.8% of the total 2004 GAPSS sample reported currently having a regular sex partner at the time of survey (Table 15).

**Table 15. Men reporting current regular male sexual partner by survey**

	2002		2004	
	n	%	n	%
Current regular sexual partner	398	49.0	668	54.8
No current regular sexual partner	414	51.0	552	45.3
Total	812	100.0	1220	100.0

P<0.05.

In 2004, over a quarter of respondents with a current regular sexual partner had been in this sexual relationship for five years or more (27.7%), and 21.3% had been in the relationship for less than six months (Fig 31). These results were similar to 2002.

**Figure 31. Length of current regular sexual relationship**

Note: Only includes men with a current regular sexual partner. 'Not stated' relationship length in 2002 and 2004 n=16; 32.

Similarly to 2002, three-quarters (75.4%) of the 2004 respondents described their current regular sex partner as a “boyfriend, long-term lover, life partner, or husband”, and one-fifth (19.2%) described this person as a “fuckbuddy” (Table 16).

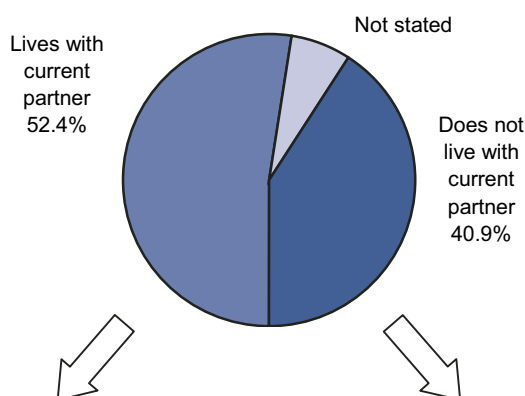
**Table 16. Description of current regular partner by survey**

	2002		2004	
	n	%	n	%
“Boyfriend, long-term lover, life partner, or husband”	300	75.4	504	75.4
“Fuckbuddy”	81	20.4	128	19.2
Someone who I pay to have sex with	3	0.8	2	0.3
Not stated/ incomplete information	14	3.5	34	5.1
Total	398	100.0	668	100.0

In 2004, a new question was added about cohabitation with a current regular male sexual partner (Fig 32).

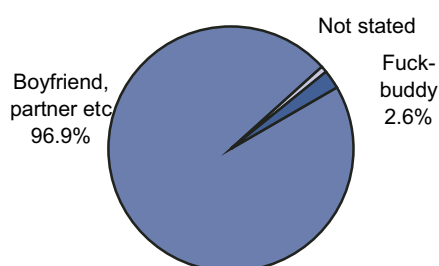
Just over half (52.4%) of all those who reported a current regular partner lived with this person, or 56.2% of all those who provided information.

**Figure 32. Cohabitation with current regular male partner (2004)**

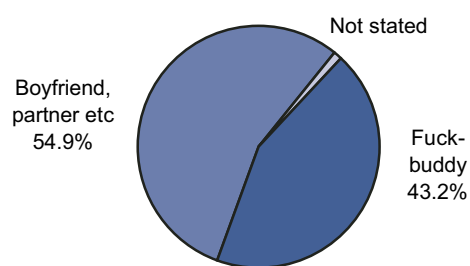


Regular relationships involving cohabitation were mostly described as a “boyfriend, life partner, or husband” (Fig 33), whereas 43.2% of non-cohabiting regular partners were described as a “fuckbuddy” (Fig 34).

**Figure 33. Description of regular partner among respondents who live together**



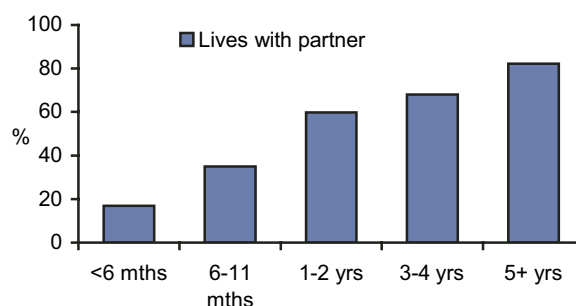
**Figure 34. Description of regular partner among respondents who do not live together**



Cohabitation rates increased dramatically as the length of regular relationship increased (Fig 35).

Just 16.9% of respondents with a regular partnership of less than six months duration lived together, compared to 59.7% of partnerships of 1-2 years duration and 82.2% of partnerships of 5 or more years duration.

**Figure 35. Cohabitation rates by length of relationship (2004)**



## Current Regular Partner's HIV Testing

Respondents with a current regular sex partner were asked what the result of his latest HIV test was. Most (62.7%) reported that this partner's latest test was HIV negative and a small number (3.9%) reported that it was HIV positive. These proportions were identical to those found in 2002. In 2004, 7.5% stated that their current regular partner had never tested for HIV and 21.6% stated that they had never asked their regular partner about his testing history (Table 17).

**Table 17. HIV test status of current regular partner by survey**

	2002		2004	
	n	%	n	%
Don't know/ haven't asked him	68	17.1	144	21.6
He hasn't had a test	53	13.3	50	7.5
Last test was HIV negative	250	62.8	419	62.7
Last test was HIV positive	15	3.8	26	3.9
Not stated/ incomplete information	12	3.0	29	4.3
Total	398	100.0	668	100.0

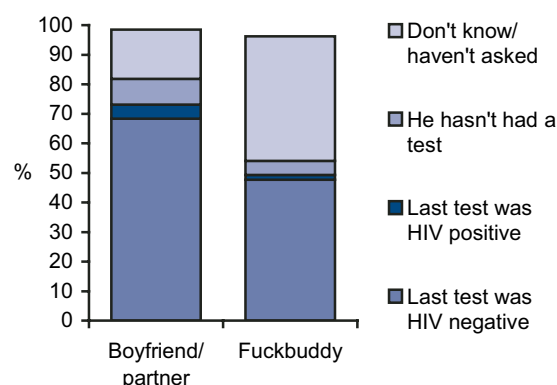
Respondent's description of their regular partner's HIV test status differed significantly by description of current partner, cohabitation status and length of relationship

The majority of regular partners whom the respondent referred to as their "boyfriend, life partner etc." had last tested HIV negative (71.4%), and 16.7% of respondents had not asked this type of regular partner about their HIV testing history. In contrast, 47.7% of respondents stated that their "fuckbuddy" regular partners had last tested HIV negative and 42.2% of "fuckbuddies" had not been asked about their HIV testing history (Fig 36).

Respondents stated that the majority of regular partners who they lived with had last tested HIV negative (71.4%), whereas just over half of non-live-in regular partners had last tested HIV negative (53.5%) (Fig 37).

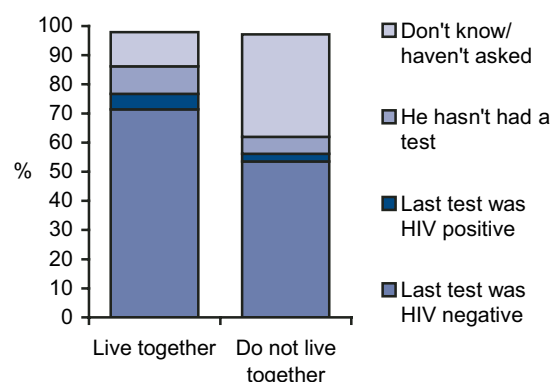
Over a third (35.2%) of respondents with a current non-live-in regular male partner stated that they had not asked this partner about their HIV test history.

**Figure 36. HIV test status of current regular sex partner by description of partner (2004)**



'Not stated' for boyfriend, fuckbuddy; n=8, 5. P<0.001

**Figure 37. HIV test status of current regular sex partner by cohabitation status (2004)**



'Not stated' for cohabiting, non-cohabiting; n=7, 8. P<0.001

Figure 38 shows that respondents currently in relationships that have lasted more than one year are more likely to state that their partner's last HIV test was negative, and less likely to have not asked their partner about their HIV testing history or to state that they "don't know" their partner's testing history.

Forty-three percent of respondents currently in a regular relationship of less than six months had not asked about their partner's HIV testing history or said that they "don't know", compared to just 10% of those who were currently in a relationship of 3-4 years duration.

Respondents were also asked what they *believed* their regular partner's current HIV status was. Table 18 shows the results of this question according to the partner's HIV testing history as reported by the respondent.

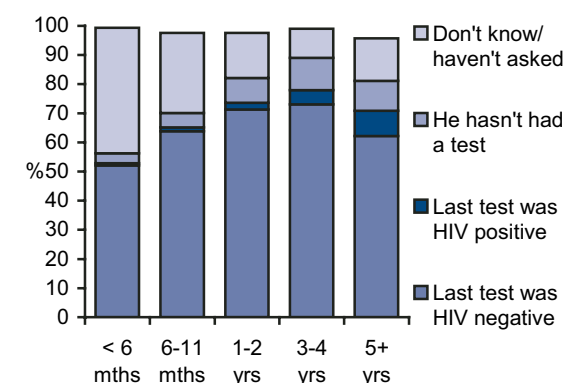
**Table 18. Respondent's belief about regular partner's current HIV status by partner's last HIV test status and survey**

Respondent's belief about regular partner's current status	2002				2004			
	Regular Partner's Test History				Regular Partner's Test History			
	Tested HIV negative		Hasn't tested/ Don't know		Tested HIV negative		Hasn't tested/ Don't know	
	n	%	n	%	n	%	n	%
Definitely HIV negative	202	80.8	59	48.8	335	80.0	80	41.2
Probably HIV negative	41	16.4	48	39.7	69	16.5	81	41.8
Probably HIV positive	0	0.0	2	1.7	0	0.0	0	0.0
Definitely HIV positive	2	0.8	2	1.7	3	0.7	2	1.0
Don't know	3	1.2	10	8.3	9	2.1	28	14.4
Missing	2	0.8	0	0.0	3	0.7	3	1.5
Total	250	100.0	121	100.0	419	100.0	194	100.0

Note: Only includes those who have a current regular partner whom the respondent described as having either a last test that returned a negative result, as having never tested, or whom the respondent did not ask about their HIV testing history.

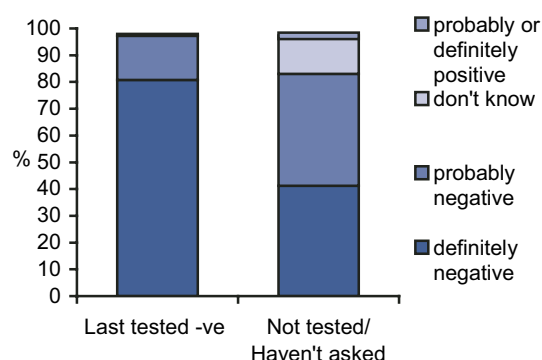
In 2004, 80.0% of respondents who reported that their partner had tested negative at their last HIV test believed that their partner was "definitely negative", compared to just 41.2% of respondents who reported that their partner had never tested for HIV or who reported that they had not asked their partner about their HIV testing history (Fig 39 and Table 18).

**Figure 38. HIV test status of current regular sex partner by relationship length (2004)**



P<0.001

**Figure 39. Respondent's belief about partner's current HIV status by partner's test history (2004)**



Combining information on a partner's last HIV test status with information on the respondent's last HIV test status, the degree of *possible* sero-concordance (having the same HIV status) with regular partners was determined (Table 19). It is important to note that we are not able to establish the *actual* level of sero-concordance, since a respondent's assessment of their own or their partner's actual HIV status may not be correct.

**Table 19. Possible sero-concordance with current regular sex partner (2004)**

Partner's last HIV test status	Respondent's own latest HIV test status					
	Unknown		HIV Negative		HIV Positive	
	n	%	n	%	n	%
HIV status unknown*	82	57.3	98	22.1	2	7.7
Last test was HIV negative	52	36.4	319	71.8	13	50.0
Last test was HIV positive	2	1.4	14	3.2	9	34.6
Not stated	7	4.9	13	2.9	2	7.7
Total	143	100.0	444	100.0	26	100.0

\* Combination of "unknown/haven't asked him" and "he hasn't had a test". Only includes men who had a current regular sex partner and who provided information on their own HIV test history (n=613).

Respondents whose last HIV test was negative were most likely to state that their current regular partner's status was HIV negative (71.8%), and respondents who had tested HIV positive were most likely to state that their partner had tested HIV positive (34.6%).

Just over half (53.5%) of the men with a current regular sex partner could be categorised as being in a possible sero-concordant relationship based on their last test result (their respective latest HIV test statuses were both negative or both positive). A small number (4.4%) were possibly in a sero-discordant relationship (tested positive and negative or tested negative and positive) and in 39.6% of cases the respondent was uncertain about either their own or their partner's HIV test status. These findings are similar to those found in 2002.

### ***Concurrent sexual partnering***

Some individuals - and couples - have sex with men other than their current regular partner at a time when they are still together. There are many different scenarios in which this may occur. Sometimes it might happen within the bounds of an agreement between partners in a couple, or, it might occur in contradiction of agreed terms to a relationship. It could happen with or without the other partner's knowledge, and it can also happen when a relationship is just forming or about to end.

The reason why we have designed the GAPSS questionnaire to identify overlapping, simultaneous or "concurrent" relationships is primarily because it presents risks for the transmission of HIV in certain conditions. While it would be extremely valuable to learn more about the circumstances, pressures and meanings facing men who have sex with men in longer-term sexual relationships, particularly with regards to sex outside the relationship, this is beyond the scope of the GAPSS questionnaire. The following analysis presents the proportion of men in regular sexual relationships that we were able to identify as having concurrent sexual partners, and later sections will examine the patterns of condom use and HIV risk present in these circumstances.

We are able to identify and distinguish between concurrent, and serial/consecutive sexual partnering, by identifying those who reported currently being in a relationship with a regular partner for “six months or more”, and then by investigating whether they had reported any other regular or casual partners during this six month period. In 2004, three-quarters (494 respondents out of 668, or 74%) of those with current regular sexual partners reported being with their current regular partner for six months or more, and Table 20 shows the results for concurrent sex among this group.

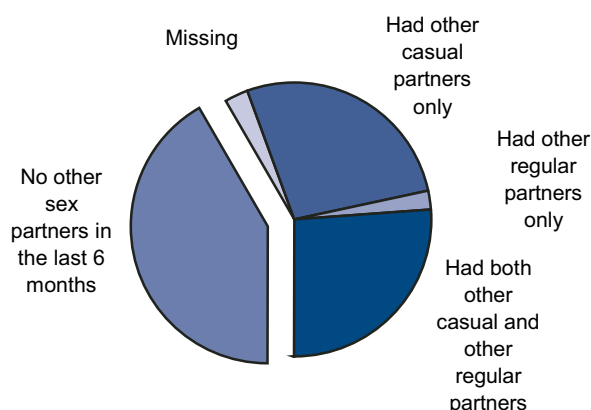
**Table 20. Concurrent sexual partnering among respondents with current regular partner of at least six months duration by survey**

	2002		2004	
	n	%	n	%
No other partners in <6 months	116	40.8	206	41.7
Concurrent casual partners only in <6 months	86	30.3	134	27.1
Concurrent regular partners only in <6 months	5	1.8	11	2.2
Both concurrent regular and concurrent casual partners in <6 months	68	23.9	129	26.1
Not stated	9	3.2	14	2.8
Total	284	100.0	494	100.0

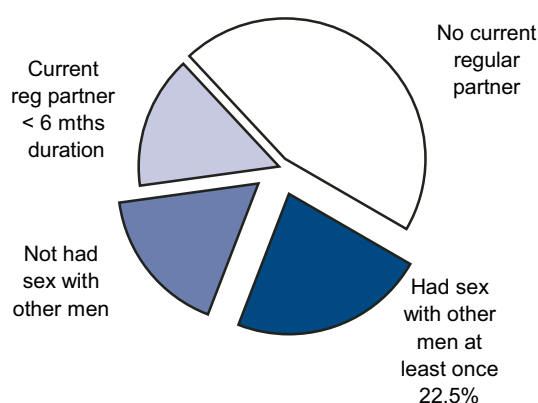
Note: Only those with a current regular partner of at least six months duration are included in the above table.

Of these 494 respondents, over half (274 respondents or 55.5%) reported at least one concurrent sexual partner (Fig 40). This was identical to 2002, although a slightly higher proportion of concurrent partnering in 2004 occurred with other regular as opposed to only casual concurrent partners.

**Figure 40. Concurrent sexual partnerships among respondents with current regular sex partner of at least six months duration (2004)**



**Figure 41. Concurrent sex in the six months prior to survey: out of whole 2004 sample**



Overall, these 274 respondents who had concurrent sexual partnerships in the six month period prior to survey represent 22.5% of the entire 2004 GAPSS sample (Fig 41), up from 19.5% in 2002.



The rate of any concurrent sex in the previous six months differed significantly according to description of current regular partner (Fig 42).

Concurrent sex was almost universal among respondents who described their current regular partner as a “fuckbuddy” and who did not live with this partner (94.2%).

While concurrent sex was significantly lower among respondents who described their partner as a “boyfriend, life partner etc.”, it was not further distinguished by whether the respondent cohabited with this partner (48.8%) or not (51.2%).

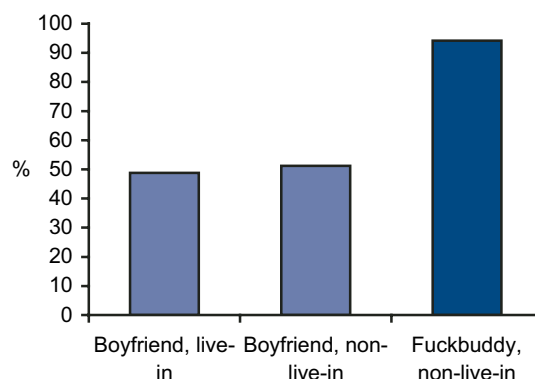
Figure 43 shows that the rate of any concurrent sex was significantly associated with length of relationship for respondents who described their current regular partner as a “boyfriend, life partner etc.”, but not for those who described their partner as a “fuckbuddy”.

Among respondents who described their current partner as a “boyfriend, life partner etc”, concurrent sex was lowest among those who had been in this relationship for less than a year (34.5%) and highest among those who had been together for 5 years or more (57.1%).

Length of relationship had no effect on the rate of concurrent sex in the previous six months among respondents with “fuckbuddy”-type current regular partners, with the rate of concurrent sex being consistently high.

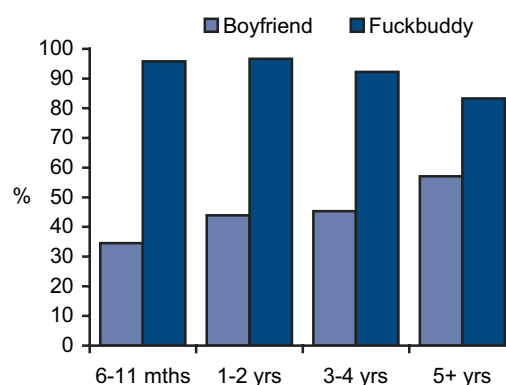
It is not possible for GAPSS to determine concurrent sex in the previous six months for those in relationships for less than six months duration, as overlapping sexual partnering needs to be distinguished from consecutive or serial partnering.

**Figure 42. Concurrent sex by description of regular partner and cohabitation status (2004)**



Note: 'Fuckbuddy, live-in' not shown as there are only nine respondents in this category, eight of whom had concurrent sex.  $P < 0.001$  between categories of 'boyfriend' and 'fuckbuddy',  $P = ns$  between 'boyfriend, live-in' and 'boyfriend, non-live-in'.

**Figure 43. Concurrent sex by description of regular partner and relationship length (2004)**



Note:  $P < 0.05$  for relationship length among 'boyfriend'-type partners,  $P = ns$  for relationship length among 'fuckbuddy'-type partners.

## Attitudes

All participants were asked how they felt about several statements to do with HIV, condom use and sex. Participants were able to “strongly agree”, “agree”, “disagree”, or “strongly disagree” with each one. Four statements used in the 2002 survey were repeated in 2004 for comparative purposes and four new statements were added. The new questions addressed perceptions of adherence and tolerance to new HIV treatments, perceptions of reductions in infectivity among HIV positive men on treatments, perceptions of an HIV positive man’s likely disclosure of their HIV status before sex, and the respondent’s hypothetical reaction to such disclosure from an HIV positive man.

### Statements repeated from 2002:

- “HIV/AIDS is a less serious threat than it used to be because of new treatments”;
- “Condoms are OK as part of sex”;
- “I don’t like wearing condoms because they reduce sensitivity”;
- “I would sometimes rather risk HIV transmission than use a condom during anal sex”;

### New statements added in 2004:

- “New HIV treatments are simple and have few side effects”;
- “I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments”;
- “A man who knows he has HIV would tell me he was positive before we had sex”;
- “If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”;

This section presents the basic findings for each statement, and comparisons over time where relevant. Full information on statistical associations with each statement are given on page 78.

Overall only 18.4% participants in 2004 agreed to the statement that HIV/AIDS is less of a threat than it used to be because of new treatments (Fig 44).

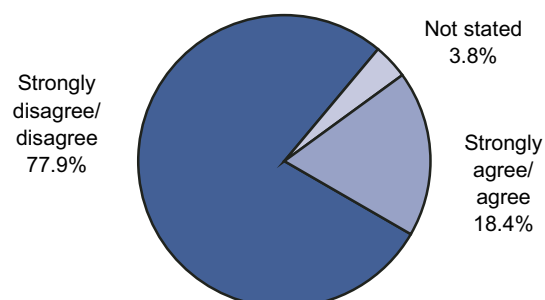
**Table 21. “HIV/AIDS is a less serious threat...” by survey**

	2002		2004	
	n	%	n	%
Agree	154	19.0	224	18.4
Disagree	637	78.5	950	77.9
Not stated	21	2.6	46	3.8
Total	812	100.0	1220	100.0

P=ns over time.

There were no significant differences in attitudes to this statement over time (Table 21).

**Figure 44. “HIV/AIDS is a less serious threat” (2004)**



Most respondents in 2004 agreed that “condoms are OK as part of sex” (89.1%) with a minority disagreeing (6.5%) (Fig 45).

**Table 22. “Condoms are OK as part of sex” by survey**

	2002		2004	
	n	%	n	%
Agree	769	94.7	1087	89.1
Disagree	24	3.0	79	6.5
Not stated	19	2.3	54	4.4
Total	812	100.0	1220	100.0

P<0.001.

There were statistically significant differences in responses to this statement between 2002 and 2004, with proportionately more respondents in 2004 disagreeing (6.5% up from 3.0%).

Despite the positive reaction to the statement above, over a third of respondents in 2004 agreed that they “don’t like to wear condoms because they reduce sensitivity” (Fig 46).

**Table 23. “I don’t like wearing condoms because they reduce sensitivity” by survey**

	2002		2004	
	n	%	n	%
Agree	326	40.2	432	35.4
Disagree	461	56.8	719	58.9
Not stated	25	3.1	69	5.7
Total	812	100.0	1220	100.0

P=ns over time.

There were no statistically significant differences in reactions to this statement over time.

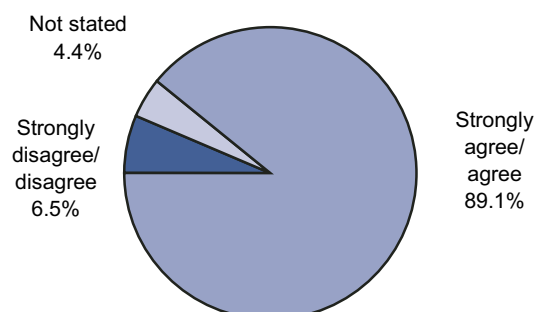
Most respondents in 2004 disagreed with the statement “I would sometimes rather risk HIV transmission than use a condom during anal sex” (82.5%) (Fig 47).

**Table 24. “I would sometimes rather risk HIV transmission than use a condom during anal sex”**

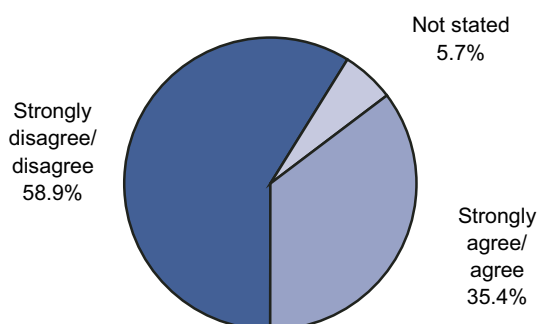
	2002		2004	
	n	%	n	%
Agree	102	12.6	115	9.4
Disagree	687	84.6	1007	82.5
Not stated	23	2.8	98	8.0
Total	812	100.0	1220	100.0

P=ns over time.

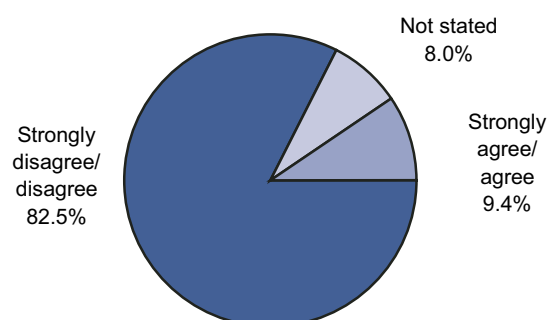
**Figure 45. “Condoms are OK as part of sex” (2004)**



**Figure 46. “I don’t like wearing condoms because they reduce sensitivity” (2004)**



**Figure 47. “I would sometimes rather risk HIV transmission than use a condom during anal sex” (2004)**



There were no statistically significant differences in reaction to this statement between 2002 and 2004 (Table 24).

Two of the new statements introduced in 2004 related to attitudes surrounding the new treatments for HIV (Highly Active Antiretroviral Therapy or “HAART”).

The first new statement, “new HIV treatments are simple and have few side effects” was met with disagreement by three quarters of respondents (76.7%), with 17.8% agreeing (Fig 48).

It is worth noting that, in addition to some other statistical associations (page 78), reaction to this statement differed markedly by HIV test status. Respondents who had never tested for HIV were significantly more likely to agree to this statement (31.9%) compared to those who had tested positive (18.9%) or last tested negative (12.7%).

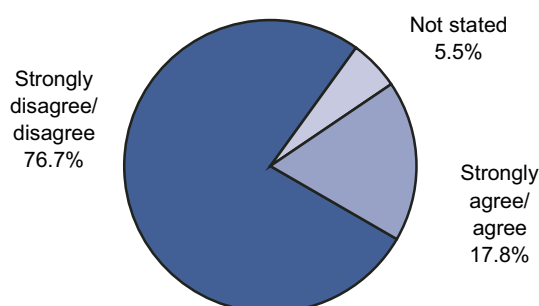
In the second HAART-related statement, “I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments”, the majority disagreed (91.7%) (Fig 49).

Similarly, reaction to this statement was, among other things, significantly related to respondent’s HIV test status (page 78). Respondents who had tested HIV positive were most likely to agree with this statement (9.4%), compared to those who had never tested for HIV (8.1%) and those who had last tested HIV negative (2.4%).

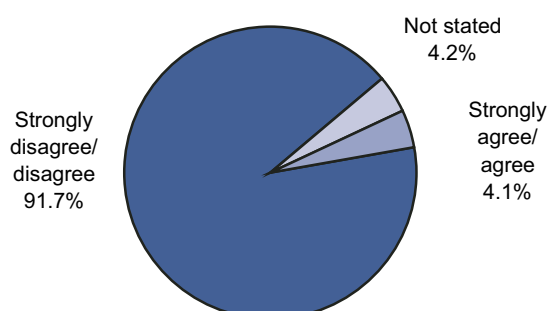
Two statements regarding disclosure of HIV status before sex by men who know they are HIV positive were also included in 2004 (note that a slightly different question was asked in the 2002 survey).

Almost three-quarters of respondents (73.0%) disagreed with the statement “A man who knows he has HIV would tell me he was positive before we had sex”, with 22.2% agreeing (Fig 50).

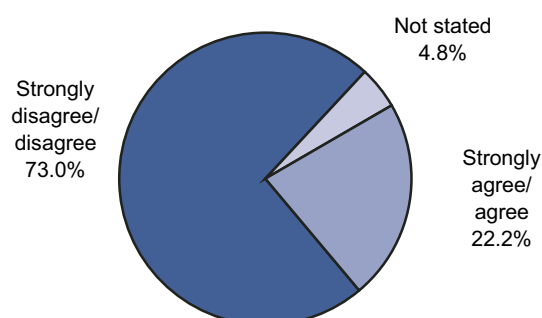
**Figure 48. “New HIV treatments are simple and have few side effects (2004)”**



**Figure 49. “I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments (2004)”**



**Figure 50. “A man who knows he has HIV would tell me he was positive before we had sex (2004)”**

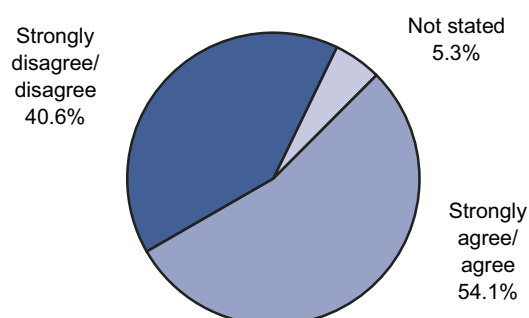


Agreement with the statement above was also statistically associated with HIV test status, with respondents who had never tested being most likely to agree (30.0%), followed by those who had last tested HIV negative (20.8%) and those who had tested positive (15.1%).

The low proportion of HIV positive respondents who believed a positive man would disclose their status prior to sex appears to be explained in part by the results for the final question shown in Fig 51. Over half of all respondents (54.1%) agreed that “if a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”. It is unclear from the way the question is worded whether respondents who agreed with this statement would not want to have sex of any kind with someone who told them he was positive (even though most activities other than anal sex and oral sex with semen contact involve none or very little chance of HIV transmission), or whether they assumed “sex” meant anal sex (either protected or unprotected).

Again, results for this statements were significantly associated with HIV test status, with respondents who had tested positive being the least likely to agree with this statement (9.4%) and those who had never tested for HIV the most likely to agree (66.8%).

**Figure 51. “If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”**





## Condom use classifications

This section outlines the two ways of expressing condom use frequencies that are used in this report: *Any unprotected anal sex* and *High, Medium and Low* condom use.

### **Any unprotected anal sex**

The first classification is the number of respondents who reported *at least once not using a condom during anal sex*. It distinguishes respondents who had any instances of unprotected anal sex from respondents who always used a condom when engaging in anal sex in the six months prior to survey (Table 25).

“Always used a condom” =  A cells  
 “Not always used a condom” =  N cells

**Table 25. Condom use classification: Any unprotected sex**


		When receptive, used condoms...					
		Not receptive	Always	Almost always	1/2 time	Very rarely	Never
When insertive, used condoms...	Not insertive		A	N	N	N	N
	Always	A	A	N	N	N	N
	Almost always	N	N	N	N	N	N
	1/2 time	N	N	N	N	N	N
	Very rarely	N	N	N	N	N	N
	Never	N	N	N	N	N	N

### **High, Medium, Low condom use**

The second utilises the five-point condom use frequency scale in the questionnaire (condom use ‘always’, ‘almost always’, ‘about half the time’, ‘very rarely’ and ‘never’) to extend the description of unprotected sex into a three-part categorisation of High, Medium and Low. Under this typology, “*High*” condom users are those who used a condom at least “always” or “almost always” when they engaged in either receptive or insertive anal sex, “*Low*” condom users are those who used condoms at most “very rarely” or “never” when they engaged in either receptive or insertive anal sex, with the rest categorised as having used condoms at a “*Medium*” level (Table 26).

Some complexity arises because some men may have used condoms “always” for receptive anal sex and “never” for insertive anal sex and vice versa. These “asymmetric” condom users have been grouped into the “Medium” category for the purposes of this analysis.

This typology has been developed because it enables a respondent who used condoms 99% of the time to be differentiated from someone who very rarely or never used a condom for anal sex. It also acknowledges that men who are otherwise habitual condom users may ‘slip up’ from time to time, and that it may still be useful to distinguish such individuals from respondents who were less habitual condom users.

“High” =  H cells  
 “Medium” =  M cells  
 “Low” =  L cells

**Table 26. Condom use classification: High, Medium, Low**

		When receptive, used condoms...					
		Not receptive	Always	Almost always	1/2 time	Very rarely	Never
When insertive, used condoms...	Not insertive		H	H	M	L	L
	Always	H	H	H	M	M	M
	Almost always	H	H	H	M	M	M
	1/2 time	M	M	M	M	M	M
	Very rarely	L	M	M	M	L	L
	Never	L	M	M	M	L	L

These condom use frequencies are expressed in three ways in various parts of this report:  
 (a) as a proportion of those who had anal sex with a (casual/current regular) partner;  
 (b) as a proportion of those who reported a (casual/current regular) partner;  
 (c) as a proportion of the total sample.

## Sex with a current regular partner

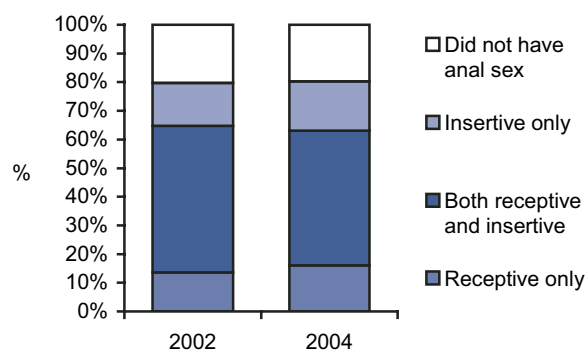
This section focuses on respondents who had a regular male partner at the time of survey. A regular partner was defined in the survey as a man “you’ve had sex with four or more times in the previous six months. They could be boyfriends, life partners, fuckbuddies etc...”.

Half (54.8%) of the total 2004 sample (668 out of 1220 respondents) stated that they currently had a regular male sex partner, an increase from 49.0% in 2002. Of these 668 respondents, 635 provided sufficient information for the analysis of sexual practices and condom use.

### *Anal sex with a current regular partner*

Of the 635 respondents who reported information about their current regular partner, 511 (80.5%) reported having anal sex with this partner in the six months prior to interview (Fig 52 and 54). This was identical to 2002 (79.9%).

**Figure 52. Anal sex with current regular partner in previous six months by survey**



Note: Out of respondents who had a current regular partner.

The majority of men who had anal sex had engaged in both insertive and receptive anal sex with their regular partner, with roughly equal proportions engaging in anal sex that was receptive only or insertive only (Fig 52).

As Table 27 shows, in 2004 one-fifth of respondents who had anal sex were receptive only (19.8%) and one-fifth were insertive only (21.1%), with the majority having both insertive and receptive anal sex with their current regular partner (57.9%).

**Table 27. Modality of anal sex with current regular partner in previous six months by survey**

	2002		2004	
	n	%	n	%
Insertive anal sex only	58	18.4	108	21.1
Both receptive and insertive anal sex	199	63.2	296	57.9
Receptive anal sex only	53	16.8	101	19.8
Not stated	5	1.6	6	1.2
Total	315	100.0	511	100.0

There were no significant differences in modality of anal sex with a current regular partner between 2002 and 2004 (Table 27).



### ***Any unprotected anal sex with a current regular partner***

Condom use is presented first according to the incidence of “any” unprotected anal sex and then according to the categorisation of “High”, “Medium” and “Low” condom use. Table 28 provides information on the total samples from 2004 and 2002 on “any” unprotected anal sex from which we can derive a variety of outcomes relating to non-condom use.

Examining first the 511 respondents in 2004 who had engaged in anal sex with a current regular partner, 62.6% of the respondents had at least once not used a condom in the six months prior to survey and 37.4% had used a condom each time they had anal sex (Fig 53). In 2002, these figures were 65.1% and 34.9% respectively.

Expanding the sample out to those who had any sex with a current regular partner, half (50.4%) of the 635 respondents in 2004 had any anal sex without condoms, and 30.1% had always used a condom with their current partner. In 2002, these figures were 52.0% and 27.9% respectively.

Finally, examining the rates of “any” unprotected anal sex with a current regular partner out of the total 2004 GAPSS sample, Table 28 shows that a quarter (26.2%) at least once did not use a condom and 15.7% had always used condom with their current partner in the six months prior to survey (Fig 55). The findings for 2002 were 25.2% and 13.5% respectively.

**Table 28. Any unprotected anal sex with current regular partner by survey: whole sample**

	2002		2004	
	n	%	n	%
No current regular sex partner	383	47.2	535	43.9
Current regular sex partner but no anal sex	79	9.7	124	10.2
Current regular partner and anal sex:				
Always used a condom	110	13.5	191	15.7
At least once did not use a condom	205	25.2	320	26.2
Not stated	35	4.3	50	4.1
Total	812	100.0	1220	100.0

These results suggest a number of things. First, when men decide to have anal sex with their current regular partner, proportionately fewer respondents in 2004 had engaged in any unprotected sex than in 2002 (65.1% in 2002, 62.6% in 2004, Fig 53). This difference however was not statistically significant. Because the same proportion of respondents had engaged in anal sex with their regular partner in 2004 as had done so in 2002 (Fig 54), this difference above was carried through into the rate of unprotected sex among regular partnerships as a whole (52.0% in 2002, 50.4% in 2004). However, while these two results show a small reduction in the rate of unprotected anal sex with regular partners, overall the rate of potential exposure to HIV between current regular partners has remained the same (or perhaps increased) (Fig 55) because in 2004 more respondents reported having a current regular partner at the time of survey (Fig 56). This increase in regular partnering means that both the amount of unprotected anal sex *and* the amount of protected anal sex increased slightly from 2002.

Figure 53. Any unprotected anal sex in previous six months by survey: of those having anal sex with current regular partner

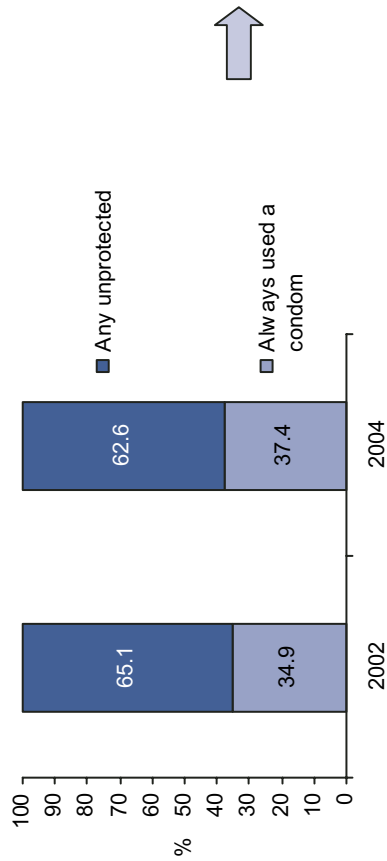


Figure 54. Had anal sex with current regular partner in previous six months by survey

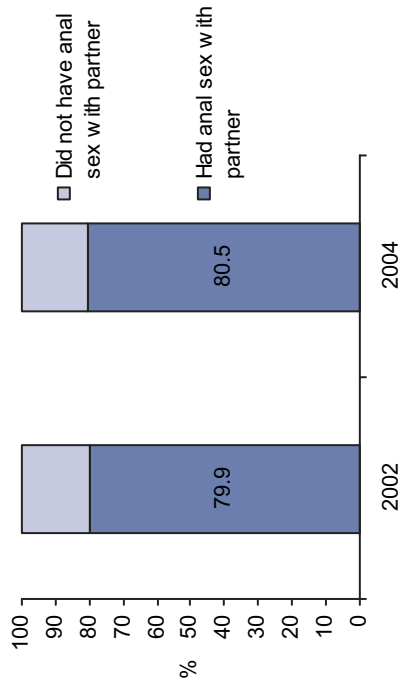


Figure 55. Any unprotected anal sex in previous six months by survey: of whole sample

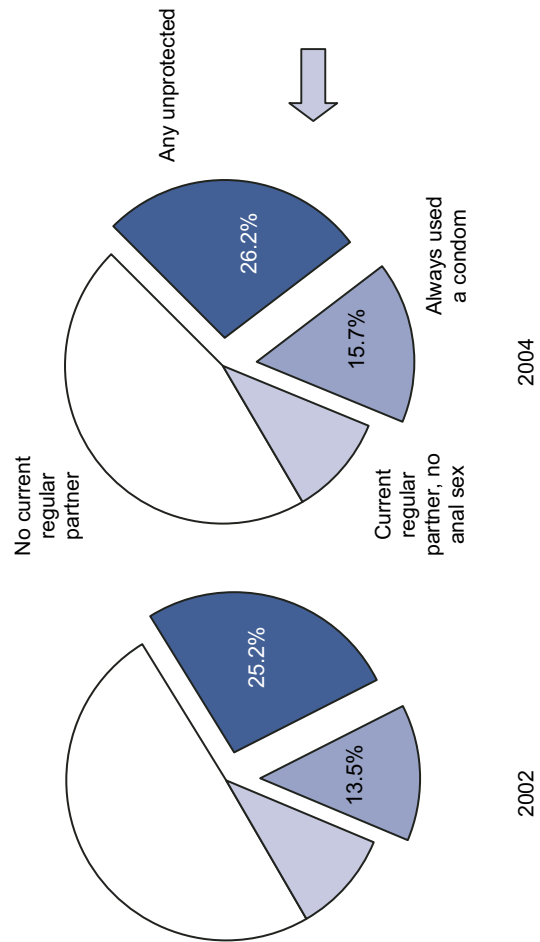
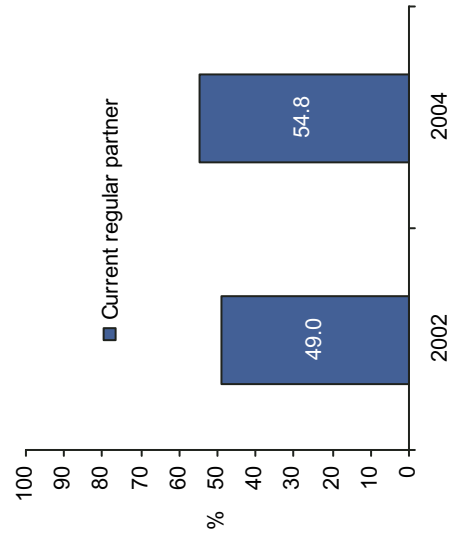


Figure 56. Have current regular sex partner by survey



### **High, Medium, Low condom use with current regular partner**

Examining condom use with regular partners by High, Medium and Low frequencies reveals a slightly different picture of unprotected sex than that found when using the “any” unprotected sex measurement (Table 29).

Of the 511 respondents in 2004 who had engaged in anal sex with their current regular partner, 47.6% were classified as Low condom users, 8.2% as Medium and 44.2% as High condom users. In 2002, the findings showed an equal split between Low (45.4%) and High (45.4%), with 8.6% being Medium condom users (Fig 57).

Expressing this information as a proportion of those who had any sex with a current regular partner, 38.3% were Low condom users, 6.6% were Medium users and 35.6% were High condom users in the 2004 sample. The figures for 2002 were 36.5%, 6.9% and 36.5% respectively.

Table 29 shows these findings expressed in terms of the total GAPSS sample. One-fifth (19.9%) of the whole 2004 sample were Low condom users, 3.4% were Medium users, and 18.5% were High condom users. The proportion of the 2002 sample that were Low and High users was equal at 17.6% (Fig 59).

**Table 29. High, Medium, Low condom use with regular sex partner: whole sample**

	2002		2004	
	n	%	n	%
No current regular sex partner	383	47.2	535	43.9
Current regular sex partner but no anal sex	79	9.7	124	10.2
Current regular partner and anal sex:				
High condom use	143	17.6	226	18.5
Medium condom use	27	3.3	42	3.4
Low condom use	143	17.6	243	19.9
Not stated	37	4.6	50	4.1
Total	812	100.0	1220	100.0

Note: 'Not stated' increases slightly in this table compared to Table 28 due to the different condom use classification.

The results obtained from analysing condom use by High, Medium and Low differed from the results gained by the “any” unprotected sex classification. Whereas the “any” unprotected anal sex results indicated that proportionately fewer respondents in 2004 having anal sex had at least once not used a condom than had done so in 2002 (65.1% in 2002, 62.6% in 2004), the High, Medium, Low classification indicated that proportionately more respondents in 2004 having anal sex were Low condom users than was found in 2002 (45.4% in 2002, 47.6% in 2004) (Fig 57). Also, whereas in 2002 exactly equal proportions had reported High and Low condom use frequencies (45.7% for each), in 2004 the Low frequency (47.6%) was greater than the High frequency (44.2%). When these 2004 findings for High, Medium and Low condom use are cumulated onto the greater amount of regular sexual partnering in the 2004 sample, the overall rate of Low condom use in 2004 was 2.3% higher than in 2002 (Fig 59).

Figure 57. High, Medium, Low condom use in previous six months by survey: of those having anal sex with current regular partner

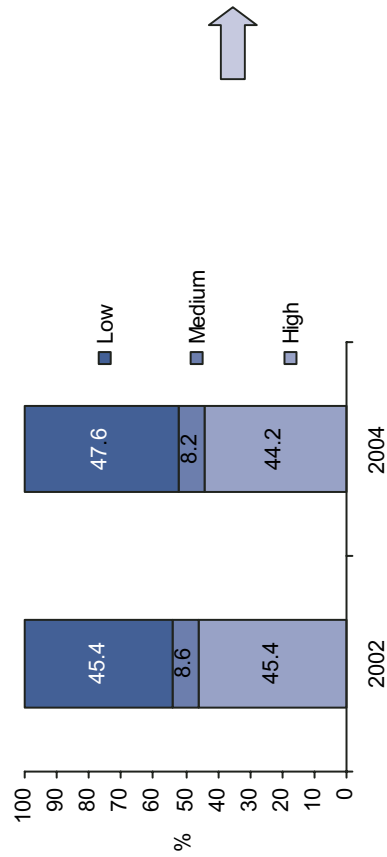


Figure 58. Had anal sex with current regular partner in previous six months by survey

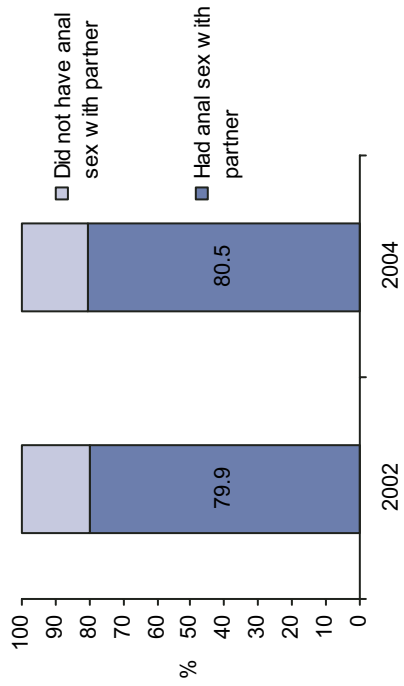


Figure 59. High, Medium, Low condom use in previous six months by survey: of whole sample

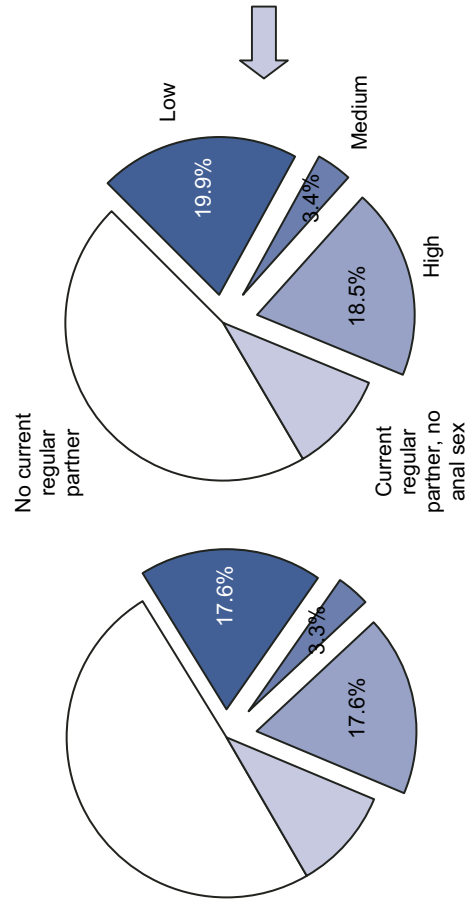
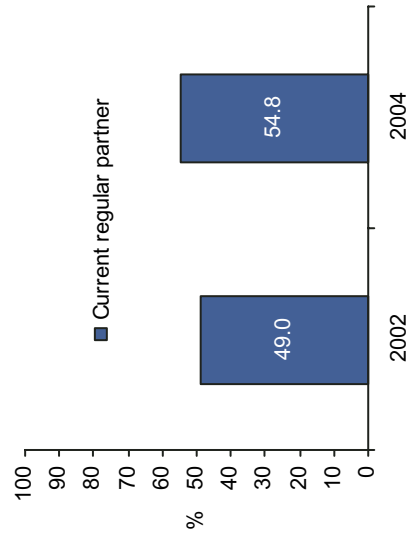


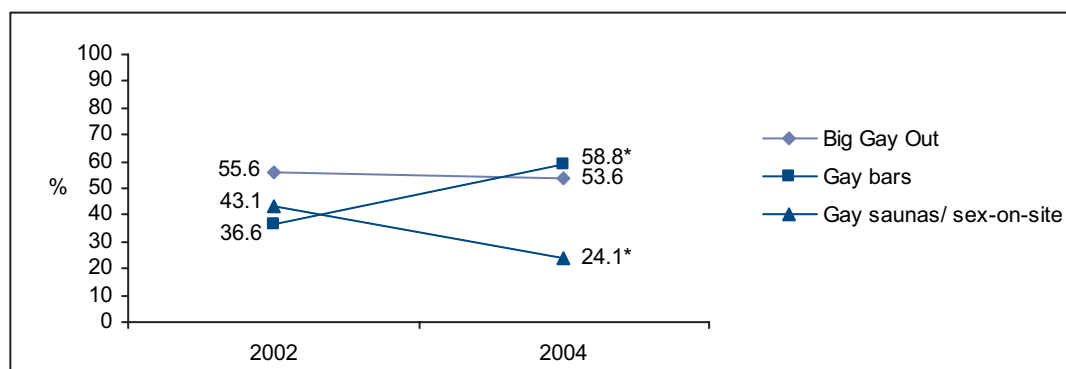
Figure 60. Have current regular sex partner by survey



## Changes over time among key groups

In addition to tracking overall changes in risk practices between 2002 and 2004, it is also important to examine for changes amongst key health promotion target groups. We have selected the three variables of site of recruitment, age group, and HIV test status as being particular priorities.

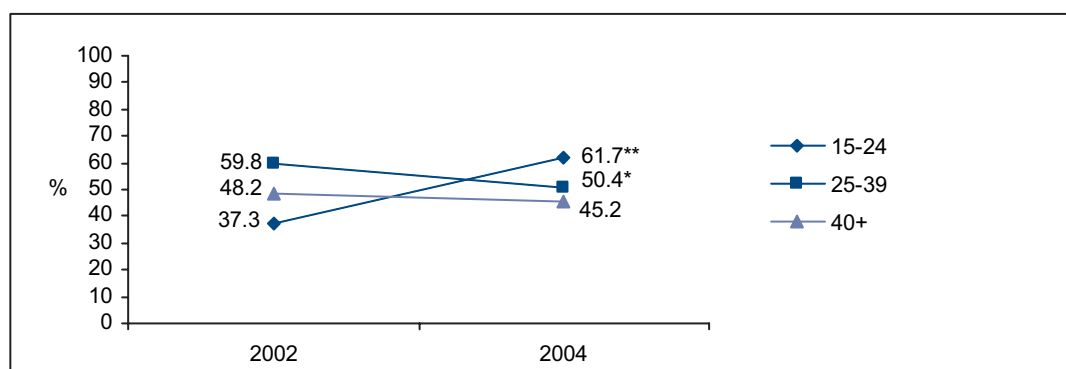
**Figure 61. Changes in rate of “any” unprotected anal sex with current regular partner by site of recruitment 2002-2004**



\* Statistically significant difference  $p < 0.05$ .

In the two years since surveillance began, respondents recruited from gay bars demonstrated a statistically significant increase in unprotected sex with a current regular partner, increasing from 36.6% in 2002 to 58.8% in 2004. Conversely, respondents recruited from the gay saunas/sex-on-site venues demonstrated a decreased rate of unprotected sex with a current regular partner, from 43.1% in 2002 to 24.1% in 2004.

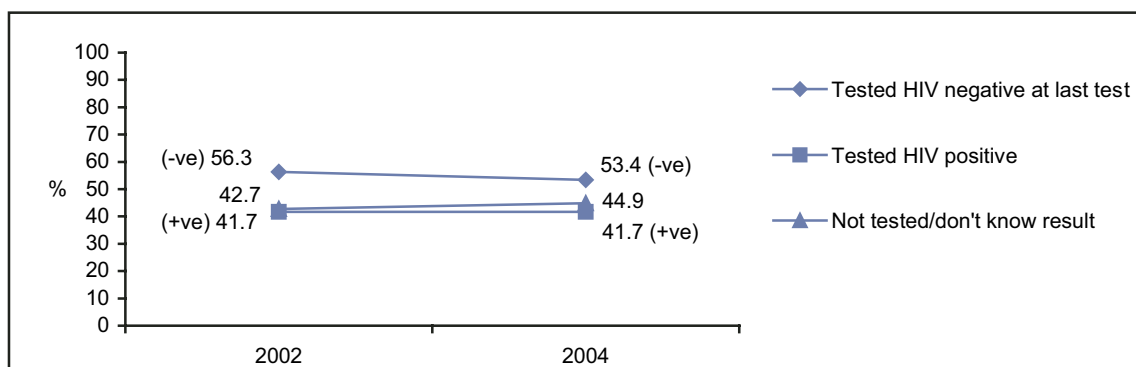
**Figure 62. Changes in rate of “any” unprotected anal sex with current regular partner by age group 2002-2004**



\* Statistically significant difference  $p < 0.05$ ; \*\* Statistically significant difference  $p < 0.01$ .

Respondents aged 15-24 reported the highest proportional change in unprotected sex with a regular partner, increasing from 37.3% in 2002 to 61.7% in 2004. Respondents aged 25-39, who demonstrated the highest rate of unprotected sex with a regular partner in 2002, decreased their rate of unprotected sex from 59.8% to 50.4% in 2004 (Fig 62).

**Figure 63. Changes in rate of “any” unprotected anal sex with current regular partner by HIV test status 2002-2004**

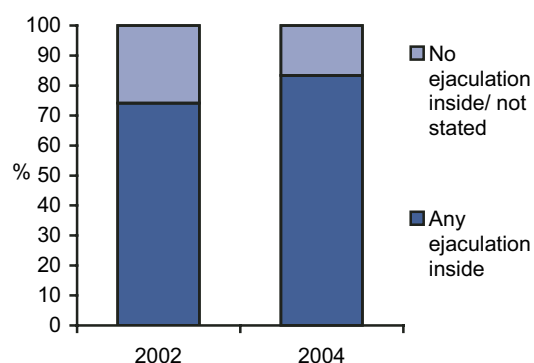


Note: No statistically significant differences by HIV test status between 2002 and 2004.

There were no statistically significant changes in rates of unprotected sex by HIV test status over time (Fig 63).

### ***Ejaculation during unprotected anal sex with a current regular partner***

**Figure 64. Any “ejaculation inside” during unprotected anal sex with current regular partner by survey**



Note: Only includes those who had any unprotected sex.  
P<0.05.

Respondents who reported any unprotected anal sex with their current regular male partner were asked whether ejaculation had occurred in them or in their partner during anal sex.

Of the 320 respondents in 2004 who had any unprotected anal sex, 83.4% reported some ejaculation either inside their regular partner or by their regular partner inside them. This proportion was significantly higher than that reported in 2002 (74.1%) (Fig 64).

In 2004, any ejaculation inside was reported significantly more often by respondents who described their regular partner as a “boyfriend, partner etc” (87.0%) than by respondents who described their regular partner as a “fuckbuddy” (64.3%).

Fig 65 expresses this finding in the context of the whole 2004 GAPSS sample. Over a fifth of all 1220 respondents in 2004 reported any ejaculation inside during unprotected anal sex with a regular partner (21.9%), compared to 18.7% in 2002.

**Figure 65. Ejaculation “inside” during unprotected anal sex with current regular partner (2004): of the whole sample**



### ***Unprotected anal sex and possible sero-concordance between regular sex partners***

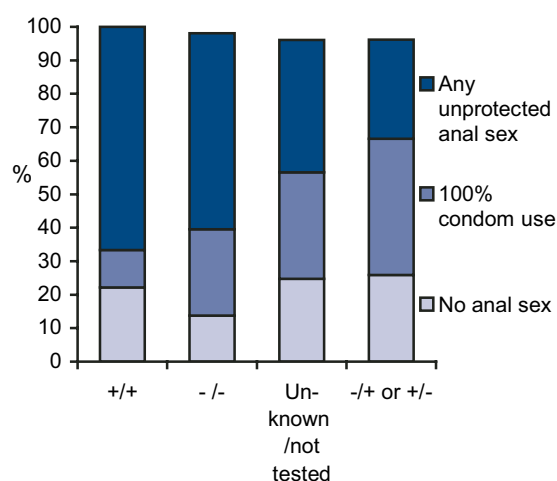
Within regular sexual relationships, engagement in unprotected anal sex may be associated with beliefs about each person’s HIV status. This has been assessed in the GAPSS sample by examining data on the HIV test status of the respondent’s current regular partner, in conjunction with the respondent’s own HIV test status.

Fig 66 expands the information presented earlier in Table 19 on possible sero-concordance by including information on the sexual practices reported by the respondent.

Regular partnerships in which both partners had tested HIV positive demonstrated the highest rate of any unprotected anal sex (66.7%), followed by partnerships in which both respondents had last tested HIV negative (58.6%), and partnerships in which either one or both partners had never tested for HIV or they had not asked their partner about their testing history (39.6%).

Unsurprisingly, serodiscordant partnerships (in which one partner had tested positive and one partner had last tested negative) demonstrated the lowest rate of unprotected anal sex (29.6%).

**Figure 66. Any unprotected sex with a regular partner by possible seroconcordance (2004)**



Note: Only includes those who provided information on both partner’s last test.  $P < 0.001$  excluding +/+ partnerships (n=9).

### Condom use with current regular partner by selected survey variables

The following pages present a selection of variables that were statistically associated with “any” unprotected sex with a regular partner. A full list is given on page 83.

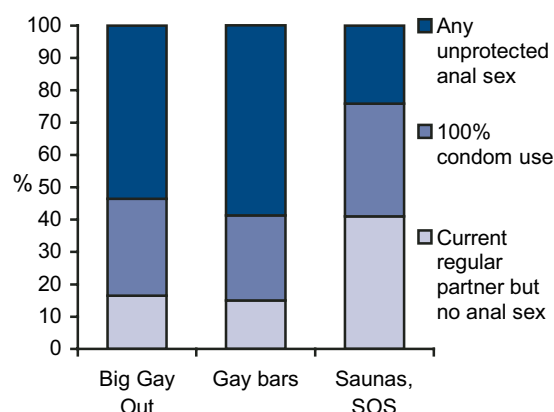
Respondents recruited at the Big Gay Out and gay bars were significantly more likely than respondents recruited at the saunas/sex-on-site venues to have had any unprotected anal sex with their current regular partner (Fig 67). Over half (58.8%) of respondents recruited at the gay bars who had a current regular partner had at least once not used a condom with this person in the previous six months, compared to 53.6% of men recruited at the Big Gay Out and 24.1% of men at the saunas/sex-on-site venues.

Respondents recruited at the saunas/sex-on-site venues were also significantly less likely to have had anal sex with their regular partner (Fig 67).

Fig 68 shows that younger respondents (61.7%) were significantly more likely to have any unprotected sex with their regular partner than those aged 25-39 (50.4%) and those aged 40 and over (45.2%).

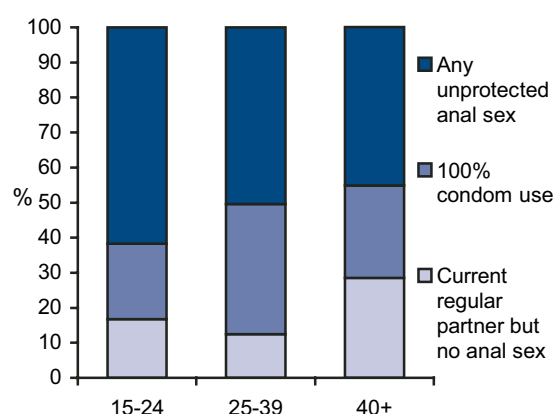
Fig 69 shows the rates of condom use were significantly higher among those who described their partner as a “fuckbuddy”. Over half (55.1%) of those who described their current partner as a “boyfriend, partner etc” had any unprotected sex with their current regular partner compared to a third (33.3%) of those with “fuckbuddy”-type regular partners.

**Figure 67. Any unprotected sex with a regular partner by site (2004)**



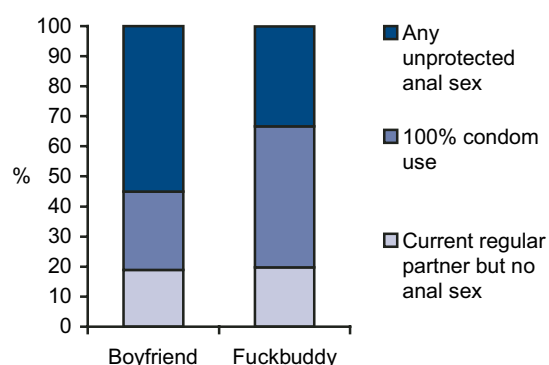
Note: Not stated not shown. P<0.001.

**Figure 68. Any unprotected sex with a regular partner by age group (2004)**



Note: Not stated not shown. P<0.001.

**Figure 69. Any unprotected sex with a regular partner by partner description (2004)**



Note: Not stated not shown. P<0.001.



The incidence of any unprotected anal sex was also higher with regular partners whom the respondent currently lived with (Fig 70). More than half (58.1%) of respondents who currently lived with their partner had at least once not used a condom with this person in the six months prior to survey compared to 41.1% of respondents who did not live with their regular partner.

Condom use differed significantly by length of current relationship (Fig 71), with new relationships (those of less than six months) demonstrating the highest rate of condom use and the smallest rate of any unprotected sex.

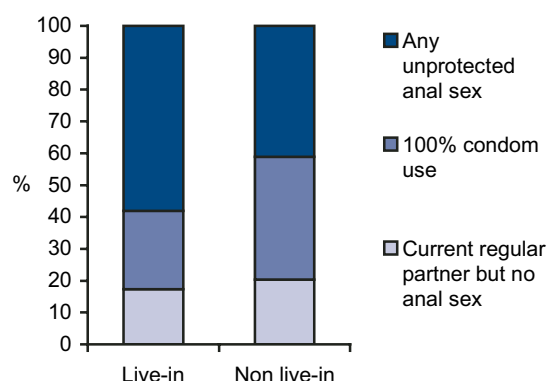
Regular relationships that were currently either 1-2 or 3-4 years duration had the highest rate of unprotected anal sex.

Although non-condom use appeared to decrease again among regular relationships that were of five or more year's duration, this is mainly due to the fact that fewer of these relationship involved anal sex.

The degree of a respondent's sexual exclusivity had also had an effect on condom use among regular partners.

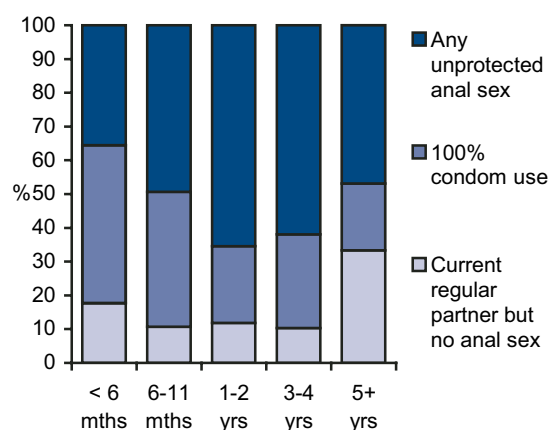
Respondents who had at least once had sex with someone other than their regular partner in the six months prior to survey were less likely to have any unprotected sex with their current regular partner (50.9%) compared to those who did not have sex with another man (62.3%) (Fig 72).

**Figure 70. Any unprotected sex with a regular partner by cohabitation status (2004)**



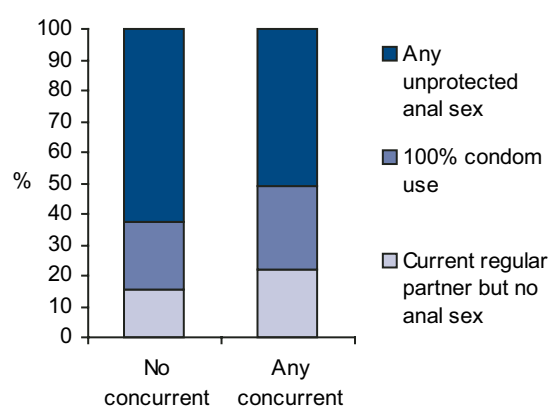
Note: Not stated not shown. P<0.001.

**Figure 71. Any unprotected sex with a regular partner by relationship length (2004)**



Note: Not stated not shown. P<0.001.

**Figure 72. Any unprotected sex with a regular partner by concurrency (2004)**



Note: Not stated not shown. P=0.05

## Sex with casual partners

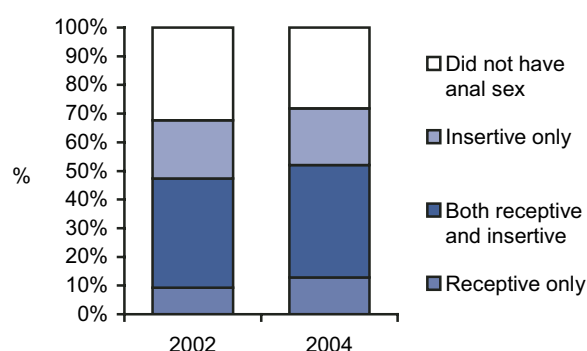
This chapter focuses on anal sex and condom use with casual partners. As described earlier, casual partners were defined on the questionnaire as “men you’ve had sex with once, twice, or three times in the last six months”.

Just under two-thirds (63.4%) of the whole 2004 sample of 1220 had a casual sex partner or partners in the previous six months, the same proportion as in 2002. Of these 773 respondents, 718 provided sufficient information for the analysis of sexual practices.

### *Anal sex with a casual partner*

Of the 718 respondents who reported information about their casual partner/s, 520 (72.4%) reported having anal sex with this partner in the six months prior to interview (Fig 73 and 75). This was slightly higher than 2002 (68.2%) but not a statistically significant difference.

**Figure 73. Had anal sex with casual partner in previous six months by survey**



Note: Out of respondents who had a casual partner/s.

The majority of men who had anal sex with a casual partner had engaged in both insertive and receptive anal sex with their partner/s, although slightly more respondents reported engaging in anal sex that was insertive only than reported receptive only (Fig 73).

As Table 30 shows, in 2004 17.3% of respondents who had anal sex were receptive only and one-quarter were insertive only (26.5%), with roughly half having both insertive and receptive anal sex with their casual partner/s (52.9%).

**Table 30. Modality of anal sex with current regular partner in previous six months by survey**

	2002		2004	
	n	%	n	%
Insertive anal sex only	98	29.1	138	26.5
Both receptive and insertive anal sex	185	54.9	275	52.9
Receptive anal sex only	45	13.4	90	17.3
Not stated	9	2.7	17	3.3
Total	337	100.0	520	100.0

There were no significant differences in modality of anal sex with a casual partner between 2002 and 2004 (Table 30).

### ***Any unprotected anal sex with casual partner/s***

As with regular partners, condom use during anal sex with a casual partner is first presented according to the incidence of “any” unprotected anal sex and then according to the categorisation of “High”, “Medium” and “Low” condom use. Table 31 provides information on the total samples from 2002 and 2004 on “any” unprotected anal sex from which we can derive a variety of outcomes relating to non-condom use.

Examining first the 520 respondents in 2004 who had engaged in anal sex with a casual partner, a third (33.5%) of the respondents had at least once not used a condom in the six months prior to survey and 66.5% had used a condom each time they had anal sex (Fig 74). In 2002, these figures were 33.2% and 66.8% respectively.

Expanding the sample out to those who had any casual sex, a quarter (24.2%) of the 635 respondents in 2004 had any anal sex without condoms, and 48.2% had always used a condom with their casual partner/s. In 2002, these figures were 22.7% and 45.5% respectively.

Finally, examining the rates of “any” unprotected anal sex with a casual partner out of the total 2004 GAPSS sample, Table 31 shows that 14.3% at least once did not use a condom and 28.4% had always used condom with their casual partner/s in the six months prior to survey (Fig 76). The findings for 2002 were 13.8% and 27.7% respectively.

**Table 31. Any unprotected anal sex with casual partner/s**

	2002		2004	
	n	%	n	%
No casual partners	252	31.0	404	33.1
Casual partners but no anal sex	157	19.3	198	16.2
Casual partners and anal sex:				
Always used a condom	225	27.7	346	28.4
At least once did not use a condom	112	13.8	174	14.3
Not stated	66	8.1	98	8.0
Total	812	100.0	1220	100.0

While the proportion of respondents who at least once did not use a condom when they had anal sex remained the same (33.2% in 2002 and 33.5% in 2004, Fig 74), a slight increase in the proportion of respondents having anal sex with a casual partner (from 68.2% in 2002 to 72.4% in 2004, Fig 75) meant that the rate of any unprotected anal sex out of those who had casual partners also increased slightly (22.7% in 2002 to 24.2% in 2004).

A similar rate of casual sexual partnering in the two samples (Fig 77) carried over this result into a minor increase in the overall rate of any unprotected casual sex (from 13.8% to 14.3% in 2004, Fig 76), but also increased the amount of condom use in the overall sample (from 27.7% in 2002 to 28.4 in 2004). However, none of these differences in proportions were statistically significant.

Figure 74. Any unprotected anal sex in previous six months by survey: of those having anal sex with casual partner/s

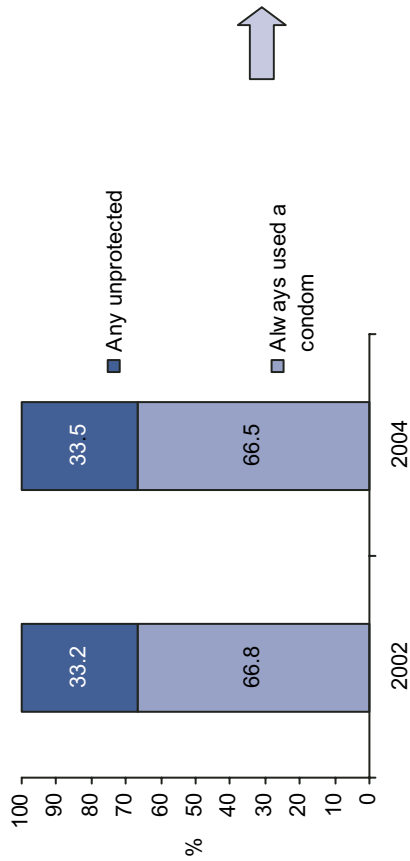


Figure 75. Had anal sex with casual partner/s in previous six months by survey

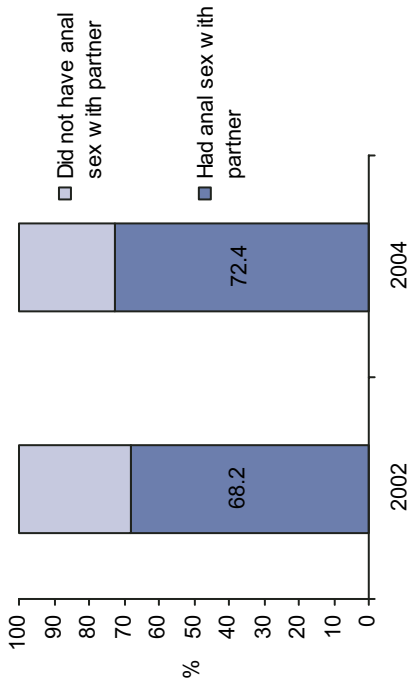


Figure 76. Any unprotected anal sex with casual partner/s in previous six months by survey: of whole sample

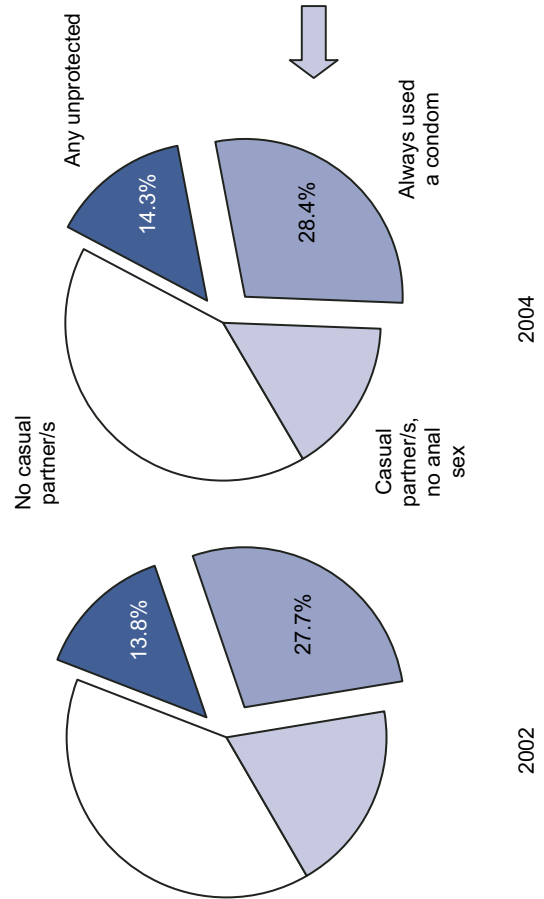
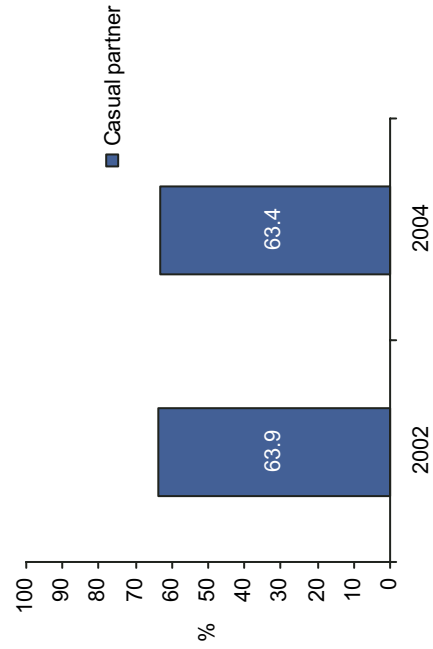


Figure 77. Had casual sex partner/s in previous six months by survey



**High, Medium, Low condom use with casual partner/s:**

Of the 518 respondents in 2004 who had engaged in anal sex with their casual partner, only a small minority (2.1%) were classified as Low condom users, 12.2% as Medium and the majority (85.7%) as High condom users. In 2002, the findings were similar with 4.5% being Low, 10.1% being Medium and 85.4% being High condom users (Fig 78).

Expressing this information as a proportion of those who had any casual sex, 1.5% were Low condom users, 8.8% were Medium users and 62.0% were High condom users in the 2004 sample. The figures for 2002 were 3.0%, 6.9% and 58.1% respectively.

Table 32 shows these findings expressed in terms of the total GAPSS sample. Just one percent (0.9%) of the whole 2004 sample were Low condom users, 5.2% were Medium users, and 36.4% were High condom users with casual partners. The proportion of the 2002 sample that were Low, Medium and High users was 1.8%, 4.2% and 35.2% respectively (Fig 80).

**Table 32. High, Medium, Low condom use with casual partner/s: whole sample**

	2002		2004	
	n	%	n	%
No casual sex partner/s	252	31.0	404	33.1
Casual sex partner/s but no anal sex	157	19.3	198	16.2
Casual sex partner and anal sex:				
High condom use	286	35.2	444	36.4
Medium condom use	34	4.2	63	5.2
Low condom use	15	1.8	11	0.9
Not stated	68	8.4	100	8.2
Total	812	100.0	1220	100.0

Note: 'Not stated' in 2004 increases by 2 from Table 31 due to different condom use classification.

The results obtained from analysing condom use by High, Medium and Low among casual partnerships were largely consistent with those obtained through the "any" unprotected sex classification, although compared to 2002, a slightly lower proportion of respondents in 2004 reported condom use frequencies that placed them in the "Low" category.

None of the changes in proportions between 2002 and 2004 were statistically significant. However, it is interesting to note that while the proportion reporting High condom use during anal sex remained the same in 2002 and 2004 (85.4% in 2002, 85.7% in 2004), a lower proportion reported Low condom use (4.5% in 2002, 2.1% in 2004) and a higher proportion reported Medium condom use (10.1% in 2002, 12.2% in 2004) (Fig 78).

When these 2004 findings for High, Medium and Low condom use are viewed in context of the total 2004 GAPSS sample, very few respondents demonstrated consistently low condom use with casual partners (0.9%) (Fig 80).

Figure 78. High, Medium, Low condom use in previous six months by survey: of those having anal sex with casual partner/s

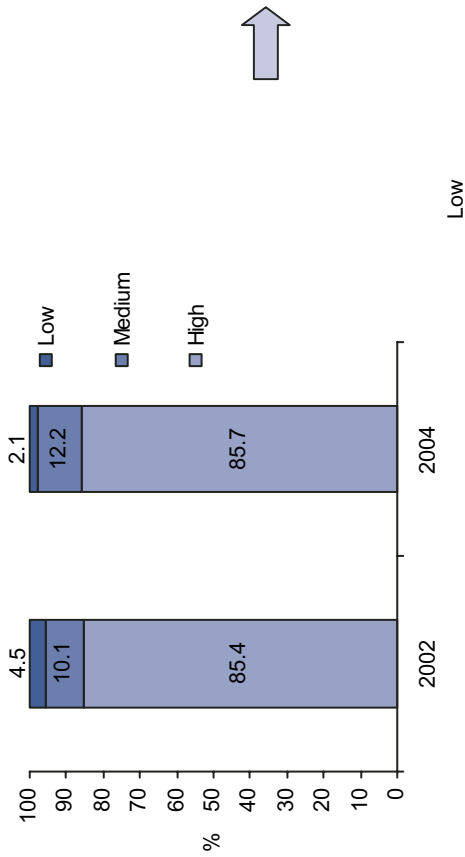


Figure 79. Had anal sex with casual partner/s in previous six months by survey

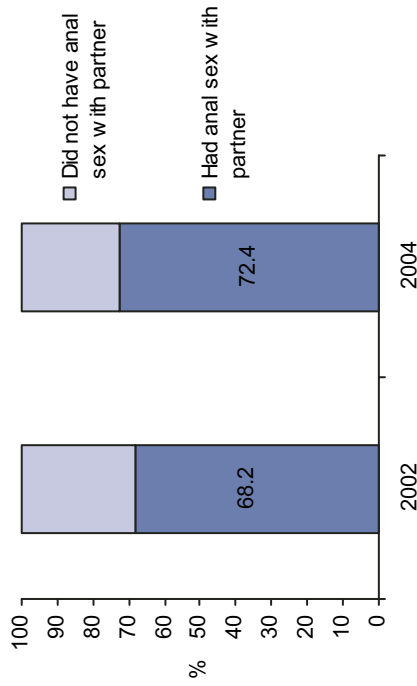


Figure 80. High, Medium, Low condom use with casual partner/s in previous six months by survey: of whole sample

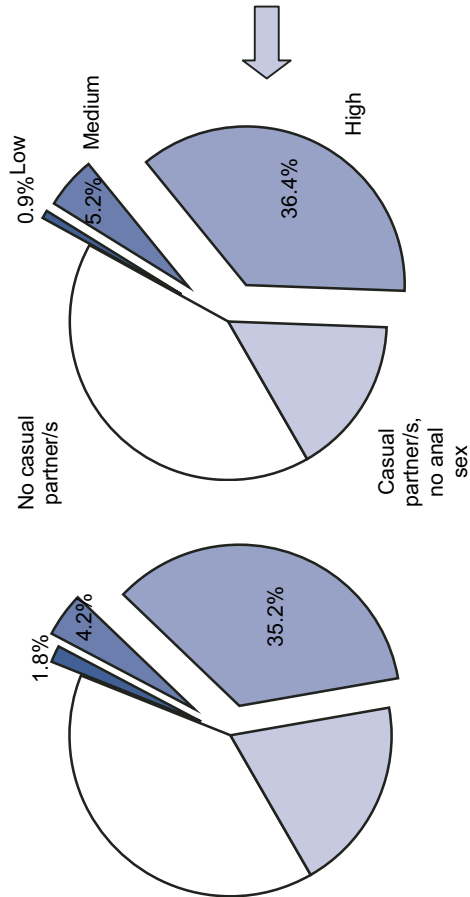
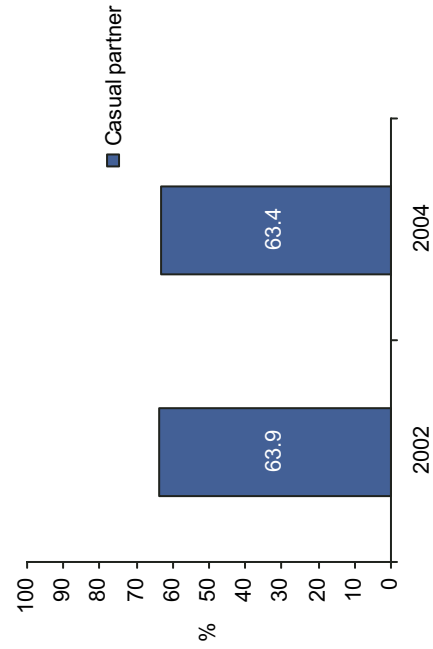


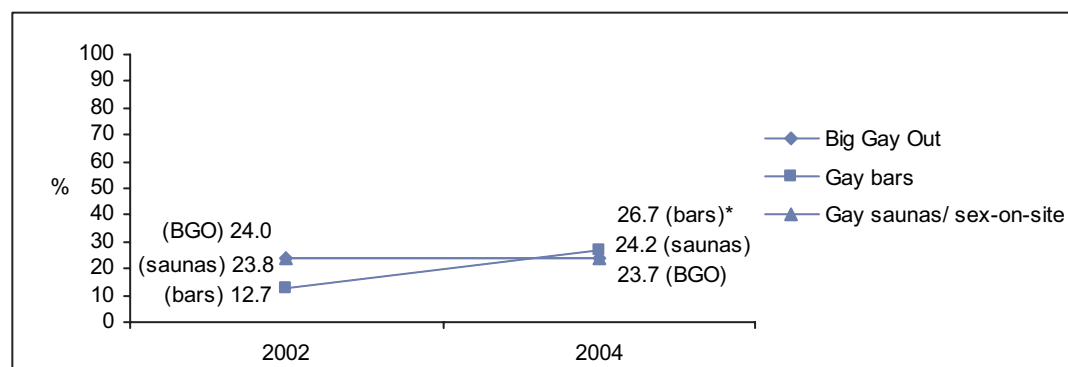
Figure 81. Had casual sex partner/s in previous six months by survey



### Changes over time among key groups

As with the analysis of regular sex partners, changes over time in any unprotected anal sex with casual partners is examined next among the three variables of site of recruitment, age group, and HIV test status.

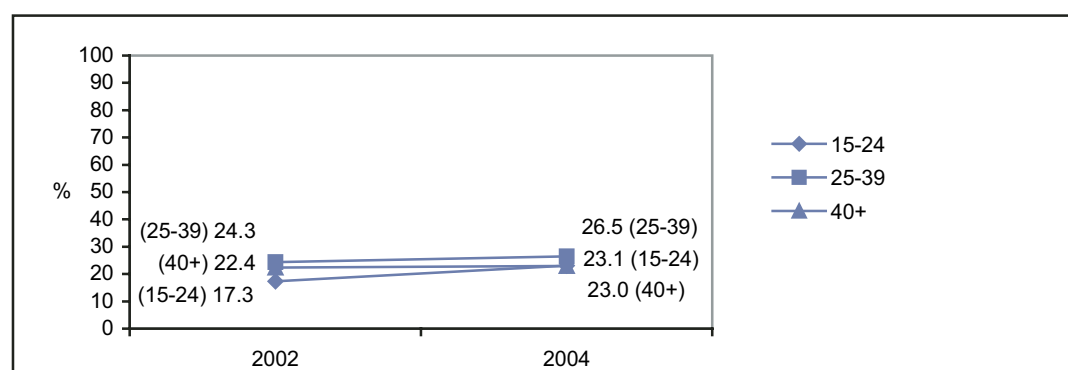
**Figure 82. Changes in rate of “any” unprotected anal sex with a casual partner/s by site of recruitment 2002-2004**



\* Statistically significant difference  $p < 0.05$ .

Respondents recruited from gay bars reported a statistically significant increase in the rate of any unprotected casual anal sex from 12.7% in 2002 to 26.7% in 2004. This group had reported the lowest rate of unprotected sex in the 2002 survey and their 2004 result generally brought them in line with other respondents (Fig 82).

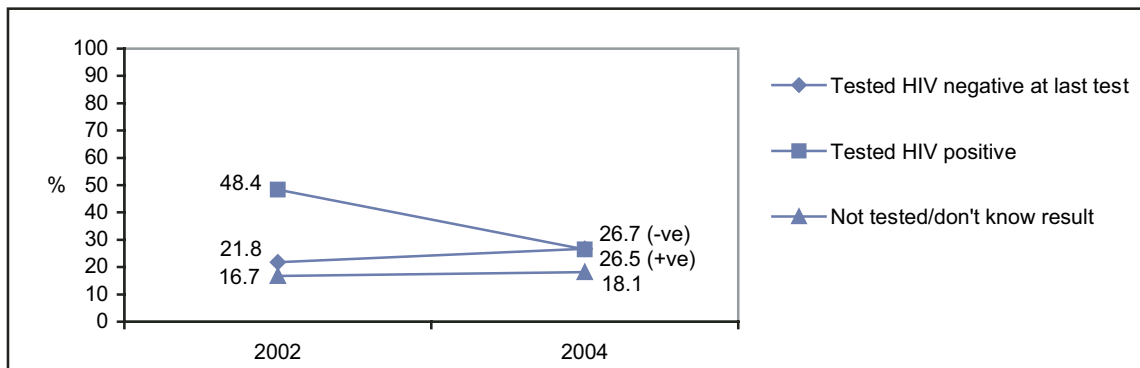
**Figure 83. Changes in rate of “any” unprotected anal sex with casual partner/s by age group 2002-2004**



Note: No statistically significant differences by age group between 2002 and 2004.

There were no statistically significant changes in the rate of any unprotected anal sex with casual partners by age group since 2002 (Fig 83). Respondents aged 15-24 reported a proportional change in unprotected sex with a casual partner from 17.3% in 2002 to 23.1% in 2004, however this was not statistically significant.

**Figure 84. Changes in rate of “any” unprotected anal sex with a casual partner/s by HIV test status 2002-2004**

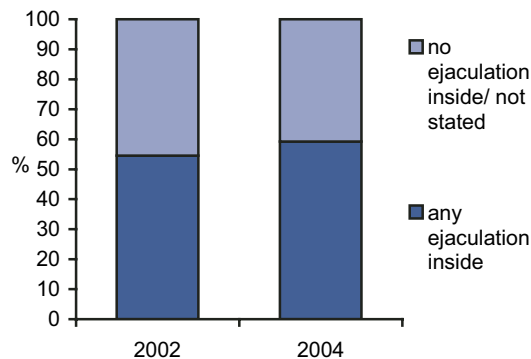


Note: No statistically significant differences by HIV test status between 2002 and 2004.

There were no statistically significant changes in rates of unprotected sex by HIV test status (Fig 84). Although the rate of unprotected sex among respondents who had tested HIV positive dropped considerably in 2004, this was not found to be statistically significant and the finding may be related to the low number of positive respondents in the sample.

***Ejaculation during unprotected anal sex with a casual partner***

**Figure 85. Any “ejaculation inside” during unprotected anal sex with casual partner by survey**



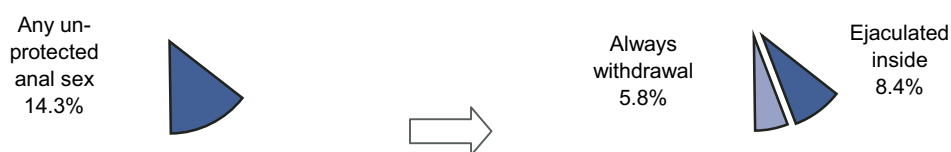
Only includes those who had any unprotected sex.

Respondents who reported any unprotected anal sex with their casual partner/s were asked whether ejaculation had occurred in them or in their partner/s during anal sex.

Of the 174 respondents in 2004 who had any unprotected anal sex with a casual partner, 59.2% reported some ejaculation either inside their casual partner/s or by their casual partner/s inside them. This proportion was not significantly higher than that reported in 2002 (54.5%) (Fig 85).

In the context of the whole 2004 GAPSS sample, less than ten percent (8.4%) reported any ejaculation inside during unprotected anal sex with a casual partner (7.5% in 2002).

**Figure 86. Withdrawal with casual partner: of the whole sample (2004)**



Note: Two respondents did not state whether withdrawal occurred.



### Condom use with casual partners by selected survey variables

The following pages present a selection of survey variables that were statistically associated with any non-condom use with casual partners. A full description of statistical associations is given on page 86.

In contrast to 2002, condom use with casual partners was not associated with HIV test status in 2004. However, among those who had not received an HIV positive diagnosis, the rate of any unprotected sex was associated with respondents' beliefs about their own HIV status (Fig 87).

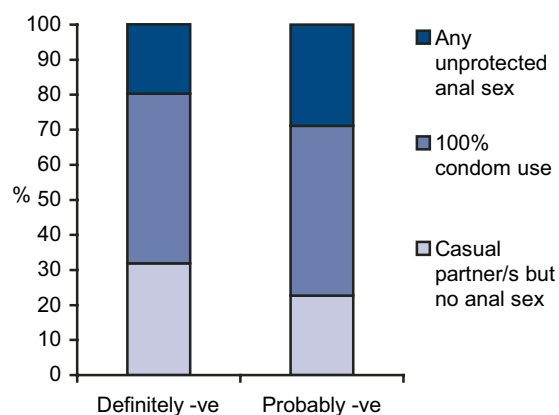
Respondents who believed they were "probably negative" were more likely to have had any unprotected sex with a casual partner (28.9%) than respondents who believed they were "definitely negative" (19.8%).

Three attitudinal statements were associated with non-condom use with casual partners, all relating to feelings about condoms.

Respondents who disagreed or strongly disagreed with the statement "condoms are OK as part of sex" were more likely to report any unprotected sex with a casual partner (45.5%) compared to those who agreed or strongly agreed with this statement (23.1%) (Fig 88).

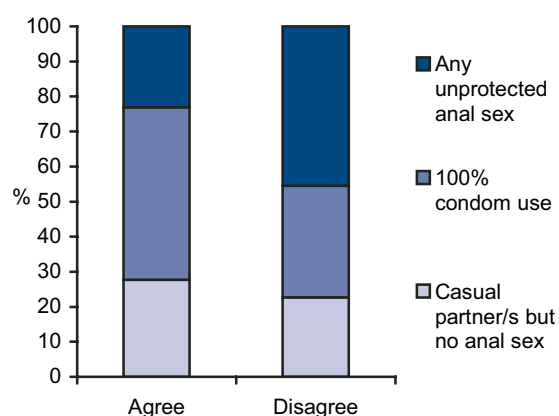
As Fig 89 shows, respondents who agreed or strongly agreed that they "don't like condoms because they reduce sensitivity" were more likely to report any unprotected sex (37.4%) with a casual partner compared to those who disagreed or strongly disagreed with this statement (15.1%).

**Figure 87. Any unprotected sex with a casual partner by current status belief (2004)**



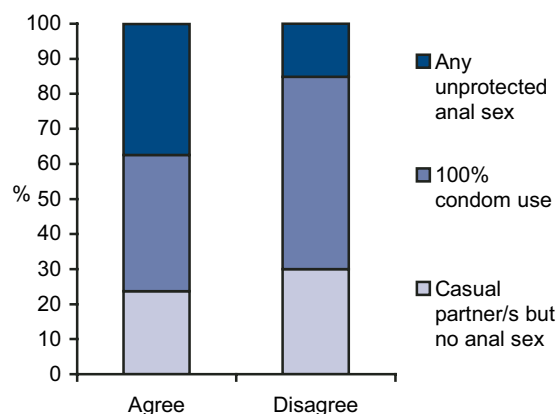
Note: Not stated not shown.  $P < 0.05$ .

**Figure 88. Any unprotected sex with a casual partner by "condoms are OK" (2004)**



Note: Not stated not shown.  $P < 0.001$ .

**Figure 89. Unprotected sex with a casual partner by "don't like condoms" (2004)**



Note: Not stated not shown.  $P < 0.001$ .

Respondents who agreed or strongly agreed that they would “rather risk HIV than use a condom during anal sex” were more likely to report any unprotected anal sex with a casual partner (45.0%) than respondents who disagreed or strongly disagreed with this statement (21.6%) (Fig 90).

None of the remaining statements about the HIV epidemic, HIV treatments, or disclosure of HIV status were associated with non-condom use with casual partners.

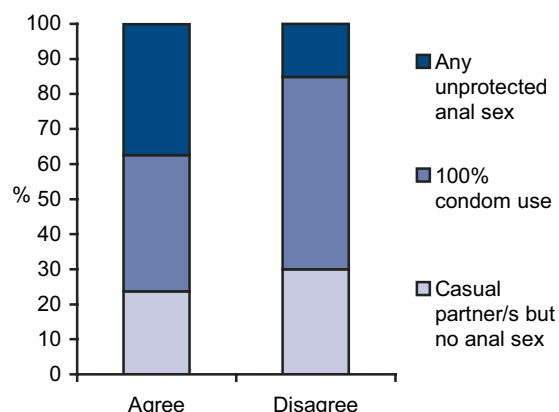
As Fig 91 shows, the number of male sexual partners respondents reported in the previous six months was associated with the rate of unprotected sex with a casual partner.

Just 7.3% of respondents who had one sexual partner in the previous six months had any unprotected sex, compared to 13.7% of those who had 2-5 partners, 29.2% of those with 6-10 sexual partners, 34.2% of those who had 11-20 sexual partners and 38.6% of those with 21-50 sexual partners.

Among those who had any anal sex with casual partners, non-condom use was also associated with the modality of anal intercourse (Fig 92).

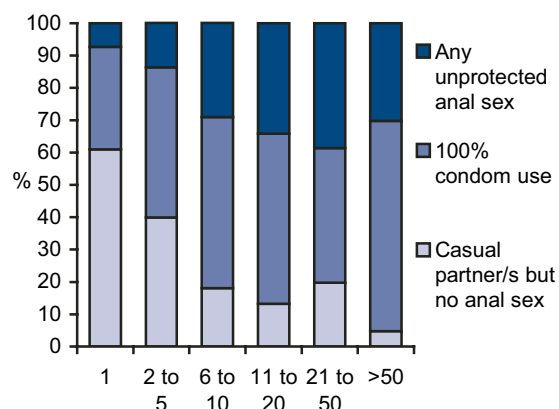
Whereas respondents who had only been receptive in anal intercourse in the previous six months reported the lowest rate of any unprotected sex (17.8%), those who were insertive only reported proportionately more unprotected sex (28.3%) and those who had been both receptive and insertive demonstrated the highest rate of non-condom use (40.0%).

**Figure 90. Any unprotected sex with a casual partner by “rather risk HIV” (2004)**



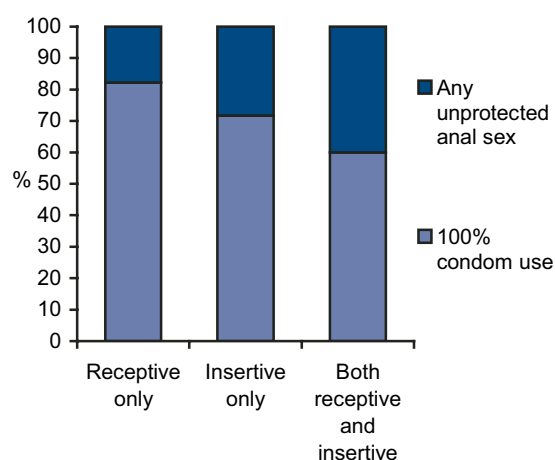
Note: Not stated not shown. P<0.001.

**Figure 91. Any unprotected sex with a casual partner by number of partners (2004)**



Note: Not stated not shown. P<0.001.

**Figure 92. Any unprotected sex with a casual partner by number of partners (2004)**



Note: Not stated not shown. P<0.001.

## Summary and discussion

### **Sample**

In 2004, 1220 men who have sex with men (MSM) participated in the study, an increase of 50% from 812 in the 2002 survey. This expansion of the GAPSS sample occurred despite response rates being slightly lower in 2004, and was achieved by better strategic placement of recruiters at the Big Gay Out fair day and by increasing the number of shifts the recruiters worked at the gay bars, saunas and cruise clubs (Saxton, 2004).

In addition, the proportion of the 2004 sample that was recruited from each of the three types of site (68.3% at the Big Gay Out, 13.4% at the gay bars, and 18.3% at the gay saunas/sex-on-site venues) remained largely the same as in 2002, meaning that we were able to avoid introducing a further type of sampling bias to the findings due to overrepresentation of clientele from a given site. Although some of the actual participating venues were different from 2002, due mainly to closure in the time between the two surveys, these were able to be replaced with new venues and we do not believe that this substantially influenced the findings.

Another important factor affecting comparability of the 2002 and 2004 surveys are the demographic characteristics of participants. In 2004, these were also largely the same as those displayed by respondents in 2002. However, the 2004 sample was slightly older, included proportionately fewer respondents who lived inside the inner city districts, proportionately more respondents who identified as gay, and proportionately fewer respondents who spent only “a little” or “none” of their free time with other gay men. When we trialled weighting the 2004 survey to match some of these characteristics of the 2002 survey, none of them however appeared to significantly influence key GAPSS behavioural outcomes. Nevertheless, in the sections comparing rates of unprotected anal sex over time we have separately analysed the sample by certain demographic characteristics in order to control to some degree the effects of small differences in sample composition.

The GAPSS survey was designed to be a non-random opportunistic community survey in order to generate a large sample of sexually-active MSM from the Auckland region (i.e. those believed to be at greatest risk from HIV in New Zealand), and care should be exercised when seeking to generalise the findings from this survey to the population of MSM and/or gay men as a whole. The ways in which the respondents were recruited inevitably bias the sample and therefore the findings. As such this is not a representative survey of all gay men. Having said this, and given the typical difficulties encountered when sampling rare, stigmatised, and geographically clustered populations, it is a method of HIV behavioural surveillance that is common internationally and provides valuable and reliable data when interpreted with the usual caution.

## ***HIV testing and serostatus***

In 2004, 72.5% of all respondents had tested for HIV at least once in their life, compared to 71.1% in 2002, and 25.9% had last tested in the six months prior to survey in 2004, compared to 23.9% in 2002.

Clearly, time since last HIV test as opposed to ever having tested is the more reliable indicator of whether undiagnosed HIV infections will be detected. However, high rates of recent testing in a population may be an indication of risk practices rather than health-seeking behaviour so such figures need to be interpreted carefully.

HIV testing was associated with the variables age, ethnicity, place of residence and sexual identity (only demographic variables were included in this particular analysis). Of some concern may be the results for Pacific respondents, who reported the lowest rates of recent testing as well as the lowest rates of ever having tested for HIV.

A similar proportion (4.3%) of the total 2004 sample had tested positive as was reported in 2002 (4.7%). Most respondents who had tested HIV positive were aged 25-39 (34.5%) or 40 and over (58.5%), the same as in 2002, although in 2004 a slightly higher proportion were non-NZ European/Pakeha than was true in 2002.

As previous HIV negative tests will only provide accurate information if no risk practices have occurred since that test, the questionnaire also asked respondents what they believed their current HIV status was. Two-thirds (66.5%) of those who had previously tested negative reported that they believed they were “definitely” negative compared to 58.5% of those who had never tested for HIV. These results were the same as those found in 2002.

Unsurprisingly, respondents who had any unprotected anal sex with a casual partner in the previous six months, and those who had tested for HIV more than six months ago, were less likely to believe they were currently “definitely” negative and were more likely to report being “probably” negative or “don’t know”.

## ***Sexual relationships***

In 2004, a slightly higher proportion of respondents reported having either none or only one male sexual partner in the six months prior to survey, and a slightly lower proportion reported having more than 50 sexual partners, compared to 2002. However there were no significant differences in the overall distribution of number of male sexual partners reported by respondents between the two survey periods. In 2004, respondents who reported having had more than 20 male sexual partners were more likely to be aged 40 and over, and to have been recruited from a gay sauna or sex-on-site venue.

The definitions of sexual partner types remained the same as in 2002 and prioritised the amount of sex the respondent had had with each person in the six months prior to interview. Casual sexual relationships were defined as men the respondent had had sex with once, twice, or three times in the previous six months (the term “sex” was defined broadly to

include any sexual physical contact), and regular sexual relationships were men the respondent had had sex with four or more times in the previous six months. Regular sexual partnerships were further able to be defined according to whether they were current or not, the description of the relationship, the length of the relationship, and whether the respondent lived with the regular male partner.

In 2004, there was a slight increase in the rate of regular partnerships among participants, with 71.9% having had at least one regular partner in the previous six months, 30.9% reporting two or more regular partners over this time period, and 54.8% reporting a current regular male partner at the time of survey (compared to 68.2%, 26.2% and 49.0% respectively in 2002). Furthermore, all recruitment sites reported similar increases in the rates of current regular partnering, suggesting that the increase was real across the survey sample and not explained by the expansion in the recruitment campaign. Rates of casual sexual partnering over the previous six months were the same in 2002 and 2004 (63.4% and 63.9% respectively).

A similar proportion of respondents described their current regular partner as a “fuckbuddy” in 2004 (19.2%) as did so in 2002 (20.4%), as opposed to describing him as a “boyfriend, long-term lover, life partner, or husband”. Just over half (52.4%) of respondents with a current regular partner lived with this man, virtually all of whom (96.9%) referred to them as a “boyfriend, etc”. Cohabitation rates increased with the length of relationship, with 82.2% of respondents who had been in a relationship with their current regular partner for more than five years reporting that they lived with them.

The rate of overlapping sexual relationships – or “concurrent” partnering – was the same in both years: 55.5% of respondents in a regular partnership of six months or longer duration at the time of survey had concurrent partnering with either other casual, other regular, or both types of sexual partners in the six months prior to survey, compared to 55.6% in 2002. In 2004, concurrent partnering was higher among regular partnerships where the partner was described as a “fuckbuddy”, and increased with the length of the regular relationship. Having said this, the rate of sex with men other than the respondent’s current regular partner was still relatively substantial among respondents in “newer” relationships of 6-11 months, with over a third (34.5%) of such men reporting concurrent sex in the last six months. The questionnaire did not solicit whether any concurrent sex occurred with the consent or not of the respondent’s current regular partner, nor was it possible to determine whether the respondent’s current partner had sex with other men.

### ***Sero-concordance in regular relationships***

Respondents were asked about the HIV test history of current regular partners, and in 2004 a similar proportion stated that their partner’s last test was HIV negative (62.7%) as did so in 2002 (62.8%). In 2004, respondents who described their current regular partner as a “fuckbuddy” were significantly more likely to report that they “don’t know” their partner’s test history or “haven’t asked” about it (42.2%), compared to 16.7% of respondents who described their partner as a “boyfriend etc”. Respondents’ beliefs about their partner’s actual

HIV status were also associated with these outcomes: 80% of respondents who reported that their partner had last tested negative stated that they believed their partner was “definitely HIV negative”, compared to 43.4% of respondents who reported that they had not asked their partner about their test history or “did not know”.

Combining responses to questions about the respondent’s and their partner’s HIV test history, 4.4% of respondents with a current regular partner could be categorised as having a sero-discordant relationship (i.e. one partner had tested positive and the other partner’s last test was HIV negative). Just over half (52.0%) of respondents in a relationship were able to be categorised as having a sero-negative concordant relationship and 1.5% were categorised as having a sero-positive concordant relationship. These proportions were similar to the 2002 survey.

However, it is important to note that these categories are based on (a) the reports of a respondent who may not necessarily know the HIV status of their regular partner; and (b) the respondent’s report of their own HIV status, which may not be correct if any risk practices have occurred since their last (negative) HIV test. Recent research from the United Kingdom has repeated other findings which indicate that around a third of MSM infected with HIV are unaware that they are HIV positive (Dodds et al. 2004). The amount of undiagnosed HIV infection among MSM populations in New Zealand will likely depend on factors such as the rate of HIV testing following risk events and the size of the HIV positive population.

### ***Sexual practice and condom use***

The GAPSS project examines potential exposure to sexual HIV transmission in several ways. Sexual practices are first separated according to the type of sexual partner (casual or current regular) and the incidence of anal intercourse (both receptive and insertive). Condom use is measured on a five-point frequency scale, and the questionnaire also asks whether ejaculation occurred inside a partner if a condom was absent. All activities relate to the six month period prior to survey. We also report the findings in a number of ways: condom use frequency is presented according to the occurrence of “any” non-condom use as well as according to a broader categorisation of High, Medium and Low, and each of these frequencies are expressed as a proportion of those having anal sex with a type of sexual partner, those having any sex with a type of sexual partner, and out of the total GAPSS sample.

The options available to us via the specific questions and cross-tabulations in the GAPSS instrument enable a reasonably rigorous evaluation of sexual HIV risk activities for this sample of MSM. This inevitably provides a more complex, or less unambiguous, result in terms of the goal of identifying clear trends in unprotected anal intercourse (UAI). However, for targeted prevention campaigns to be effective they must be based on accurate - not necessarily unequivocal - empirical foundations. Exposing the complexity of real-life behaviours thus helps one to resist the tendency to oversimplify, compartmentalise, and generalise that arises from quantitative research in particular. This is particularly vital if

relationships between researchers and community health promoters are to reflect a full partnership model (Saxton, Dickson, Hughes & Sharples, 2003).

### ***Sex with casual partners***

The same proportion of respondents reported having sex with a casual partner or partners in the six months prior to survey (63.9% in 2002 and 63.4% in 2004). In 2004 a higher proportion of these men reported engaging in anal sex with a casual partner (in 2002 68.2% of men having casual sex had anal sex compared to 72.4% in 2004, though this difference was not statistically significant).

Of those who had anal sex with a casual partner, the proportion of respondents reporting any non-condom use remained the same (33.2% in 2002 and 33.5% in 2004).

The rate of any non-condom use was slightly higher when expressed as a proportion of those who had any sex with a casual partner (22.7% in 2002 to 24.2% in 2004) or expressed as a proportion of the total GAPSS sample (13.8% in 2002 to 14.3% in 2004) due to the higher rate of anal sex with casual partners in the 2004 sample reported above. Thus the rate of any potential exposure to HIV increased slightly overall, but this was due to higher rates of anal sex rather than decreased use of condoms by respondents.

Examining condom use by the High, Medium and Low frequency revealed that, among those having anal sex, High condom use remained the same (85.4% were High users in 2002 compared to 85.7% in 2004). Proportionately more respondents reported Medium condom use (10.1% in 2002, 12.2% in 2004) however, meaning that proportionately fewer respondents reported Low condom use (4.5% in 2002, 2.1% in 2004). Even with the increase in anal sex with a casual partner since 2002, this resulted in fewer respondents reporting Low condom use out of the total GAPSS sample (0.9%). However, none of the changes in either measure of condom use frequency were statistically significant between the two years.

Between 2002 and 2004, changes in any UAI among key health promotion target groups (according to site of recruitment, age and HIV test status) were also examined. Of those who had casual sex, respondents recruited from gay bars were the only group to demonstrate a statistically significant change, with higher rates of any UAI with casual partners reported in 2004 compared to 2002. Although it was not statistically significant, respondents who had tested HIV positive - who demonstrated high rates of UAI in 2002 - reported a substantial decrease in the rate of non-condom use in 2004 to about the same rate reported by other respondents. The low number of HIV positive respondents in both years increases the variability of findings for this group, and the reliability of both the 2002 and 2004 results will need to be carefully assessed as they have important implications for HIV prevention initiatives. Research involving larger numbers of HIV positive MSM such as HIV Futures NZ /Mate aarai kore a muri ake nei (Grierson et al. 2002) for example will be particularly important in this regard.

Within the 2004 sample there were also differences in UAI between groups. Respondents were more likely to report any UAI with a casual partner in the last six months if they: identified as NZ European/Pakeha, had fewer education qualifications, were unemployed, had higher number of male sexual partners in the previous six months, had been both receptive and insertive in anal sex with casual partners, were less certain that their current HIV status was HIV negative, disagreed with the statement “condoms are ok as part of sex”, agreed with “I don’t like wearing condoms because they reduce sensitivity”, or agreed with “I would sometimes rather risk HIV transmission than use a condom during anal sex”.

### ***Sex with a current regular partner***

As stated earlier, the 2004 sample demonstrated a higher rate of regular sexual partnering overall compared to 2002. With respect to current partnering, 54.8% of the 2004 sample reported a current regular sexual partner as opposed to 49.0% in the previous survey. This increase was not related to a specific site, meaning that recruitment and sampling factors are unlikely to be responsible, and thus the increase is likely to be real for the study population. In contrast to what was found in casual sexual partnerships, there was no change in the rate of anal sex with current regular partners (79.9% reported anal sex in 2002 compared to 80.5% in 2004).

Of those who had anal sex with a current regular partner, the proportion reporting any non-condom use dropped slightly (65.1% in 2002, 62.6% in 2004).

Because rates of anal sex with a current regular partner remained the same in both years, the rate of any non-condom use also dropped slightly when expressed as a proportion of those who had any sex with a current regular partner (52.0% in 2002, 50.4% in 2004). In 2004 however, the higher rate of regular partnering meant that the overall rate of any non-condom use with regular sexual partners increased slightly from 25.2% in 2002 to 26.2% in 2004. As with the results for casual sex, it is important to point out that this overall increase was not due to a reduction in condom use by respondents when engaging in anal sex.

The results for any non-condom use above were tempered by the findings when examining condom use by the High, Medium and Low frequencies. Whereas proportionately fewer respondents having anal sex at least once did not use a condom in 2004 than 2002, of those who did report any non-condom use, proportionately more in 2004 were in the category of Low condom use (45.4% of those having anal sex in 2002 compared to 47.6% in 2004). As above, the higher rate of regular sexual partnering in 2004 meant that overall, the proportion of respondents who reported Low condom use out of the total GAPSS sample increased over time (17.6% in 2002, 19.9% in 2004). Again, none of these changes in condom use over time were statistically significant so care must be exercised when interpreting the findings.

Between 2002 and 2004 there were more changes among key health promotion groups than occurred for sex with casual partners. Of those who had a current regular partner, statistically significant increases in any UAI over time were found among respondents recruited from gay bars (36.6% to 58.8%) and those aged 25-24 (37.3% to 61.7%), and a significant decrease



was found among respondents recruited from gay saunas/sex-on-site venues (43.1% to 24.1%). Further research on these changes is needed.

Within the 2004 sample, a number of survey variables were associated with reporting any UAI. Of the relationship variables, respondents who described their partner as a “boyfriend, etc.”, who lived with their partner, who had longer relationships, and who did not have concurrent sex were more likely to report any UAI with their current partner. Respondents recruited from the Big Gay Out and gay bars, those aged 15-24, who had both receptive and insertive anal sex, who could be categorised as being in a sero-negative concordant relationship, who believed both they and their partner were currently “definitely HIV negative”, who disagreed with the statement “condoms are OK as part of sex”, agreed with “I don’t like wearing condoms because they reduce sensitivity”, or agreed with “I would sometimes rather risk HIV transmission than use a condom during anal sex”, were also more likely to report any UAI with their current regular partner.

### ***Places to find male sexual partners and socialise with other MSM***

Two new questions on looking for male sexual partners and socialising with other MSM were added to the questionnaire in 2004. A fifth of all respondents each reported that a gay bar/nightclub (20.5%) or a gay sauna (19.8%) was the place they visited the most to look for male sexual partners in the previous six months, followed by the Internet (12%) and a gay cruise club (8.9%).

Respondents were less divided on the place they went to most to socialise with other gay men, with most citing a gay bar or gay nightclub (44.3%), followed by a private party, their own place or a friend’s place (18.5%), a gay saunas or cruise club (13.6%) and the Internet (5.2%).

None of the sexual or socialising venues visited most by respondents were associated with respondents reporting elevated rates of unprotected anal intercourse with casual or with regular sexual partners.

### ***Sex with men the respondent met via the Internet***

The largest change between the two survey periods was seen in the proportion of men who stated they had had sex with a man whom they had met via the Internet in the previous six months. In 2002, a quarter (25.1%) of the whole sample reported that they had done so; in 2004, this had risen to 42.0%. In 2004, younger respondents (aged 15-24) were most likely to report this (58.0%).

Respondents who reported having had sex with someone they met via the Internet were not more likely to report any unprotected sex with a casual partner than were other men.

## **Attitudes**

There was only one significant change in response to the four original attitude statements from 2002 – fewer respondents agreed with the statement “condoms are OK as part of sex” (94.7% in 2002, 89.1% in 2004). Otherwise agreement with “negative” statements such as “I would sometimes rather risk HIV transmission than use a condom” remained low (9.4% in 2004).

Similarly to 2002, agreement with “optimistic” statements regarding the HIV epidemic also remained low, with fewer than one in five (19.0% in 2002, 18.4% in 2004) agreeing that “HIV/AIDS is a less serious threat because of new treatments”, a similar proportion agreeing with the new statement “new HIV treatments are simple and have few side effects” (17.8% in 2004), and very few agreeing with the statement “I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments” (4.1%).

Most respondents disagreed that “a man who knows he has HIV would tell me he was positive before we had sex” (73.0%), and this was highest among respondents who had themselves tested HIV positive. While further legal opinion has been sought regarding the legal responsibilities of people who have tested positive in situations where there is a significant risk of HIV transmission, disclosure of HIV status can only occur if the person is aware they are infected, and health promoters have attempted to emphasise the dilemmas many positive people face when deciding whether to disclose to a sexual partner. This is reinforced with the results from a subsequent statement, with over half the sample (54.1%) agreeing that “if a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”. This leaves little incentive for HIV positive men to disclose their status to potential or current sexual partners, especially if the HIV positive man was not going to engage in activities that posed a significant risk of transmission in any event.

Thus from a personal health perspective, and regardless of the ethical or legal position, it is clear that HIV negative MSM living in the midst of an HIV epidemic must always entertain the possibility that their sexual partner is HIV positive. Furthermore, not initiating condom use for activities such as insertive or receptive anal sex on the part of HIV negative men may also be taken to imply consent to engage in sero-discordant sex by a positive man. Given the realities of sexual partner formation generally and the specific context of MSM’s sexual cultures (which much data in this report describe), from a public health perspective it is almost certainly preferable to prioritise physical prophylactics such as condom use for anal sex above other interventions such as verbal consent (Hughes and Saxton, 2004).

## **Conclusion**

A comparison with the 2002 results suggests that the GAPSS project provides robust and reliable data on the study population. Many of the findings were identical in both surveys. For this reason, where results were found to be significantly different between the two surveys, and where results were found to differ significantly between groups of respondents, careful consideration of their implications for HIV prevention will need to be made.

The 2004 survey went into the field just as epidemiological data emerged showing the substantial increase in HIV diagnoses among MSM in 2003 (AIDS Epidemiology Group, 2004). As there is inevitably some time delay between infection and diagnosis, the 2002 - 2004 GAPSS data will not necessarily provide the behavioural "footprint" explaining this epidemiological increase. If there have been significant changes in behaviour, within certain groups of MSM or the MSM population as a whole, this may have occurred prior to 2002 and will therefore not be identified when comparing GAPSS data from that year onwards. Further quantitative research such as the Health Behaviour Survey: Sexual and Reproductive Health, which will survey at the national level and use random sampling methods, will bolster this evidence base beyond the population represented here. Also, other methodologies such as in-depth interview research needs to accompany quantitative data such as GAPSS in order to investigate differences in meanings associated with the contemporary social-sexual milieu among different groups. These two methodologies - quantitative and qualitative - need to be seen as complementary and both are essential.

In conclusion, the 2004 GAPSS data provides a solid empirical foundation that can contribute to the development of targeted HIV health promotion for MSM in the Auckland region. This GAPSS report will allow HIV educators to reflect on the information they receive from other sources such as community observation and feedback and strategic input from health promotion planners. We hope that the report will be useful for policy makers, community members, media, researchers, service providers and other key stakeholders concerned with the health of MSM in New Zealand. Finally, the research team wishes to thank once again all of the men who participated in the 2004 survey.

## Summary of statistical associations

### *Testing differences between 2002 and 2004*

The full results for statistical tests exploring differences between 2002 and 2004 results are not given here, as they are present in the text of the report. In order of their appearance, these included tests of difference between 2002 and 2004 for the following outcomes (marks represent statistically significant differences over time at  $p < 0.05$ ):

The site of recruitment	
The demographic characteristics of the sample	•
The proportion who had sex with a man whom the respondent met via the Internet	•
The rate of ever tested for HIV and time since last HIV test	
The HIV status of the sample	
The number of male sex partners	
The types of sexual relationships	
The number of regular partners	
The rate of current regular sexual partnering	•
The length of current regular relationship	
The description of current regular partner	
The HIV test status of current regular partner	
The rate of concurrent sexual partnering	
Agreement with four attitude statements	•
The rate of anal sex with a current regular partner	
The modality of anal sex with a current regular partner	
The rate of any unprotected sex with a current regular partner:	
out of those having anal sex with a regular partner;	
out of those having any sex with a regular partner;	
out of the total sample;	
The rate of High, Medium and Low condom use with a current regular partner:	
out of those having anal sex with a regular partner;	
out of those having any sex with a regular partner;	
out of the total sample;	
The rate of any unprotected anal sex out of those having any sex with a regular partner:	
by site;	•
by age group;	•
by HIV test status;	
The rate of any ejaculation with a current regular partner during unprotected anal sex;	•
The rate of anal sex with a casual partner	
The modality of anal sex with a casual partner	
The rate of any unprotected sex with a casual partner:	
out of those having anal sex with a casual partner;	

out of those having any sex with a casual partner;	
out of the total sample;	
The rate of High, Medium and Low condom use with a casual partner:	
out of those having anal sex with a casual partner;	
out of those having any sex with a casual partner;	
out of the total sample;	
The rate of any unprotected anal sex out of those having any sex with a casual partner:	
by site;	•
by age group;	
by HIV test status;	
The rate of any ejaculation with a casual partner during unprotected anal sex	

### Tests of association within the 2004 dataset

This section details the results of univariate tests of significance between key outcomes (attitude statements, unprotected sex with a current regular partner, unprotected sex with a casual partner) and selected variables within the 2004 sample.

These tests represent only the basic hypotheses regarding associations in 2004 and are not exhaustive. This information is also presented in order to illustrate which survey variables were *not* associated with these outcomes in 2004.

Variables outside of those included in the questionnaire are of course unable to be tested for association, and in some cases the small number of respondents in a given category of interest (e.g. HIV positive men and their partners) prohibits reliable statistical analysis.

### Statistical associations with attitude statements

Univariate statistical tests were conducted to determine whether agreement or disagreement with the following statements was statistically associated with selected variables.

#### “HIV/AIDS is a less serious threat than it used to be because of new treatments”

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
	•		•					•		•

Agreement with this statement was higher among:

- Respondents who identified as bisexual (25.2%) compared to respondents who identified as gay (17.9%). P=0.05.
- Respondents who were of a Pacific Island (31.1%), Asian (29.3%) or Maori (28.3%) compared to respondents who identified as NZ European (15.8%). P<0.001.
- Of respondents who had anal sex with a casual partner, those who had been insertive only in the previous six months (27.0%) compared to those who were receptive only (17.0%) or who had been both insertive and receptive (17.1%). P<0.05.
- Respondents who had never tested for HIV (28.7%) compared to respondents who had tested HIV positive (20.8%) or those whose last test was HIV negative (15.2%). P<0.001.

**“New HIV treatments are simple and have few side-effects”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
•	•	•	•							•

Agreement with this statement was higher among:

- Respondents who were recruited from the saunas/sex-on-site venues (26.0%) compared to respondents recruited at the Big Gay Out (17.2%) or gay bars (17.8%).  $P < 0.05$ .
- Respondents who identified as bisexual (29.6%) compared to respondents who identified as gay (17.3%).  $P = 0.001$ .
- Respondents who were aged 15-24 (23.2%) compared to those aged 25-39 (19.6%) or who were aged 40 and over (15.2%).  $P < 0.05$ .
- Respondents who identified as a Pacific Island (44.2%), Asian (41.1%) or Maori (29.7%) ethnicity compared to those who identified as NZ European/Pakeha (13.6%).  $P < 0.001$ .
- Respondents who had never tested for HIV (33.3%) compared to respondents who had tested HIV positive (18.9%) or whose last test was HIV negative (13.1%).  $P < 0.001$ .

**“I don’t need to worry so much about using condoms with people who are HIV positive who are on new treatments”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
	•		•		•					•

Agreement with this statement was higher among:

- Respondents who identified as bisexual (9.4%) compared to those who identified as gay (3.6%). Fisher's exact  $p < 0.01$ .
- Respondents who identified as a Pacific Island (11.4%), Maori (10.6%) or Asian (8.2%) ethnicity compared to those who identified as NZ European/Pakeha (2.7%). Fishers exact  $p = 0.01$ ,  $p < 0.001$ ,  $p < 0.05$  respectively.
- Respondents who had more than 20 male partners in the previous six months (8.0%) compared to respondents who had 20 or fewer male partners (3.6%).  $P = 0.01$ .
- Respondents who had tested HIV positive (9.4%) or who had never tested for HIV (8.3%) compared to those whose last tested was HIV negative (2.4%).  $P < 0.001$ .

**“A man who knows he has HIV would tell me he was positive before we had sex”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
	•	•	•							•

Agreement with this statement was higher among:

- Respondents who identified as bisexual (35.7%) compared to those who identified as gay (21.7%).  $P = 0.001$ .
- Respondents who were aged 15-24 (30.5%) compared to those aged 25-39 (23.7%) and those aged 40 and over (18.9%).  $P < 0.01$ .
- Respondents who identified as a Pacific Island (44.4%), Asian (32.9%) or Maori (32.4%) ethnicity compared to those who identified as NZ European (19.9%).  $P < 0.001$ .
- Respondents who had never tested (30.7%) compared to those who had last tested HIV negative (21.3%) or those who had tested positive (15.1%).  $P < 0.01$ .



**“If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
	•	•			•					•

Agreement with this statement was higher among:

- Respondents who identified as bisexual (73.7%) compared to those who identified as gay (55.7%).  $P < 0.001$ .
- Respondents who were aged 15-24 (75.1%) compared to those who were aged 25-39 (57.7%) and those aged 40 or over (48.5%).  $P < 0.001$ .
- Respondents who had 20 or fewer male partners in the previous six months (59.2%) compared to those who had more than 20 partners (44.4%).  $P < 0.001$ .
- Respondents who had never tested for HIV (68.1%) compared to those whose last test was HIV negative (56.0%) and those who had tested HIV positive (9.4%).  $P < 0.001$ .

**“Condoms are OK as part of sex”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
							•		•	

Disagreement with this statement was higher among:

- Of respondents who had a current regular partner, those who had any unprotected anal sex (9.0%) compared to those who had always used a condom (4.3%) or who had no anal sex (2.6%).  $P < 0.05$ .
- Of respondents who had casual sex, those who had any unprotected anal sex (11.7%) compared to those who had always used a condom (4.2%) or had no anal sex (5.2%).  $P < 0.01$ .

**“I don’t like wearing condoms because they reduce sensitivity”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
		•					•		•	•

Agreement with this statement was higher among:

- Respondents who were aged 40 and over (42.3%) compared to those aged 25-39 (34.5%) and those aged 15-24 (34.0%). P<0.05.
- Of respondents who had a current regular partner, those who had any unprotected anal sex (50.6%) compared to those who had always used a condom (24.7%) or who had no anal sex (38.6%). P<0.001.
- Of respondents who had casual sex, those who had any unprotected anal sex (62.7%) compared to those who had always used a condom (32.4%) or had no anal sex (34.9%). P<0.001).
- Respondents who had last tested HIV negative (40.4%) compared to those who had tested positive (35.8%) or those who had never tested for HIV (31.8%). P<0.05.

**“I would sometimes rather risk HIV transmission than use a condom during anal sex”**

Site	Sexual identity	Age	Ethnicity	Recent partnering status	Number of sexual partners in last six months	Modality of anal sex with regular partner	Any unprotected sex with regular partner	Modality of anal sex with casual partner	Any unprotected sex with casual partner	HIV test status
	•				•		•		•	•

Agreement with this statement was higher among:

- Respondents who identified as bisexual (16.4%) compared to those who identified as gay (9.3%).  $P < 0.05$ .
- Respondents who had over 20 male partners in the previous six months (14.6%) compared to those who had 20 or fewer partners (9.6%).  $P = 0.06$ .
- Of respondents who had a current regular partner, those who had any unprotected anal sex (12.3%) compared to those who had always used a condom (1.1%) or who had no anal sex (10.3%).  $P < 0.001$ .
- Of respondents who had casual sex, those who had any unprotected anal sex (21.7%) compared to those who had always used a condom (7.9%) or had no anal sex (9.7%).  $P < 0.001$ .
- Respondents who had never tested for HIV (13.5%) or who had tested HIV positive (13.5%) compared to those whose last test was HIV negative (8.8%).  $P = 0.06$ .

**Statistical associations for unprotected sex with a current regular partner**

Univariate statistical tests were conducted on the 2004 dataset to determine whether engagement in any unprotected anal sex with a current regular partner was statistically associated with selected survey variables.

Only respondents who had any sex with a current regular partner were included in this statistical analysis.

Table 33 indicates whether a statistically significant association was found, and significant findings are reported in more detail in the notes following.

**Table 33. Any unprotected anal sex with a current regular partner: associations with selected variables**

•	Site	•	Concordance of beliefs about status	•
•	Sexual identity	•	Had any concurrent sex	•
•	Age	•	Had sex with man via internet < 6 mths	•
•	Ethnicity	•	"HIV/AIDS is a less serious threat than it used to be..."	•
•	Education	•	"New treatments are simple and have few side effects.."	•
•	Employment	•	"I don't need to worry so much about using condoms with people who are HIV positive on new treatments"	•
•	Residence	•	"A man who knows he has HIV would tell me he was positive before we had sex..."	•
•	Live together	•	"If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him"	•
•	Length of relationship	•	"Condoms are OK as part of sex"	•
•	Description of partner	•		•
•	Modality of anal sex with regular partner	•		•
•	Possible sero-concordance	•		•

•	"I don't like wearing condoms because they reduce sensitivity"
•	"I would sometimes rather risk HIV transmission than use a condom during anal sex"

Among those with a current regular partner, any unprotected anal intercourse with this partner in the previous six months was more likely to be reported by:

- Respondents who were recruited from the Big Gay Out (53.6%) and from gay bars (58.8%) compared to those recruited at gay saunas/sex-on-site venues (24.1%). ( $p < 0.001$ ).
- Respondents who were aged 15-24 (61.7%) compared to those aged 25-39 (50.4%) and those aged 40 and over (45.2%). ( $p < 0.001$ ).
- Respondents who lived together (58.1%) compared to those who do not live together (41.1%). ( $p < 0.001$ ).
- Respondents who had a relationship of 5 years or more in length (46.9%), those in a relationship of 3-4 years duration (61.9%), those in a relationship of 1-2 years duration (65.4%), and those in a relationship of 6-11 months duration (49.3%), compared to those in a relationship of less than 6 months duration (35.5%). ( $p < 0.001$ ).
- Respondents who describe their partner as a “Boyfriend, long-term lover, life partner, or ‘husband’ ” (55.1%) compared to those who described their partner as a “fuckbuddy” (33.3%). ( $p < 0.001$ ).
- Of those who had anal sex, respondents who had both receptive and insertive anal sex (68.9%) compared to those who were receptive only (54.5%) or who were insertive only (52.8%). ( $p < 0.001$ ).
- Respondents who could be categorised as sero-negative concordant (i.e. both the respondent’s and partner’s last HIV test was negative) (59.7%) compared to those whose last test results did not indicate concordance (i.e either one or both had never tested or their status was unknown) (41.2%) or those who were sero-discordant (their last test results were different to each other’s) (30.8%). ( $p < 0.001$ ).
- Of respondents who either believed they were currently definitely negative or probably negative, those who believed both themselves and their partner was “definitely” negative (60.5%) compared to those who believed they were “probably” negative but their partner was “definitely” negative (54.2%), those who believed both they and their partner were “probably negative” (40.7%), and those who believed they were “definitely” negative but their partner was “probably” negative (31.3%). ( $p < 0.001$ ).
- Of respondents who had been together for six months or more, those who did not have concurrent sex with another man in the previous six months (62.3%) compared to those who had concurrent sex with another man (50.9%). ( $p < 0.05$ ).
- Respondents who disagreed with the statement “condoms are OK as part of sex” (71.8%) compared to those who agreed with this statement (49.5%). ( $p < 0.05$ ).

- Respondents who agreed with the statement “I don’t like to use condoms because they reduce sensitivity” (63.8%) compared to those who disagreed with this statement (42.5%). ( $p < 0.001$ ).
- Respondents who agreed with the statement “I would sometimes rather risk HIV transmission than use a condom during anal sex” (72.5%) compared to those who disagreed with this statement (48.6%). ( $p < 0.05$ ).

**Statistical associations for unprotected sex with a casual partner**

Univariate statistical tests were conducted on the 2004 dataset to determine whether engagement in any unprotected anal sex with a casual partner (UAI-C) was statistically associated with selected variables.

Only respondents who had casual sex were included in this statistical analysis.

Table 34 indicates whether a statistically significant association was found, and significant findings are reported in more detail in the notes following.

**Table 34. Any unprotected anal sex with a casual partner: associations with selected variables**

Site												
Sexual identity												
Age												
Ethnicity												
Education												
Employment												
Residence												
Number of partners												
Modality of anal sex with casual partner/s												
HIV test status												
Belief about status												
Goes to gay bar to find partners												
Goes to gay sauna to find partners												
Goes to gay cruise club to find partners												
Uses internet to find partners												
Had sex with man via internet < 6 mths												
Had sex with woman <6 mths												
"HIV/AIDS is a less serious threat than it used to be..."												
"New treatments are simple and have few side effects..."												
"I don't need to worry so much about using condoms with people who are HIV positive on new treatments"												
"A man who knows he has HIV would tell me he was positive before we had sex..."												
"If a man I was going to have sex with told me he was HIV positive I would not want to have sex with him"												
"Condoms are OK as part of sex"												
"I don't like wearing condoms because they reduce sensitivity"												
"I would sometimes rather risk HIV transmission than use a condom during anal sex"												

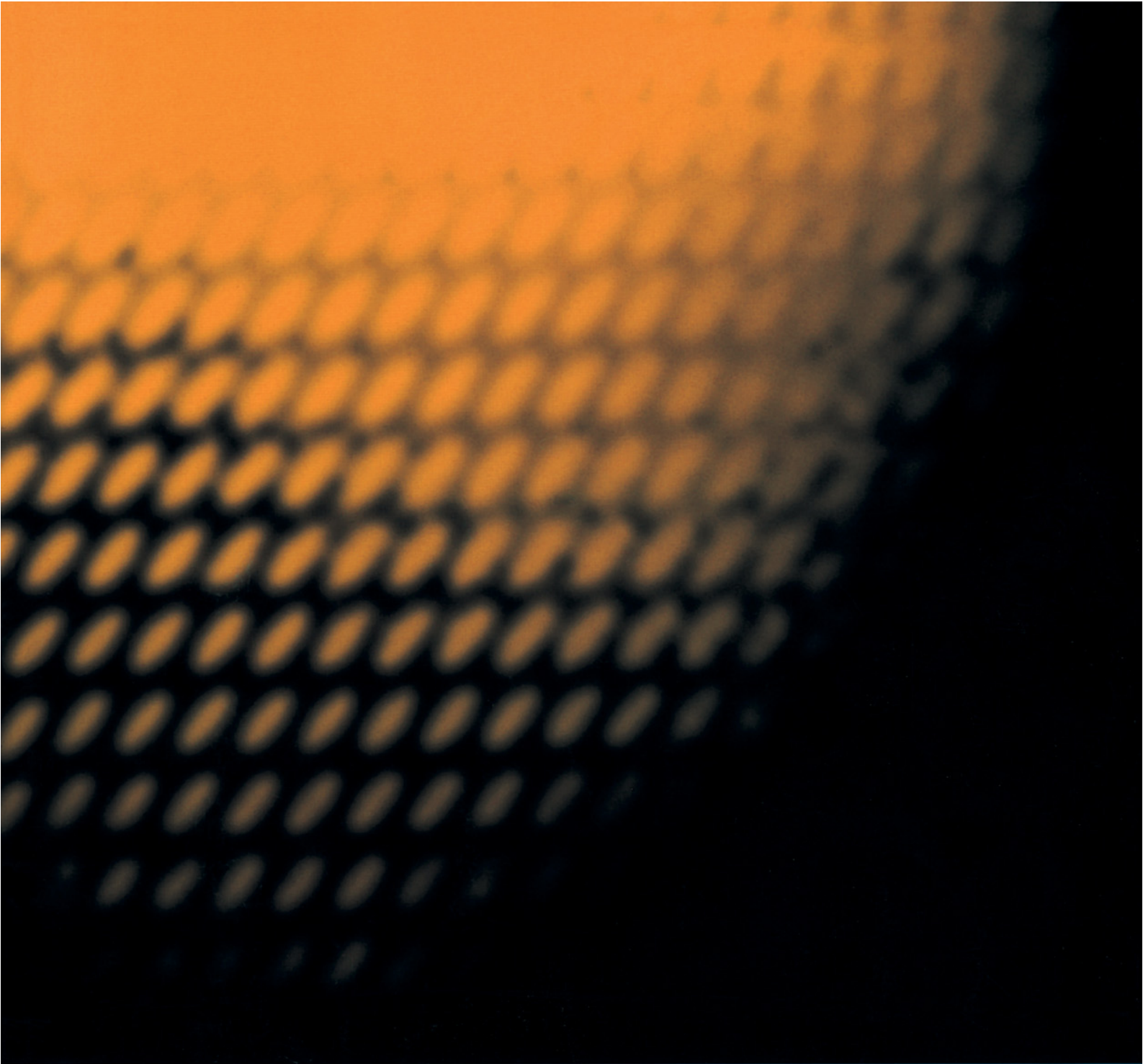
Among those who had casual sex, any unprotected anal intercourse with a casual partner in the previous six months was more likely to be reported by:

- Respondents identifying as NZ European/ Pakeha (26.5%) compared to those who identified as Maori (17.1%), Pacific Island (21.7%), or Asian (17.1%). ( $p < 0.01$ ).
- Respondents who had no formal school qualification or whose highest qualification was school certificate or sixth form certificate (32.7%) compared to those whose highest qualification was HSC, bursary or a trades qualification (23.2%) or those who had a tertiary degree or higher (20.5%). ( $p < 0.01$ ).
- Respondents who were unemployed (30.8%) compared to those who were employed (25.1%), were a student (15.1%) or who were a beneficiary or retired (11.4%). ( $p < 0.001$ ).
- Respondents who had over 50 male partners (30.2%) those with 21-50 partners (38.6%), those with 11-20 partners (34.2%), and those with 6-10 partners (29.3%), compared to those with 2-5 partners (13.7%) and those who had one sexual partner in the last 6 months (7.3%). ( $p < 0.001$ ).
- Of respondents who had anal sex, those who had both receptive and insertive anal sex (40.0%) compared to those who were insertive only (28.3%) or who were receptive only (17.8%). ( $p < 0.001$ ).
- Of respondents who had not already been diagnosed HIV positive, those who believed they were “probably HIV negative” (28.9%) compared to those who believed they were “definitely HIV negative” (19.8%). ( $p < 0.05$ ).
- Respondents who disagreed with the statement “Condoms are OK as part of sex” (45.5%) compared to those who agreed with this statement (23.1%). ( $p < 0.01$ ).
- Respondents who agreed with the statement “I don’t like wearing condoms because they reduce sensitivity” (37.4%) compared to those who disagreed with this statement (15.1%). ( $p < 0.01$ ).
- Respondents who agreed with the statement “I would sometimes rather risk HIV transmission than use a condom during anal sex” (45.0%) compared to those who disagreed with this statement (21.6%). ( $p < 0.001$ ).



## References

- AIDS Epidemiology Group. (2004). *AIDS - New Zealand*. Issue 53. AIDS Epidemiology Group, University of Otago Medical School.
- Dodds, J., Mercey, D., Parry, J. & Johnson, A. (2004). Increasing risk behaviour and high levels of undiagnosed HIV infection in a community sample of homosexual men. *Sexually Transmitted Infections*. 80: 236-40.
- Grierson, J., Pitts, M., Whyte, M., Misson, S., Hughes, A., Saxton, P. & Thomas, M. (2002). *HIV Futures New Zealand (Mate aaraikore a muri ake nei)*: Monograph Series Number 32. The Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne.
- Hughes, A. & Saxton, P. (2004). *Some thoughts on the legal requirement for condom use versus disclosure of HIV status by msm in public health context*. Discussion paper. Auckland: New Zealand AIDS Foundation.
- Ministry of Health. (2002). *The New Zealand Health Monitor: A 10-year strategic plan for a coordinated national population survey programme*. Wellington: Public Health Intelligence, Ministry of Health.
- Ministry of Health. (2003). *HIV/AIDS Action Plan: Sexual and Reproductive Health Strategy*. Wellington: Ministry of Health.
- Paul, C., Wilson, M., Dickson, N., Sharples, K. & Skegg, D. (2000). Enhanced surveillance of HIV infections in New Zealand, 1996-1998. *New Zealand Medical Journal*. Vol. 113, No. 1118: 390-4.
- Saxton, P. (2004). *Behavioural Surveillance, Gay Auckland Periodic Sex Survey: Report to the Ministry of Health on the recruitment phase*. Auckland: New Zealand AIDS Foundation.
- Saxton, P., Dickson, N., Hughes, A. & Sharples, K. (2003). "Definitional masking of diversity in the sexual relationships of gay men". Paper presented at the 6<sup>th</sup> International AIDS Impact Conference, Milan, Italy, July 6-10.
- Sharples, K., Dickson, N., Paul, C. & Skegg, D. (1996). HIV/AIDS in New Zealand: an epidemic in decline? *AIDS*. 10:1273-8.



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