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THE UNIVERSITY OF AUCKLAND
FACULTY OF MEDICAL AND HEALTH SCIENCES

GAPSS/GOSS Research Brief

Gay Men's Sexual Health research group, Department of Social and Community Health

Dec 2014 | **Infrequent condom use between casual male partners**

Introduction

Gay, bisexual and other men who have sex with men (GBM) are the group at highest risk of HIV infection in New Zealand [1]. Between GBM, most transmission is attributable to anal intercourse without a condom. Furthermore, ongoing HIV spread at a community level is facilitated by a combination of the high per-contact risk during receptive anal intercourse, densely connected sexual networks, elevated infectivity in the early acute stage of HIV infection prior to symptoms or diagnosis, and the ability unlike heterosexuals to assume either or both roles (receptive and/or insertive) during intercourse.

Understanding the factors associated with non-condom use with casual partners is therefore an important objective of public health, as men having casual sex may be changing partners more frequently than those with steady partners, and be less likely to know their partners' sexual and HIV testing history. Identifying predictors of unprotected casual anal intercourse can also help HIV prevention agencies tailor condom social marketing and target their placement. Previous New Zealand research has examined this among GBM surveyed in 1996 [2] and 2006 [3], and an updated understanding is warranted. The aim of the current analysis was to investigate factors predicting non-condom use with casual partners among GBM participating in HIV behavioural surveillance in 2014.

Methods

Respondents were invited into the survey at the Big Gay Out fair day, gay bars and sex-on-site venues in Auckland (GAPSS) or from Internet dating sites nationwide (GOSS) in early 2014. Eligibility criteria were being male, having had sex with a man in the previous five years and being at least 16 years old. Participation was voluntary and anonymous and the questionnaires were self-completed. Detailed methods are published elsewhere [4].

Respondents were asked about sexual contact in the past six months with casual partners (men they had had sex with no more than three times over this period) and regular partners (men they had sex with four or more times). Those with a current regular partner at the time of survey were asked to describe the relationship ("boyfriend, long term union partner, husband" or "fuckbuddy/friend I have sex with"). Respondents were asked if they had engaged in anal intercourse with casual and/or a regular partner and if so, the role (receptive, insertive) and for each role the frequency of condom use on a five point scale (always, almost always, about half the time, very rarely, never). The questionnaire also contained socio-demographic items and items about sexual partnering, health screening and attitudes to HIV and condoms.

For this analysis, condom use was categorised either as "frequent" (at least "almost always" or "always" for any anal intercourse role) or "infrequent" (at most "half the time", "very rarely" or "never"). The denominator is respondents reporting any anal intercourse with a casual partner or partners in the previous six months. We report the basic frequency of infrequent condom use, whether this varied by characteristics of respondents, and identified factors that were independently associated with infrequent condom use.

Results

There were 3141 respondents to the 2014 surveys, of whom 1912 had engaged in anal intercourse with a casual partner in the six months prior to survey and reported on their condom use. Of these, just under three quarters (72.8%) reported frequent condom use and just over a quarter (27.2%) reported infrequent condom use. Overall, the latter equated to 16.7% of all respondents (Figure 1).

(a) During anal intercourse with casual partners (b) Total 2014 GAPSS/GOSS sample

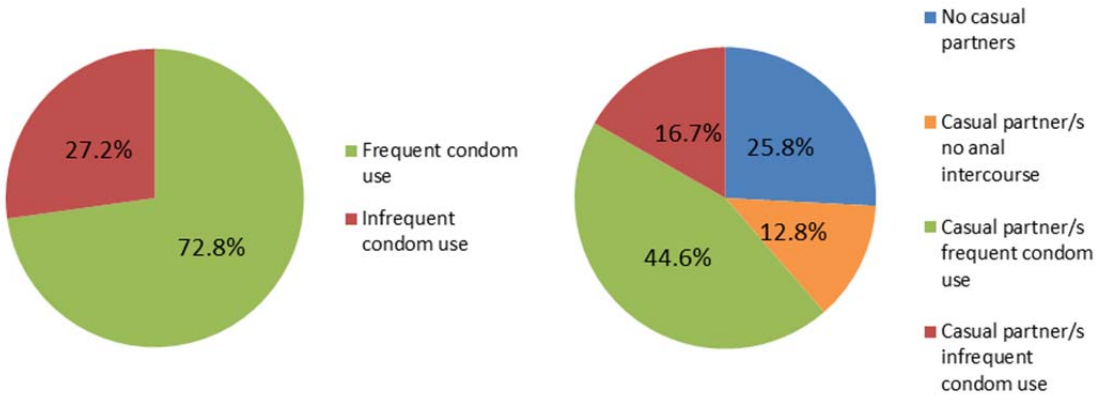

Figure 1. Proportion reporting infrequent condom use with casual partner/s

Association with respondent characteristics, behaviours and attitudes

Differences in the rate of infrequent condom use were found for recruitment site, ethnicity and education (Table 1). Infrequent condom use was proportionately higher among those recruited online (31.6%) and among Maori (38.2%) and Pacific

(37.5%) respondents, and was lower among those who were tertiary educated (20.3%).

Table 1. Prevalence of infrequent condom use with casual partners in preceding 6 months by respondent characteristics

		Number	Reported infrequent condom use		Chi-squared p-value
			n	%	
	Total	1912	518	27.2%	
Recruitment site					
	Offline - community event	485	106	21.9	***
	Offline- bars	51	6	11.8	
	Offline – sex-on-site venue	125	13	10.4	
	Online dating site	1244	393	31.6	
Age group					
	16-29	819	227	27.7	Ns
	30-44	553	141	25.5	
	45+	488	139	28.5	
Ethnicity					
	European	1370	371	27.1	***
	Maori	173	66	38.2	
	Pacific	56	21	37.5	
	Asian	198	40	20.2	
	Other	72	11	15.3	
Highest education qualification					
	Less than tertiary degree	998	332	33.3	***
	Tertiary degree or higher	863	175	20.3	
Free time spent with other gay men					
	None	76	18	23.7	Ns
	A little	655	178	27.2	
	Some	590	154	26.1	
	A lot	510	143	28.0	
Sexual identity					
	Gay or homosexual	1535	432	28.1	Ns
	Bisexual or other	365	83	22.7	

*** p<0.001. NS=not statistically significant. Proportions are calculated from non-missing sample.

Table 2 shows that infrequent condom use varied among respondents based on other behaviours and screening practices, including condom use at first anal intercourse with a man, recent partnering history and practices, and HIV and STI diagnosis. Infrequent condom use with casual partners was proportionately higher among respondents who hadn't used a condom the first time they had anal intercourse with a man (38.0%), among those who had a current boyfriend (41.2%) or fuckbuddy (67.8%) partner with whom condoms were also used infrequently, among those with confirmed HIV infection (47.2%), and among those who had been diagnosed with an STI in the previous 12 months (37.2%).

Infrequent condom use with casual partners varied according to the frequency of respondents seeing condoms being promoted and also the number of different sources where condoms were to seen being promoted (Table 3). This was higher among those who had never recalled seeing condoms promoted in the previous 12 months, and among those who could not recall any specific condom promotion (for example "promos at gay events", "billboards or bus-stop adverts", "condom packs", promos online or on a mobile app", "posters", "material at saunas or cruise clubs").

Table 2. Prevalence of infrequent condom use with casual partners in preceding 6 months by respondent behaviours and HIV screening

		Number	Reported infrequent condom use		Chi-squared p-value
			n	%	
Condom used at first anal intercourse with a male					
	No	730	277	38.0	***
	Yes	1132	232	20.5	
Number of male sexual partners in last 6 months					
	One	146	41	28.1	Ns
	2-5	795	204	25.7	
	6-10	436	112	25.7	
	11-20	269	72	26.8	
	21-50	188	64	34.0	
	>50	52	20	38.5	
Partnering and protective behaviours in last 6 months					
	Casual only or no current regular partner	986	253	25.7	***
	Current boyfriend and no anal intercourse with him	61	14	23.0	
	Current boyfriend and frequent condom use with him	109	5	4.6	
	Current boyfriend and infrequent condom use with him	238	98	41.2	
	Current fuckbuddy and no anal intercourse with him	73	15	20.6	
	Current fuckbuddy and frequent condom use with him	226	6	2.7	
	Current fuckbuddy and infrequent condom use with him	171	116	67.8	
HIV testing history					
	Last tested HIV negative	1329	334	25.1	***
	Diagnosed HIV positive	108	51	47.2	
	Untested or no result	412	122	29.6	
STI diagnosed in last 12 months					
	No	1539	384	25.0	***
	Yes	290	108	37.2	

*** p<0.001. NS=not statistically significant. Proportions are calculated from non-missing sample.

Table 3. Prevalence of infrequent condom use with casual partners in preceding 6 months by recent exposure to condom social marketing

		Number	Reported infrequent condom use		Chi-squared p-value
			n	%	
Frequency of seeing condom promotion in last 12 months					
	Very frequently	829	187	22.6	***
	Often	515	139	27.0	
	Occasionally	333	107	32.1	
	Rarely	165	60	36.4	
	Never	39	18	46.2	
Number of places recall seen condoms promoted in last 12 months[a]					
	None	89	40	44.9	***
	1	466	152	32.6	
	2	260	73	28.1	
	3	325	76	23.4	
	4	267	69	25.8	
	5	287	52	18.1	
	6	178	45	25.3	

[a] Options included “promos at gay events”, “billboards or bus-stop adverts”, “condom packs”, promos online or on a mobile app”, “posters”, “material at saunas or cruise clubs”. *** p<0.001. Proportions are calculated from non-missing sample.

Respondents who reported more favourable attitudes to HIV and safe sex were less likely to report infrequent condom use with casual partners (Table 4). Infrequent condom use was highest for the small number of respondents who disagreed with the statement "we all have a shared responsibility to protect other gay and bisexual men by using condoms for anal sex" (69.5%), but was also elevated among the larger number of respondents who agreed that "a man who knows he has HIV would tell me he was positive before we had sex" (30.0%).

Table 4. Prevalence of infrequent condom use with casual partners in preceding 6 months by attitudes to condom use and safe sex

		Number	Reported infrequent condom use		Chi-squared p-value
			n	%	
"HIV/AIDS is a less serious threat than it used to be because of new treatments"					
	Agree/strongly agree	632	217	34.3	***
	Disagree/strongly disagree	1244	291	23.4	
"Condoms are OK as part of sex"					
	Agree/strongly agree	1796	449	25.0	***
	Disagree/strongly disagree	86	63	73.3	
"If he doesn't want to use condoms I won't bother using them"					
	Agree/strongly agree	404	270	66.8	***
	Disagree/strongly disagree	1470	238	16.2	
"We all have a shared responsibility to protect other gay and bisexual men by using condoms for anal sex"					
	Agree/strongly agree	1766	434	24.6	***
	Disagree/strongly disagree	105	73	69.5	
"I don't like wearing condoms because they reduce sensitivity"					
	Agree/strongly agree	793	345	43.5	***
	Disagree/strongly disagree	1070	165	15.4	
"It's no-one else's business whether or not I use condoms"					
	Agree/strongly agree	602	270	44.9	***
	Disagree/strongly disagree	1257	240	19.1	
"I would sometimes rather risk HIV transmission than use a condom during anal sex"					
	Agree/strongly agree	241	148	61.4	***
	Disagree/strongly disagree	1612	360	22.3	
"The sex I have is always as safe as I want it to be"					
	Agree/strongly agree	1594	375	23.5	***
	Disagree/strongly disagree	262	130	49.6	
"I would never be willing to use condoms for anal sex"					
	Agree/strongly agree	111	62	55.9	***
	Disagree/strongly disagree	1743	445	25.5	
"A man who knows he has HIV would tell me he was positive before we had sex"					
	Agree/strongly agree	757	227	30.0	*
	Disagree/strongly disagree	1092	281	25.7	

*** p<0.001, *P<0.05. Proportions are calculated from non-missing sample.

Factors independently associated with infrequent condom use

We examined whether eight of the attitudes to HIV and safe sex remained associated with condom use after controlling for respondents' socio-demographic characteristics.[b] All of these statements with the exception of "HIV/AIDS is a less serious threat than it used to be because of new treatments" and "a man who knows he has HIV would tell me he was positive before we had sex" remained significantly predictive of infrequent condom use (Table 5). Of the six statements, the most strongly predictive of infrequent condom use was agreement that "if he doesn't want to use condoms I won't bother using them" (AOR 6.8, 95% CI 5.0-9.1).

Table 5. Attitudes independently associated with infrequent condom use with casual partners in preceding 6 months controlling for socio-demographic factors [b,c]

Attitudes independently associated with infrequent condom use		Adjusted odds ratio (95% CI)	p-value for variable
"Condoms are OK as part of sex"			
	Agree/strongly agree (ref)	1	
	Disagree/strongly disagree	3.7 (2.0-7.0)	<0.001
"If he doesn't want to use condoms I won't bother using them"			
	Agree/strongly agree	6.8 (5.0-9.1)	<0.001
	Disagree/strongly disagree (ref)	1	
"We all have a shared responsibility to protect other gay and bisexual men by using condoms for anal sex"			
	Agree/strongly agree (ref)	1	
	Disagree/strongly disagree	4.2 (2.3-7.7)	<0.001
"I don't like wearing condoms because they reduce sensitivity"			
	Agree/strongly agree	2.6 (2.0-3.4)	<0.001
	Disagree/strongly disagree (ref)	1	
"It's no-one else's business whether or not I use condoms"			
	Agree/strongly agree	2.0 (1.5-2.7)	<0.001
	Disagree/strongly disagree (ref)	1	
"The sex I have is always as safe as I want it to be"			
	Agree/strongly agree (ref)	1	
	Disagree/strongly disagree	3.4 (2.4-4.8)	<0.001

[b] Two attitude statements were omitted from the model because they would obviously be related to condom use, including "I would never be willing to use condoms for anal sex" and "I would sometimes rather risk HIV transmission than use a condom during anal sex".

[c] Socio-demographic variables included in the model were recruitment site, age group, ethnic group, education and sexual identity.

Table 6 shows the independent predictors of infrequent condom use other than attitudes. The variables tested included socio-demographic (recruitment site, age group, ethnicity, education, sexual identity), behavioural (condom use at first anal intercourse, number of partners, recent partnering history), condom promotion (frequency of recalling condom promotion, number of different types of condom promotion recalled) and HIV testing variables.

The model found that after controlling for all these variables, being of Pacific ethnicity, having 20 or more male sexual partners in the last six months, using condoms infrequently with a current boyfriend or fuckbuddy, or being diagnosed HIV positive were independently predictive of infrequent condom use with a casual partner. Conversely, being older, having a tertiary degree, using a condom at first anal intercourse with a male, being exclusively receptive with a casual partner/s

during anal intercourse, or seeing condoms promoted in multiple ways was predictive of frequent condom use with a casual partner.

When attitudes were added to this model, all the attitudes remained significantly independently associated with infrequent condom use (data not shown). However, the effect of some of the variables in Table 6 diminished or disappeared, suggesting that their predictive effect may be due to their correlation with unfavourable attitudes.

Table 6. Socio-demographic, behavioural, HIV and condom social marketing factors independently associated with infrequent condom use with casual partners in preceding 6 months

Socio-demographic, behavioural, HIV testing and social marketing factors independently associated with infrequent condom use		Adjusted odds ratio (95% CI)	p-value for variable
Recruitment site			0.003
	Offline – fair day (ref)	1	
	Offline – bars and sex-on-site venues	**0.5 (0.3-0.97)**	
	Online dating site	**1.5 (1.1-2.1)**	
Age group			
	16-29 (ref)	1	0.042[d]
	30-44	0.9 (0.6-1.2)	
	45+	**0.7 (0.5-0.99)**	
Ethnic group			0.0285
	European (ref)	1	
	Maori	1.4 (0.9-2.0)	
	Pacific	**2.2 (1.1-4.4)**	
	Asian	0.9 (0.6-1.5)	
	Other	0.5 (0.2-1.03)	
Highest education			<0.001
	Up to tertiary degree (ref)	1	
	Tertiary degree or higher	**0.5 (0.4-0.7)**	
Sexual identity			0.096
	Gay or homosexual (ref)	1	
	Bisexual or other	0.8 (0.5-1.1)	
Condom used at first anal intercourse with a male			<0.001
	No (ref)	1	
	Yes	**0.4 (0.3-0.5)**	
Number of male sexual partners in previous 6 months			0.013
	Up to 20 (ref)	1	
	More than 20	**1.6 (1.1-2.4)**	
Modality of anal intercourse with casual partners			0.019
	Both insertive and receptive (ref)	1	
	Receptive only	**0.6 (0.5-0.9)**	
	Insertive only	0.8 (0.6-1.05)	
Partnering and protective behaviours in last 6 months			<0.001
	Casual only or no current regular partner (ref)	1	
	Current boyfriend and no anal intercourse with him or only frequent condom use	**0.4 (0.2-0.7)**	
	Current boyfriend and infrequent condom use with him	**2.5 (1.7-3.5)**	
	Current fuckbuddy and no anal intercourse with him or only frequent condom use	**0.2 (0.1-0.3)**	
	Current fuckbuddy and infrequent condom use with him	**4.9 (3.3-7.4)**	
HIV testing history			0.001
	Last tested HIV negative (ref)	1	
	Diagnosed HIV positive	**3 (1.8-5.0)**	
	Untested or no result	1.1 (0.8-1.5)	
Frequency of seeing condom promotion in last 12 months			0.086[d]
	For each decline in frequency seeing condom promotion	1.1 (0.98-1.3)	
Number of places recall seen condoms promoted in last 12 months			0.008[d]
	For each increase in number of places seen condoms promoted	**0.9 (0.8-0.97)**	

[d] P-value is for variable entered as ordinal categories.

Summary

In this large and diverse sample of gay, bisexual and other men who have sex with men in New Zealand recruited from community and internet dating sites, the majority (just under three-quarters) frequently used condoms during anal intercourse with their casual sex partners in the six months prior to survey. Around a quarter (27.2%) used condoms infrequently, that is never, very rarely or at most half the time.

Being of Pacific ethnicity, having 20 or more male sexual partners in the last 6 months, using condoms infrequently with a current boyfriend or fuckbuddy, or being diagnosed HIV positive were independently predictive of infrequent condom use with a casual partner over and above the impact of other influences. Conversely, being older, having a tertiary degree, using a condom at first anal intercourse with a male, being exclusively receptive with a casual partner/s during anal intercourse, or seeing condoms promoted in multiple ways was independently predictive of frequent condom use with a casual partner. Attitudes to condoms were strongly predictive of actual condom use, and their effect remained strong after taking into account these socio-demographic and behavioural factors. There appeared to be a strong link between the extent of exposure to condom social marketing, attitudes to condoms, and actual condom use.

Strengths of this study include the broad non-clinic based sampling approach, the anonymous and self-completed participation that should have minimised reporting bias about sensitive behaviours, the question specificity that gave us information about frequency of condom use by modality of intercourse with casual and with regular partner types, and the range of potential factors related to condom use included in the questionnaire.

Limitations include the non-random sampling, meaning the findings may not be generaliseable to all gay and bisexual men attending these settings or to all GBM.

These results should be used to better target HIV prevention with GBM communities. An important general finding is that more exposure to condom promotion is associated with more condom use with casual partners. This argues for the continuation of diverse condom social marketing through multiple channels that is a feature of New Zealand's rejuvenated response to the HIV epidemic.

Unsurprisingly, attitudes to condoms predicted condom use, but three observations are worth highlighting. Firstly the statements relate to different dimensions of condom deployment, for example physical sensation ("I don't like condoms because they reduce sensitivity"), altruism/collectivism ("we all have a shared responsibility…"), and personal resilience ("if he doesn't want to use condoms…"). This suggests it is an oversimplification to explain away unfavourable attitudes merely as "condom negativity". Secondly and encouragingly, attitudes are modifiable, and in our data appeared to be influenced by social marketing and therefore potentially by community norms. More nuanced responses that engaged GBM more compellingly could therefore result in increased condom use. Thirdly, although some unfavourable attitudes were only held by a minority of respondents

(less than 5 percent), others such as “if he doesn’t want to use condoms…” were held by around a fifth of respondents and exerted a strong impact on condom use.

Understanding better these more common attitudes in particular, and successfully challenging them, could shift a high proportion of infrequent condom use being reported by these GBM and would be a good use of HIV prevention resources.

Condom use with casual partners was related to behaviours with other partners, supporting previous work indicating a strong patterning or habitual factor to condom use across partnerships for many GBM. This was reinforced by a clear association between early adoption of condoms and current use. Both findings argue for universal promotion of condoms for anal sex between men, because stopping condom use in one circumstance may make it more difficult to continue condom use in other scenarios. Respondents with higher numbers of recent sex partners were more likely to report infrequent condom use, and it is important to engage these men effectively as they will play a disproportionate role in facilitating or preventing HIV transmission clusters.

Above and beyond these factors, Pacific-identified respondents, younger respondents and those with less than a tertiary degree were more likely to report infrequent condom use. Prevention responses will need to ensure they engage these groups’ needs in their design and placement. Respondents with diagnosed HIV infection engaging in casual anal intercourse also reported less frequent condom use. Although we cannot tell from our data whether non-condom use occurred with other known positive GBM, not all of these men were on antiretroviral therapy meaning there is considerable risk of onward transmission, and the risk of acquiring and transmitting other STIs will also be high. Clearer information about these risks and improved linkage into support and treatment should be considered.

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The Gay Auckland Periodic Sex Survey (GAPSS) and Gay men’s Online Sex Survey (GOSS) were a collaboration between the Gay Men’s Sexual Health research group at the University of Auckland, the AIDS Epidemiology Group at the University of Otago, and the New Zealand AIDS Foundation. The studies received ethics approval from the University of Auckland Human Participant Ethics Committee and were funded by the Ministry of Health.

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