

Vital statistics Scotland 2001

*Findings from the
Gay Men's Sex Survey*

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Original Research Report

Acknowledgments

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Since 1997 Healthy Gay Scotland, Scotland's national HIV prevention initiative for gay and bisexual men, has developed a range of initiatives and resources to support HIV prevention for and on behalf of gay and bisexual men. A key principle which has underpinned this work has been consultation and discussion with gay and bisexual men throughout Scotland as well as a variety of community based groups representing their needs and interests.

Healthy Gay Scotland also commissions research about gay and bisexual men and HIV prevention. Vital Statistics Scotland 2001 is one such contribution. Sigma Research were commissioned by Health Gay Scotland to undertake a Scottish component to their annual Gay Mens Sex Survey. We hope this extension to the survey will make a useful contribution to planning work with and on behalf of gay and bisexual men living in Scotland.

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ABBREVIATIONS AND JARGON

Letters	What they stand for	Further explanation of their use
AI	anal intercourse	fucking between men
IAI	insertive anal intercourse	active or insertive AI; doing the fucking
RAI	receptive anal intercourse	passive or receptive AI; getting fucked
PAI	protected anal intercourse	AI always with a condom
UAI	unprotected anal intercourse	AI without a condom
UIAI	unprotected insertive anal intercourse	IAI without a condom
URAI	unprotected receptive anal intercourse	RAI without a condom
sdUAI	sero-discordant unprotected anal intercourse	UAI between HIV infected and uninfected men
OI	oral-genital intercourse	sucking between men, oral sex
IOI	insertive oral-genital intercourse	active or insertive OI: getting sucked
ROI	receptive oral-genital intercourse	passive or receptive OI: doing the sucking
IOIj	IOI to ejaculation in the mouth	getting sucked to ejaculation in partners mouth
ROIj	ROI to ejaculation in the mouth	sucking to ejaculation in your mouth
ExHAM	Exclusively homosexually active men	a man that has had sex ONLY with other men and not with women (in this instance, in the last year)
BB	behaviourally bisexual (in this instance, in the last year)	a man that has had sex with men and women
STI	sexually transmitted infection	infectious agents acquired during sex (including HIV)
	(Statistically) significant Significantly	If we had done the survey multiple times, this difference would be observed in fewer than one in a thousand of the surveys, purely by chance. In tables significant differences are highlighted in purple and bold for the highest figure and <u>underlining</u> of the lowest.
CI	confidence interval	When a proportion of the sample is reported (eg. 25.2%), the confidence interval gives the range within which we can be 95% confident that the real proportion in the population lies (eg. 24.2% to 26.4%).

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1 Introduction and methods

1.1 CONTENT OF THE REPORT

This research report outlines the main findings of the Vital Statistics 2001 survey – which is also known as the *Gay Men's Sex Survey*. It reports on all Scottish-resident men recruited to the survey during the summer of 2001. This report is the first from Sigma Research to include Scottish-resident homosexually active men. However, it complements comparable reports on English-resident men recruited to the *Gay Men's Sex Survey* in 1997 (Hickson, Reid *et al.*, 1998); 1998 (Hickson, Weatherburn *et al.*, 1999); and 1999 (Weatherburn *et al.*, 2000); and English- and Welsh-resident men recruited in 2000 (Hickson, Reid *et al.*, 2001) and 2001 (Reid *et al.*, 2002).

The information contained here is about HIV infection, sex between men and HIV prevention needs. The audience for the report are people involved in planning and delivering programmes to address the HIV prevention needs of homosexually active men.

This chapter provides some background to the survey and explains how the sample was recruited. It also explains what exclusions were applied to the sample prior to the presentation of data in the rest of the report.

Chapter 2 gives a brief description of the sample of 877 men living in Scotland who either had sex with another man in the last year or expected to have sex with a man in the future. We describe where they live, their ages, educational qualifications, ethnicities, current employment status' and the gender of their sexual partners in the last year.

Chapter 3 is concerned with health and reports some measures of the impact of HIV and other conditions on this sample of men. We report the proportions who had tested for HIV and their results, their health self-ratings and experience of long-term illness, health problems or disability. We also examine values held around the severity of HIV infection and their personal preferences for risking HIV transmission over condom use. These measures and values are then compared to those population groups presented in Chapter 2.

Chapter 4 looks at the sexual behaviours of the men that may involve HIV exposure including the assumed HIV sero-status of their sexual partners, engagement in unprotected anal and oral intercourse, condom failure during anal intercourse and ejaculation during oral intercourse. The data suggest specific sub-groups of men that can be targeted on the basis of the likelihood of their involvement in HIV exposure.

Chapter 5 examines the HIV prevention needs associated with the behaviours described in Chapter 4. We report on the extent to which a number of HIV prevention needs are not met. The findings support a targeting of interventions to specific unmet needs as well as on the basis of likelihood of involvement in HIV exposure.

1.2 BACKGROUND TO THE GAY MEN'S SEX SURVEY

The *Gay Men's Sex Survey* (GMSS) uses a short self-completion questionnaire to collect a limited amount of information from a substantial number of men. Its chief characteristics are the methods of recruitment, which are by community members making personal invitations to men to participate at Pride-type events and, for the first time in 2001, via the internet.

Sigma Research first carried out GMSS at the London Lesbian & Gay Pride festivals in 1993, 1994 and 1995. No survey was undertaken in 1996. Since 1997, funding from the Terrence Higgins Trust as part of the CHAPS programme has allowed the survey to expand across England and from 2000, to include Wales. For the first time in 2001 funding from Healthy Gay Scotland enabled the survey to recruit in Scotland.

The survey uses a short questionnaire on clipboards for recruitment at Pride-type events and festivals. In England and Wales the entire questionnaire was also reproduced as a small booklet which was self-sealing for Freepost return. More than 30,000 copies of the booklet were directly distributed to gay men and bisexual men by a range of gay and HIV health promotion agencies. The booklet was not distributed by agencies in Scotland but some agencies distributing in England and Wales did distribute to Scottish-resident men visiting England or Wales. The 16 Scottish-resident men returning booklets received in England or Wales are included in this report.

The survey questionnaire was also available for completion on-line via our own website. The on-line version was substantially promoted by gay.com – a major gay commercial internet service provider (see section 1.4).

1.3 PRIDE EVENTS: SCOTLAND AND OTHERS

On June 23rd 2001 survey recruitment occurred at Scotland Pride in Edinburgh. The anonymous survey was printed on two sides of A4 for self-completion and was distributed on a clipboard with a pen attached, by personal request from a team of five community members. Respondents completed the forms on the spot and immediately returned them to sealed boxes. On the day, 419 survey forms were returned to sealed ballot boxes.

A further 71 Scottish-resident men were recruited at Pride events in England or Wales, with the majority from London Mardi Gras (27 men) and Manchester Mardi Gras (28 men). A full description of England and Wales recruitment is available elsewhere (Reid *et al.*, 2002).

1.4 WEB RECRUITMENT

In 2001, for the first time the survey was available for completion online via the Sigma Research website. The online version of the questionnaire contained all the same questions as the Pride survey with twelve others added. The additional questions concerned two areas: whether respondents had seen a number of HIV prevention and 'safer sex' campaigns and materials (8 questions) and questions on use of a variety of gay and other settings where HIV prevention often occurs (4 questions). None of these additional questions are reported here.

The web version was a pilot exercise to assess the feasibility of survey work using the internet. It was also undertaken to assess the degree to which the method might recruit larger numbers of men in demographic groups to which smaller numbers are recruited using Pride events, especially behaviourally bisexual men, men living away from urban centres, younger men and men from Black and minority ethnic groups. This is not a question of representation but of recruiting large enough numbers of men to make estimates of the levels of need in these groups with greater confidence.

The actual questionnaire appeared as one continuous document on the Sigma website with a link from our homepage. The design did not use many of the more sophisticated approaches to online survey work that are possible – we were not convinced enough people would use the service.

Data was captured when the respondent pressed 'submit' at the end of the document, although they could do this at any point in the questionnaire if they wished to abort completion. When 'submit' was pressed data was sent in an individual anonymous email to Sigma Research.

The web version was available online for 8 weeks (August and September 2001). During this time the survey was promoted via gay.com, one of the largest gay-specific internet providers in the UK. Gay.com (UK) claimed 200,000 unique users at the time of the survey. During their promotion they delivered 250,000 pop ups on their home page and placed a recurrent banner in chat rooms. Pop-ups were not 'capped' based on non-response so any man returning to the home page in the same internet session would have seen the pop-up each time. There was also coverage of the survey in their news section.

During the 56 days that the internet was online we received 8,392 individual email responses that contained any data. Unfortunately 2,047 of these incoming emails were lost as a consequence of two major technical problems related to viral attacks. The first was a server storage problem when our internet account was suspended due to viral infection, the second was a consequence of a substantial viral infection of the entire Sigma system when all incoming data was corrupted. Effectively, 7 days of data was not available for use as a consequence of two periods (4 consecutive days and a subsequent 3 consecutive days) when incoming data was lost or corrupted. Sadly, both events occurred early in the survey and on weekends when technical support was absent.

Ultimately, 6,345 separate email-returned surveys were available for automatic data capture. Of these, 479 were from Scottish-resident men.

1.5 EXCLUSIONS AND ADDITIONS

The table below shows the number of questionnaires returned during all forms of recruitment in all sites. It also provides a summary of the reasons and numbers of men excluded from the following analysis.

All men recruited to the survey (N = 18,105)	Pride Scotland	Other Prides	Web	Booklet
All returns	419	8,628	6,345	2,713
Resident in Scotland	373	71	479	16
No evidence of sex with men in the previous year or intention to have sex with men in the future	7	0	6	0
Already completed the survey	15	1	29	1
Not completed sufficient questions (missing demographics)	2	0	0	0
Spoiled / completed by a female	1	0	0	0
Sample size	348	70	444	15
Men with homosexual experience or desire & resident in Scotland	(92%)	(99%)	(93%)	(94%)

The overall number of Scottish-resident men recruited was 939. After exclusions the final sample is 877 men (93.4% of those recruited) who were resident in Scotland and homosexually active in the last year, or intended to be in the future.

2 Sample description

This chapter describes the sample of 877 men resident in Scotland who had sex with a man in the last year (96.1%) or expected to have sex with a man in the future (3.9%). Each section introduces a demographic characteristic and describes how it varies in the sample. We also make comparisons between the two recruitment sub-samples: Pride events compared with the internet (the 15 men recruited through booklet distribution in England are excluded from these comparisons).

2.1 NHS BOARD OF RESIDENCE

Men were asked *Which Local Authority do you live in? (who sends your household the Council Tax bill?)* and to supply their postcode or home town if they did not know their local authority.

Overall 95.4% of men gave sufficient information to easily allocate them to one of the sixteen Scottish NHS Boards. Seventeen men resident in Renfrewshire (which crosses Argyll & Clyde and Greater Glasgow NHS Boards) were allocated to Argyll & Clyde. Similarly 19 men resident in South Lanarkshire (which crosses Lanarkshire and Greater Glasgow NHS Boards) were allocated to Lanarkshire. Four men specified 'Scotland' as their place of residence.

The following table shows the number of respondents resident in each NHS Board, the proportion of the sample they represent and the proportion of them recruited on the web.

Whole sample (N=873, missing 4)	Number of respondents	% of total sample	% recruited on web
Lothian	360	41.2	31
Greater Glasgow	224	25.7	55
Fife	47	5.4	60
Lanarkshire	44	5.0	66
Grampian	42	4.8	71
Argyll & Clyde	38	4.4	87
Ayrshire & Arran	35	4.0	80
Tayside	30	3.4	73
Forth Valley	23	2.6	74
Highland	13	1.5	92
Dumfries & Galloway	8	<1.0	63
Borders	5	<1.0	80
Western Isles	2	<1.0	100
Orkney	1	<1.0	100
Shetland	1	<1.0	100

All sixteen NHS Boards are represented, but two thirds of the sample live in the NHS Boards covering Edinburgh (Lothian) and Glasgow (Greater Glasgow).

The aim of web recruitment was to extend the geographic reach of recruitment and this was successful. Two thirds of the Lothian based men were recruited at Scottish Pride in Edinburgh. For all other areas the web accounted for between half and all of the respondents. Of the web sample, 25% lived in Lothian, 28% in Greater Glasgow and 48% in the rest of Scotland, compared with 56%, 23% and 17% of the Pride sample respectively.

In the rest of the report we make comparisons between three residence groups: Lothian and Greater Glasgow NHS Boards and the rest of Scotland.

2.2 AGE

The average (mean) age of the whole sample was 30.8 years (standard deviation = 9.6, median 30, range 14 to 71). While a very wide age range was recruited, half were aged between 23 and 35.

The web sub-sample (mean age 29.3, median 28, with 14.0% under 20 years) was significantly younger than the Pride sub-sample (mean age 32.3, with only 3.1% under 20 years). The web-based version of the survey was successful at recruiting younger men to the survey.

Considering the three area sub-samples, the two metropolitan samples were more tightly bunched in the middle of the age range. Lothian residents included smaller proportions of both men under 20 (5.9%) and over 50 (3.6%) compared with those living in Greater Glasgow (7.7% under 20, 5.0% over 50) or elsewhere in Scotland (12.8% under 20, 7.6% over 50). The average age of the three area sub-samples did not significantly vary however.

2.3 FORMAL EDUCATION

Men were asked *Which of the following educational qualifications do you have?* and instructed to tick one each of: *I have no educational qualifications; O-grades or equivalent; Highers or sixth year studies; University degree; Other.* Those who indicated other qualifications were asked what they were.

Men were allocated to one of three groups on the basis of their highest educational qualification. Those with no qualifications (2.6%) or O-grades (18.7%) were grouped as 'low' educational qualifications. Those who indicated a university degree (45.0%) were grouped as 'high' educational qualification and the remaining (34.4%) were classified as 'medium' educational qualifications. The proportions with 'medium' and 'high' education qualifications did not differ between the Pride and web sub-samples, nor between the three area sub-samples.

2.4 ETHNICITY

The ethnic group question was derived from the 1991 UK Census (Coleman & Salt, 1996). Men were asked *What is your ethnic group?* and asked to indicate one of the following (the number in brackets is the number in that group): *Chinese* (5); *Asian* (11, composed of 1 *Indian*, 4 *Pakistanis* and 6 *Other Asians*); *Black* (no respondents); *White* (850 composed of 792 *British*, 19 *Irish* and 39 *other Whites*), *Mixed ethnicity* (11), or *Any other group* (1).

Overall then, 90.7% were White British, another 6.7% were in *other White* groups, and 2.6% were from Asian and mixed ethnicities (n=23). These proportions did not significantly vary by recruitment method.

Due to the small numbers of men in ethnic groups other than White, no ethnic group comparisons are made in the rest of this report.

2.5 EMPLOYMENT

Men were asked *Are you...? In full-time education, Employed full-time or part-time, Unemployed, Retired, Medically retired or Other* (they could tick any which applied). Those who chose other were asked to specify what their employment status was.

Over three quarters of the sample (77.1%) were currently employed. Another 14.8% (n=130) were in full-time education and 3.4% (n=30) indicated they were retired, including 'medically retired'. The remaining 4.5% (n=39) were currently unemployed.

Unsurprisingly, the students were concentrated in the under 25s and the retired were concentrated in the over 50s. There were no significant difference in employment by recruitment method, area of residence or education group.

Due to the small numbers of men in retired and unemployed groups, no employment group comparisons are made in the rest of this report.

2.6 GENDER OF SEXUAL PARTNERS

All of the men in the sample either had sex with a man in the last year *and/or* expected to have sex with a man in the future. Men were asked about the gender of their sexual partners in the last twelve months. The following table shows the number of men in each of the four possible combinations of male and female partners (female partners were not known for two men with male partners).

Whole sample (N=875, 2 missing)		Male partner in the last year	
		No	Yes
Female partner in the last year	No	n=25	n=767
	Yes	n=9	n=74

In this sample, most (767 of 841, 91.2%) of the men who had sex with man in the last year only had sex with men. Also, most (25 of 34, 73.5%) of the men who had not had sex with man but expected to in the future had sex with no one. Overall, 9.5% of the sample had sex with a female partner in the last year.

The Pride and web methods recruited similar proportions of men who had not had sex with a man in the last year but expected to in the future (3.6% and 4.1% respectively).

However, among the homosexually active men, significantly more of the web sub-sample also had a female partner (13.4%) than the Pride sub-sample (4.0%).

The proportion of men who were behaviourally bisexual varied with age, and how it did so differed in the two recruitment sub-samples. In the Pride sub-sample behavioural bisexuals were most common in the under 20s and absent from the 50+ age group. In the web sub-sample behavioural bisexuals were least common in the under 20s and most common in the 40s age group. This suggests the two recruitment methods are complementary in their coverage of the diverse population of homosexually active men.

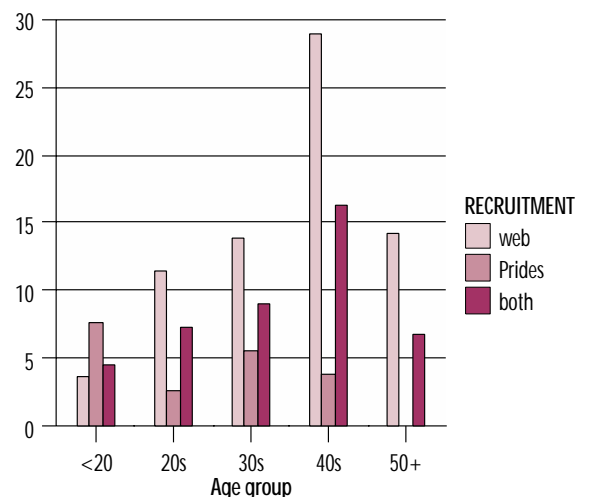


Figure 2.6: Proportion of homosexually active men who also had a female partner by recruitment method and age group (web and Prides n=54 & 13, 175 & 149, 130 & 163, 45 & 51, 21 & 22)

2.7 SUMMARY

The sample consists of 877 men who live in Scotland and had sex with a man in the last year *and/or* expected to have sex with man in the future. Men who have sex only with men predominated. The sample was overwhelmingly White, and two thirds lived in Lothian or Greater Glasgow NHS Boards. Almost half had university education, and over three quarters were currently employed. A quarter were aged 22 or younger.

3 HIV & health

This chapter describes the HIV testing history, health status and health values of all respondents and compares answers across the two different recruitment methods. It also examines how these variables vary across the various demographic sub-samples.

3.1 HIV TESTING HISTORY

Men were asked, *Have you ever received an HIV test result? (yes or no)*, and if *yes* they were asked *What was the most recent HIV test result that you received? (positive or negative)*. Only 0.9% (n=8) of all men declined to supply these answers.

Overall, 2.4% (n=21) had diagnosed HIV infection, another 42.5% had received a negative test result at some point in the past. The remaining 55.1% had never tested for HIV.

Men recruited at Pride events were more likely to have ever tested for HIV (52.9%) than those recruited on the web (38.1%). Among those who had tested, the Pride sub-sample were more likely to have tested HIV positive (7.0% versus 3.0%).

How HIV testing history varied across the demographic groups is reported in section 3.5 below.

3.2 SELF-RATING OF HEALTH

To gauge general health, all men were asked, *Over the last twelve months would you say your health has on the whole been (good?, fairly good? or not good?)*

The vast majority of men rated their health positively (97.7%) as either *good* (75.8%) or *fairly good* (21.9%). Only a small minority (2.3%) rated their health as *not good*.

The web sample were less likely to rate their general health as *good* (70.4%) and more likely to rate it as *not good* (3.4%) compared to the Pride sample (80.9% and 1.2% respectively).

Only one of the 21 men who had tested positive indicated his health over the last 12 months had been *not good*. The majority (57.1%) indicated *good* (compared with 76.3% of men who had not tested positive, a statistically non-significant difference).

3.3 LONG-TERM ILLNESS

To further assess general health we asked, *Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do? Any man answering yes was asked to specify what these problems were.*

Overall 9.7% of men reported a health problem that affected their daily activities or the work they did. There was no difference between the recruitment methods in the likelihood of having a long-term illness or disability

Approximately 10% of men who reported a long-term illness, health problem or disability did not specify their problem. The most common problem area was mental health/emotional or neurological problems (27% of those with an illness or disability). Next most common was skeletal/muscular/nerve/mobility problems (23%). Heart and blood disorders accounted for another fifth (21%) and 9% each reported respiratory or infectious diseases. Less common problems (fewer than 5% of responses) included gastrointestinal problems, sight and hearing problems and skin problems. Two men could not be allocated to any of these categories.

HIV was not the main source of long-term illness and disability among these men. Of the men who indicated an illness or disability, only 6.1% had HIV. Conversely, only 25% of men with HIV indicated they had a long-term illness, health problem or disability.

3.4 HEALTH VALUES

3.4.1 HIV is still a very serious medical condition

It has been proposed that knowledge of changes in HIV clinical management have reduced the perceived severity of HIV disease which in turn has influenced sexual actions.

Men were asked to agree or disagree with the statement *HIV is still a very serious medical condition* on a five-point scale. Overall, 84.5% of men *agreed strongly* with the statement and another 13.6% *agreed*. This left 1.9% (n=16) who did not agree (half of whom indicated they were *not sure*). These proportions were identical in the two recruitment sub-samples.

While 1.9% did not agree *HIV is still a very serious medical condition*, this was 9.5% (2 / 21) of the men who had tested HIV positive compared with 1.7% (14 / 824) of those who had not tested positive. There is a wide consensus among gay men in Scotland that HIV remains a very undesirable infection.

3.4.2 I would sometimes rather risk HIV transmission than use a condom

In an attempt to gauge the extent to which men value unprotected anal intercourse (UAI) more than avoiding exposure to HIV they were asked to agree or disagree with the statement *I would sometimes rather risk HIV transmission than use a condom*.

This statement showed more variation than the preceding statement. Overall 6.8% agreed with the statement (including 1.9% who *agreed strongly*). Another 8.1% were *unsure*. However, the vast majority (85.1%) disagreed (including 68.1% who *disagreed strongly*).

While the proportions agreeing and disagreeing did not vary by HIV testing history, the web sub-sample were more likely to be *unsure* of this statement (11.0%) than were the Pride sub-sample (4.7%).

3.5 VARIATION ACROSS POPULATION GROUPS

3.5.1 NHS Board of residence, HIV and health

The following table shows how the previous indicators concerning health and HIV varied in the three area of residence groups.

Whole sample (N=873, missing 4)		% by NHS Board of residence		
		Lothian (n=360)	Greater Glasgow (n=224)	Elsewhere (n=289)
HIV testing history	Never tested	48.0	51.6	66.2
	Tested positive	3.9	2.2	0.7
Long-term illness, health problem or disability		9.5	9.4	10.2
Health self-rating	good	80.2	73.1	72.5
	fairly good	18.2	24.7	24.4
	not good	1.7	2.2	3.1
HIV is a very serious condition	Agree	98.0	98.6	97.9
	Disagree	1.2	0.9	0.7
Rather risk HIV transmission than use a condom	Agree	6.6	6.4	7.3
	Disagree	85.4	87.2	83.2

HIV testing history varies significantly by area of residence. Ever having tested for HIV was most common among men resident in Lothian, followed by Greater Glasgow, and far less common elsewhere in Scotland where two-thirds had never tested. Similarly, having tested positive was most common in Lothian and least common elsewhere in Scotland. Given that the next chapter suggests the sexual behaviour of this sample provides plenty of opportunity for HIV exposure and transmission, the levels of testing for HIV suggest many of these men's HIV testing needs may be unmet.

Poor health was not associated with NHS Board of residence, neither were perception of the severity of HIV infection or having a preference for risking HIV transmission over condom use.

- Men resident in Lothian were most likely to have ever tested for HIV.
- Men resident in Lothian were most likely to have tested positive for HIV.

3.5.2 Age, HIV and health

The following table shows how the previous indicators concerning health and HIV vary across the age range.

Whole sample (N=873, missing 4)		% by age groups				
		< 20 (n=75)	20s (n=343)	30s (n=306)	40s (n=103)	50+ (n=46)
HIV testing history	Never tested	76.0	41.1	50.2	56.3	58.7
	Tested positive	1.3	2.4	2.3	2.9	4.3
Long-term illness, health problem or disability		5.5	8.1	9.8	10.8	23.9
Health self-rating	good	67.6	74.2	76.0	88.3	69.6
	fairly good	28.4	25.2	21.1	7.8	26.1
	not good	4.1	0.6	3.0	3.9	4.3
HIV is a very serious condition	Agree	95.9	97.9	98.3	99.0	100.0
	Disagree	0.0	0.9	1.4	1.0	0.0
Rather risk HIV transmission than use a condom	Agree	4.1	5.3	7.9	8.9	11.1
	Disagree	86.3	86.1	83.6	86.1	82.2

While HIV testing history does not vary by age, if we group the men into age bands, men under 20 are significantly less likely to have tested for HIV, but men in their 20s were most likely to have tested. Diagnosed HIV infection is increasingly common with increasing age, so that men aged 50 or over are most likely to have diagnosed HIV.

There is also a direct relationship between older age and the likelihood of reporting a long-term illness, health problem or disability. The older men get the more likely they are to report health problems. Men who reported health problems were on average significantly older (mean age = 34.2) than those who did not (mean age = 30.5).

Self-ratings of health show a different pattern. Compared to younger men, those in their 40s were most likely to rate their health as *good*. Men under 20 and men 50 or older were least likely to rate their health as *good* and most likely to say it was *not good*. Overall the average age of men who said their health was *not good* was older (34.4 years) than men saying their health was *good* (31.1 years) and *fairly good* (29.4 years).

Perceptions of the severity of HIV infection and the preference for risking HIV transmission over condom use did not vary significantly by age.

- Men in their 20s were most likely to have ever tested for HIV.
- Men in their 50s were most likely to have tested positive for HIV.
- Men in their 50s were more likely to report a long-term illness, health problem or disability.
- Men under 20 and in their 50s are more likely to self-rate their health as *not good*.

3.5.3 Education, HIV and health

The following table shows how the previous indicators concerning health and HIV vary across education groups.

Whole sample (N=864, missing 13)		% by education groups		
		Low (n=175)	Medium (n=297)	High (n=392)
HIV testing history	Never tested	61.8	56.2	50.9
	Tested positive	4.6	1.4	2.3
Long-term illness, health problem or disability		11.1	11.7	7.3
Health self-rating	good	78.6	70.4	78.9
	fairly good	20.2	26.6	18.8
	not good	1.2	3.0	2.3
HIV is a very serious condition	Agree	97.0	79.6	99.0
	Disagree	1.8	1.3	0.3
Rather risk HIV transmission than use a condom	Agree	9.5	4.1	7.0
	Disagree	76.3	87.6	88.2

HIV testing history is significantly associated with educational attainment. Men with lower educational achievements were significantly less likely to have ever tested for HIV but more likely to have tested positive.

Poor health was not significantly associated with education level.

The perception of the severity of HIV infection did not vary significantly by education, but men with lower education were significantly more likely to *agree* and less likely to *disagree* that they would sometimes rather risk HIV transmission than use a condom.

- Men with low levels of education were less likely to have ever tested for HIV.
- Men with low levels of education were more likely to have tested positive for HIV.
- Men with low levels of education were more likely to prefer to risk HIV transmission than use a condom.

3.5.4 Gender of sexual partners, HIV and health

The following table shows how the health indicators varied by the gender of men's sexual partners in the last year.

Whole sample (N=875, missing 2)		% by gender of partners		
		No men (n=34)	Men only (n=767)	Men & women (n=74)
HIV testing history	Never tested	88.2	51.6	74.3
	Tested positive	2.9	2.5	1.4
Long-term illness, health problem or disability		12.1	9.8	8.1
Health self-rating	good	79.4	75.1	80.8
	fairly good	17.6	22.4	19.2
	not good	2.9	2.5	0.0
HIV is a very serious condition	Agree	94.1	98.1	100.0
	Disagree	2.9	1.0	0.0
Rather risk HIV transmission than use a condom	Agree	5.9	6.7	8.5
	Disagree	91.2	85.4	78.9

Men who had sex with men only were much more likely to have ever tested for HIV than were men who had sex with both men and women (48.4% had compared to 25.7%). Men who had no sex with men in the last year – but intended to in the future – were least likely to have ever tested (only 11.8% had). However, among those who had tested there was no significant difference in the proportion who had received a positive result.

Neither reports of long-term illness, health problems or disability nor self-rating of health varied by gender of partners in the last year. Nor did agreement with the two statements of health values.

- Men who had not had sex with men in the last year (but intended to do so in the future) were least likely to have ever tested for HIV.

3.6 SUMMARY & IMPLICATIONS FOR PROGRAMME PLANNING

These implications for programme planning should be read in conjunction with those at the end of Chapters 4 and 5. They are intended to suggest where the emphasis in HIV prevention programmes might have the greatest impact on HIV incidence, rather than where they might have the greatest impact on inequality of HIV prevention aims.

These implications (and those at the end of Chapters 4 and 5) are broadly compatible with reports on residents of England participating in the *Gay Men's Sex Survey* in 1997 (Hickson, Reid *et al.*, 1998); 1998 (Hickson, Weatherburn *et al.*, 1999) and 1999 (Weatherburn *et al.*, 2000), and England and Wales in 2000 (Hickson, Reid *et al.*, 2001) and 2001 (Reid *et al.*, 2002).

More than half (55.1%) of the entire sample had never tested for HIV. Never having tested was least common among resident in Lothian (48.0% never had), followed by residents of Greater Glasgow (51.6% never had). Never having tested was most common among men resident elsewhere in Scotland (66.2% never had). Having diagnosed HIV infection is most common among Lothian resident men (3.9%) followed by residents of Greater Glasgow (2.2%) and elsewhere (0.7%). The following implications hold for each area of the country separately.

In this data the pattern of HIV infection does not vary by age group in the same way as it does among residents of England and Wales. Here men in their 20s (and 30s) were most likely to have ever tested for HIV and men in their 50s (and 40s) were most likely to have diagnosed HIV. Given this pattern it is not possible to recommend an age group that HIV prevention programmes should disproportionately benefit.

Men with lower levels of education were less likely to have ever tested, but more likely to have diagnosed HIV. This suggests that the incidence of HIV infection is higher among gay men with low levels of formal education. Hence, in order to increase their impact on incidence:

- **HIV prevention programmes should disproportionately benefit men who do not have a University degree.**

Compared with behaviourally bisexual men, those that have sex with men only (that is, those who are exclusively homosexually active) are more likely to have ever tested and to have diagnosed HIV. This suggests that the incidence of HIV infection is higher among exclusively homosexually active men than behaviourally bisexual men and that in order to increase their impact on incidence:

- **HIV prevention programmes should disproportionately benefit exclusively homosexually active men.**

4 Sex and HIV related behaviours

In this chapter, we consider the profile of sexual behaviour in the sample of 843 men who had sex with another man in the last year, concentrating on sexual behaviours related to the transmission of HIV. First we look at the numbers of male sexual partners men had in the last year, then what they knew about the HIV status of their sexual partners and the behaviours they engaged in with them. This chapter also reports condom behaviours, including usage and failure. At the end of the chapter we consider how sexual behaviour varies across the demographic groups described in Chapter 2.

4.1 NUMBER OF MALE SEXUAL PARTNERS

Men were asked *In the last 12 months how many MEN have you had sex with in total?*

The five bands offered and the overall proportion of homosexually active men who indicated them were: one (21.1%); 2, 3 or 4 (30.2%); between 5 and 12 (26.9%); between 13 and 29 (12.5%); 30 or more (9.2%).

4.2 HIV RISK BEHAVIOURS

In this section we look at sex with partners of varying HIV statuses, especially anal intercourse without condoms and oral intercourse to ejaculation in the mouth.

4.2.1 HIV sero-status of male sexual partners

All sexual HIV exposures occur within the context of HIV sero-discordant sex (sex between HIV positive and HIV negative men). Obviously, exposures are only a sub-set of sexual acts which occur in this context, but the overall volume of discordant sessions will influence the overall number of exposures occurring.

Men were asked to tick as many as apply of the following:

*In the last 12 months, have you had sex with a man ...
who you knew at the time was HIV POSITIVE?
who you knew at the time was HIV NEGATIVE?
whose HIV status you DID NOT KNOW at the time?*

The following table shows the proportions of men who indicated each of the three options (men could tick more than one and so the columns do not add up to 100%), separated by whether they had tested HIV positive or not.

Men who had sex with a man in the last year (N=826, missing 17)	% by HIV testing history	
	Diagnosed positive (n = 20)	Not diagnosed positive (n = 806)
Had a known HIV positive partner	65.0	7.1
Had a known HIV negative partner	60.0	43.8
Had a partner of unknown HIV status	75.0	81.8

Similar proportions of positive and not positive respondents had sex with men whose status they did not know (81.6% overall) and men they knew to be negative (44.2% overall). However, men who had tested positive were much more likely to have sex with men they knew to be positive than were other men.

- Sexual partners of unknown HIV status are the norm both among those diagnosed HIV positive and those that are not.
- Diagnosed HIV positive men are more likely to have sexual partners they know are negative than men who have not tested positive are to have sex with men they know are positive.

In the context of the above it is important to consider undiagnosed HIV infection. Current estimates from the Public Health Laboratory Service (Unlinked Anonymous Surveys Steering Group, 2000) assert that about two-thirds of HIV infections among gay men have been diagnosed. Similarly, recent research in London (Dodds & Mercey, 2001) suggests that 67% of the men with undiagnosed infection think they are HIV negative. This means that in addition to the 2.1% of the sample with diagnosed infection, another 0.7% probably have undiagnosed infection. Hence, some of men who think they are negative, having UAI with men they also think are negative, will be engaging in sexual HIV exposure.

4.2.2 Engagement in anal and oral intercourse

Men who had a male sexual partner in the last year were asked the following questions about their sexual behaviour in the preceding year:

<i>Still thinking about the last 12 months, have you fucked a man (been active in anal intercourse)?...</i>	No/Yes
<i>If Yes, Have you fucked a man (been active) WITHOUT a condom in the last 12 months?...</i>	No/Yes
<i>Still thinking about the last 12 months, have you been fucked by a man (been passive in anal intercourse)?...</i>	No/Yes
<i>If Yes, Have you been fucked WITHOUT a condom?...</i>	No/Yes
<i>Still thinking about the last 12 months, have you sucked a man's cock?...</i>	No/Yes
<i>If Yes, Has a man ejaculated (cum, spunked) in your mouth?...</i>	No/Yes
<i>Still thinking about the last 12 months, have you had your cock sucked by a man?...</i>	No/Yes
<i>If Yes, Have you ejaculated (cum, spunked) in a man's mouth?...</i>	No/Yes

Due to space limitations, we did not ask about condom use during oral intercourse, nor about ejaculation during anal intercourse. The following table shows the overall proportions of all homosexually active men who indicated they had done each of the eight sexual acts listed above. The table reports diagnosed HIV positive men and other men separately.

Men who had sex with a man in the last year (N=826, missing 17)		% by HIV testing history	
		Diagnosed positive (n = 20)	Not diagnosed positive (n = 806)
Receptive	Anal intercourse (RAI)	85.0	66.7
	RAI without a condom (URAI)	45.0	38.7
	Oral intercourse (ROI)	100.0	98.1
	ROI to ejaculation in the mouth (ROIj)	70.0	59.8
Insertive	Anal intercourse (IAI)	75.0	73.5
	IAI without a condom (UIAI)	40.0	41.4
	Oral intercourse (IOI)	100.0	98.0
	IOI to ejaculation in the mouth (IOIj)	50.0	67.5

Both receptive and insertive oral intercourse were almost universally popular and equally common among diagnosed positive and other men. More positive men had receptive than insertive oral intercourse to ejaculation, a pattern reversed among men not tested positive. More men said that they had ejaculated in another man's mouth than had received ejaculate in their mouth.

Anal intercourse was very common but not universal. More positive men had receptive than insertive anal intercourse, a pattern reversed among men not tested positive. Similar proportions of positive men and not positive men had any UAI.

- Men who have tested positive are more likely than other men to engage in most of the sexual behaviours that can transmit HIV.

4.2.3 HIV sero-status of UAI and UOIJ partners

Men who had been involved in unprotected anal intercourse (either URAI or UIAI) or ejaculation in the mouth (ROIJ or IOIJ) were asked:

*Have you [done that sexual act] with a man...
 who you knew at the time was HIV POSITIVE?
 who you knew at the time was HIV NEGATIVE?
 whose HIV status you DID NOT KNOW at the time?"*

They were asked to tick as many as applied. The following table shows the overall proportions of all homosexually active men who indicated they had done each of the possible sexual acts listed above. The table reports the sexual behaviour of diagnosed HIV positive men and other men separately.

Men who had sex with a man in the last year (N=826, missing 17)			% by HIV testing history	
			Diagnosed positive (n=20)	Not diagnosed positive (n=806)
Receptive	Anal without a condom	with known positive	31.6	1.1
		with known negative	10.5	18.9
		with unknown	21.1	20.7
	Oral to ejaculation in the mouth	with known positive	31.6	1.2
		with known negative	36.8	25.1
		with unknown	42.1	40.0
Insertive	Anal without a condom	with known positive	26.3	1.1
		with known negative	10.5	19.3
		with unknown	15.8	23.9
	Oral to ejaculation in the mouth	with known positive	25.0	2.0
		with known negative	20.0	23.5
		with unknown	25.0	48.8

Very small proportions of men who had not tested positive had engaged in these sexual acts with men who they new to be HIV infected. That is, 1.1% had engaged in receptive UAI with a known positive partner in the last year; 1.1% had insertive UAI with a positive partner and 1.2% knowingly had a positive man come in their mouth. Larger proportions of the tested positive men had engaged in these behaviours with men they knew were negative.

Considering engagement in sexual acts where there is an awareness of the partnerships' sero-discordancy, the three activities during which HIV is thought to be transmitted are:

- 1] *HIV positive men having insertive anal intercourse without condoms with negative men.*
10.5% of positive men (who constitute 2.4% of the whole sample) indicated they had UIAI with men they knew was negative (0.3% of sample), and 1.1% of not tested positive men (the other 97.6% of the sample) indicated they had URAI with a man they knew was positive (1.1% of sample).
- 2] *HIV positive men ejaculating in negative men's mouths.*
20.0% of positive men indicated they had ejaculated in the mouth of a man they knew was negative (0.5% of the entire sample), and 1.2% of not tested positive men indicated they had taken ejaculate in their mouth from a man they knew was positive (1.2% of sample).
- 3] *HIV negative men having insertive anal intercourse without condoms with positive men.*
10.5% of positive men indicated they had URAI with men they knew were negative (0.3% of sample), and 1.1% of not tested positive men indicated they had UIAI with a man they knew was positive (1.1% of sample).

Compared with others, men with diagnosed HIV infection were much more likely to have engaged in all of the three sexual acts in known HIV sero-discordant sexual partnerships. However, because diagnosed positive men are in the minority, an absolutely larger number of men who not tested positive had engaged in each sero-discordant act.

- Men with diagnosed infection are more likely to be involved in sexual HIV exposure than men without diagnosed HIV infection.

4.3 CONDOM FAILURE

As well as unprotected intercourse, condom failure during protected anal intercourse provides another potential source of sexual HIV exposure. All men were asked about wearing condoms for insertive anal intercourse, their experience of condom failure and some behaviours that may have contributed to it.

4.3.1 Protected insertive intercourse

Men were asked *Have you fucked a man (been active) WITH a condom in the last 12 months? ... No/Yes.* Overall 60.5% said they had (n = 505), which is 82.5% of all those men who reported having had any insertive anal intercourse.

For the whole sample then, 27.3% had no insertive anal intercourse (IAI), 30.7% had protected insertive anal intercourse only (PAI, consistent condom wearers), 31.0% had both PIAI and UIAI (inconsistent condom wearers) and 11.1% had UIAI only (never wore a condom for insertive anal intercourse).

Protected and unprotected anal intercourse are associated and tend to occur in the same men. So, for example, of those who had any protected insertive anal intercourse, half (50.2%) also had unprotected, whereas only a quarter (27.4%) of men who did not have protected IAI had unprotected IAI.

4.3.2 Experience of condom failure

Those who had worn a condom for IAI in the last year were asked *Have any of the condoms YOU'VE worn SPLIT or COME OFF while you were fucking a man? ... No/Yes.* Of those who had worn a condom in the last year, 10.4% said they had experienced failure at least once.

Condom failure was strongly associated with inconsistent condom use: 15.7% of those who had sometimes used a condom for IAI experienced failure compared with only 5.3% of those who always used condoms for IAI.

4.3.3 Condom failure risk behaviours

All men who had used worn condom in the last year were asked: *All of the following contribute to condoms tearing or slipping. Which have you done in the last 12 months?*

They were asked to tick as many as apply from a list of seven behaviours generated from a randomised controlled trial of factors contributing to condom failure (Golombok *et al.*, 2001). The following table shows the behaviours and the proportion of condom users who indicated each, ordered by the most common first.

Men who had worn a condom for insertive anal intercourse in the last year (n=498, missing 7)	% of all condom users	% by experience of failure		Adjusted odds ratio (95% CI)
		no failure (n=446)	any failure (n=52)	
Fucking for over half an hour without changing the condom	14.6	11.4	42.3	4.1 (2.1–8.0)
Using saliva as a lubricant	13.4	11.4	30.8	ns
Not using any lubricant	12.2	9.9	32.7	ns
Not using lots of water-based lubricant on the outside of the condom	7.6	6.1	21.2	ns
Putting lubricant inside the condom before putting it on	7.4	6.3	15.4	ns
Unrolling the condom before putting it on your cock	5.4	5.4	5.8	ns
Using a condom that's too short for your cock	5.2	4.3	13.5	ns

Six of the seven behaviours (excluding unrolling the condom first) were individually associated with experience of condom failure, being significantly more common among those who experienced failure than those who did not.

In a multiple logistic regression with experience of failure (yes/no) as the outcome and these six behaviours as the factors, only one factor showed independent associations with failure: IAI for over half an hour without changing the condom.

Taken together, the prevalence of this condom failure risk behaviour and its associations suggest a reduction in condom failure requires education about changing the condom during longer sessions of IAI and availability of more condoms than there are sessions of anal intercourse to cover.

4.4 VARIATION IN HIV RELATED SEXUAL BEHAVIOURS ACROSS POPULATION GROUPS

This section asks the question *Who* among men not tested HIV positive *is most likely to be involved in sero-discordant unprotected anal intercourse*. Evidence that one group is more likely to do this than another can be used to prioritise that groups unmet HIV prevention needs (although this data cannot tell us what those unmet needs are). We also ask, *Who is most likely to experience condom failure* and each of the seven behaviours identified as contributing to failure.

4.4.0 HIV testing history and HIV related sexual behaviours

The preceding sections have shown how the sexual risk behaviour measures varied with having tested HIV positive or not. The first prioritisation of need is the HIV prevention needs of men who have tested positive. The following table shows the differences in the sexual HIV exposure measures among men not tested HIV positive and the condom failure risk measures in all three HIV testing history groups.

Men who had sex with a man in the last year (N=835, missing 8)		% by HIV testing history			
		Never tested (n=449)	Last test negative (n=366)	Tested positive (n=20)	
Male sexual partners in last year	One	22.9	19.8	15.0	
	30+	5.4	12.9	25.0	
With man known to be positive	Sexual partner	2.8	12.2		
	Unprotected receptive anal	0.5	2.0		
	Receptive oral to ejaculation	0.9	1.4		
	Unprotected insertive anal	0.2	2.2		
With man of unknown HIV status	Sexual partner	83.5	79.7		
	Unprotected receptive anal	19.7	21.9		
	Receptive oral to ejaculation	38.0	42.6		
	Unprotected insertive anal	21.9	26.3		
Condom failure behaviours	Wore a condom	53.6	68.1	75.0	
	% of users	use for 30 minutes +	13.2	15.0	28.6
		saliva as lubricant	11.5	15.0	14.3
		no lubricant	11.9	12.6	7.1
		insufficient lubricant	5.5	10.2	0.0
		unrolling prior to use	5.1	4.9	14.3
		condom too short	5.1	4.5	14.3
		put lubricant inside	6.8	7.7	14.3
had a failure	10.6	9.0	35.7		

Among men not tested positive, those who had tested negative at some point in the past were more likely to be involved in sexual risk behaviours with men they knew to be positive than were those who had never tested. Behaviours with partners of unknown status were equally common across the HIV testing history groups. Without more detail about the recency of HIV testing and sexual behaviours it is not possible to say which may have contributed to the other. However, this data does support other surveys suggesting that sexual HIV exposure and HIV testing occur in the same men.

Condom wearing and condom failure were most common among positive men. Long intercourse, unrolling, short condoms and putting lube inside were more common among positive men but not significantly so. These data suggest that as well as positive men being a priority for sdUAI needs, they should also be a priority for condom failure needs. This means any programme of interventions intended to reduce condom failure should disproportionately benefit positive men.

4.4.1 NHS Board of residence and HIV related sexual behaviours

The following table shows the differences in the sexual risk behaviour and condom failure measures in the three NHS Board sub-samples. Note that the rest of the tables in this section only concern men who have not tested HIV positive.

Men not tested HIV positive, who had sex with a man in the last year (N=812, missing 3)		% by NHS Board of residence			
		Lothian (n=331)	Greater Glasgow (n=209)	Elsewhere (n=272)	
Male sexual partners in last year	One	22.7	18.7	21.8	
	30+	8.9	13.4	5.2	
With man known to be positive	Sexual partner	11.1	5.9	3.4	
	Unprotected receptive anal	2.5	0.0	0.4	
	Receptive oral to ejaculation	1.9	1.5	0.0	
	Unprotected insertive anal	2.8	0.0	0.0	
With man of unknown HIV status	Sexual partner	81.5	84.8	80.0	
	Unprotected receptive anal	20.1	20.2	22.0	
	Receptive oral to ejaculation	38.1	44.2	39.5	
	Unprotected insertive anal	21.8	24.1	26.1	
Condom failure behaviours	Wore a condom	59.8	62.6	59.4	
	% of users	use for 30 minutes +	17.1	15.2	11.1
		saliva as lubricant	13.2	11.4	15.4
		no lubricant	12.2	12.9	11.7
		insufficient lubricant	5.9	11.4	6.8
		unrolling prior to use	4.4	6.8	5.6
		condom too short	5.9	6.1	3.7
		put lubricant inside	7.8	7.6	6.8
had a failure	8.8	12.1	11.1		

Although men in Greater Glasgow were more likely to have had high numbers of sexual partners, among those not tested positive, having had sex with a man known to be HIV positive was more common in Lothian (11.1%) compared to Greater Glasgow (5.9%). This difference reflects the earlier finding that more men in Lothian have diagnosed HIV infection (3.9%) compared with Greater Glasgow (2.2%). That is, there are more positive men in Lothian to have sex with. There was no significant difference in having had sex with a man whose HIV status they did not know, or having done each of the three sexual risk behaviours with a man of unknown status.

Having worn a condom for IAI was equally common in the three areas, as was having done each of the condom failure risk behaviours and having experienced failure.

4.4.2 Age and HIV related sexual behaviours

The following table shows the differences in the sexual risk behaviour and condom failure measures in five age bands.

Men not tested HIV positive, who had sex with a man in the last year (N=811, missing 4)		% by age					
		< 20 (n=66)	20s (n=319)	30s (n=289)	40s (n=95)	50+ (n=42)	
Male sexual partners in last year	One	21.2	16.7	25.9	22.1	29.3	
	30+	<u>4.5</u>	6.0	12.9	10.5	<u>4.9</u>	
With man known to be positive	Sexual partner	4.7	6.1	10.6	3.3	4.9	
	Unprotected receptive anal	1.6	1.6	0.7	0.0	2.6	
	Receptive oral to ejaculation	3.1	1.3	0.7	1.1	0.0	
	Unprotected insertive anal	1.6	1.3	1.4	0.0	0.0	
With man of unknown HIV status	Sexual partner	87.5	80.8	82.8	83.5	73.2	
	Unprotected receptive anal	30.6	22.8	19.4	12.6	17.9	
	Receptive oral to ejaculation	56.3	45.0	37.2	28.6	<u>20.5</u>	
	Unprotected insertive anal	34.4	23.4	24.7	17.2	23.1	
Condom failure behaviours	Wore a condom	62.1	64.2	60.8	<u>43.6</u>	50.0	
	% of users	use for 30 minutes +	26.8	17.2	<u>10.0</u>	13.0	<u>10.0</u>
		saliva as lubricant	19.5	14.8	10.6	15.2	5.0
		no lubricant	22.0	12.0	10.6	10.9	10.0
		insufficient lubricant	14.6	7.7	4.4	10.9	15.0
		unrolling prior to use	0.0	6.7	5.6	4.3	5.0
		condom too short	7.3	5.3	4.4	2.2	10.0
		put lubricant inside	4.9	5.3	11.1	6.5	5.0
had a failure	12.2	9.6	10.6	10.9	15.0		

Having large numbers of male partners was most common among men in their 30s. None of the sexual risk behaviours were significantly associated with age except receptive oral intercourse to ejaculation with partners of unknown status, which was most common among men under 20.

The group most likely to have worn a condom for IAI was men in their 20s. Experience of condom failure did not vary with age and only one condom failure risk behaviour did. Having IAI for over half an hour without changing the condom was most common among men under 20 and men who had done this were significantly younger than those who had not.

4.4.3 Education and HIV related sexual behaviours

The following table shows the differences in the sexual risk behaviour and condom failure measures in three education groups.

Men not tested HIV positive, who had sex with a man in the last year (N=802, missing 13)		% by education			
		Low (n=157)	Medium (n=277)	High (n=368)	
Male sexual partners in last year	One	21.8	19.3	23.0	
	30+	4.5	10.2	9.3	
With man known to be positive	Sexual partner	7.3	6.0	7.4	
	Unprotected receptive anal	1.3	1.1	0.8	
	Receptive oral to ejaculation	0.7	1.8	0.3	
	Unprotected insertive anal	1.3	1.1	0.6	
With man of unknown HIV status	Sexual partner	78.1	86.6	80.2	
	Unprotected receptive anal	20.4	23.5	18.9	
	Receptive oral to ejaculation	38.9	45.0	37.1	
	Unprotected insertive anal	22.7	27.6	21.7	
Condom failure behaviours	Wore a condom	53.2	56.7	66.9	
	% of users	use for 30 minutes +	17.0	15.7	12.9
		saliva as lubricant	11.4	13.8	13.7
		no lubricant	9.1	14.5	11.7
		insufficient lubricant	8.0	8.8	6.9
		unrolling prior to use	8.0	5.7	4.4
		condom too short	6.8	6.3	4.0
		put lubricant inside	10.2	7.5	6.5
had a failure	12.5	8.9	10.5		

None of the sexual risk behaviours varied by education group, although men with medium levels of education were most likely to have sex with a partner of unknown status.

Men with higher education were significantly more likely to have worn a condom, and men with low education were least likely to have done so. However, there were no education differences in experience of condom failure or the behaviours that contribute to it.

4.4.4 Gender of sexual partners and HIV related sexual behaviours

The following table shows the differences in the sexual risk behaviour and condom failure measures between exclusively homosexually active men and behaviourally bisexual men.

Men not tested HIV positive, who had sex with a man in the last year (N=813, missing 2)		% by gender of partners		
		Men only (n=740)	Men & women (n=73)	
Male sexual partners in last year	One	22.1	14.1	
	30+	9.1	5.6	
With man known to be positive	Sexual partner	6.6	12.7	
	Unprotected receptive anal	1.3	0.0	
	Receptive oral to ejaculation	1.0	2.8	
	Unprotected insertive anal	1.3	0.0	
With man of unknown HIV status	Sexual partner	81.2	87.3	
	Unprotected receptive anal	20.9	18.6	
	Receptive oral to ejaculation	40.5	36.6	
	Unprotected insertive anal	23.7	26.5	
Condom failure behaviours	Wore a condom	59.6	65.7	
	% of users	use for 30 minutes +	14.4	17.0
		saliva as lubricant	13.7	10.6
		no lubricant	11.5	19.1
		insufficient lubricant	7.1	12.8
		unrolling prior to use	5.8	2.1
		condom too short	5.3	4.3
		put lubricant inside	7.3	8.5
		had a failure	10.9	4.3

Men who had sex with women as well as men appear both less likely to have one male partner and less likely to have very large numbers of male partners, compared to men who had sex only with men. However, there were no statistically significant differences between the two groups in sexual HIV risk behaviours nor in condom use or condom failure measures.

4.4.5 Number of partners and HIV sexual related behaviours

The following table shows the differences in the sexual risk behaviour and condom failure measures by the number of male sexual partners respondents had in the last year.

Men not tested HIV positive, who had sex with a man in the last year (N=809, missing 6)		% by number of male partners					
		One (n=174)	2, 3 or 4 (n=246)	5 to 12 (n=215)	13 to 29 (n=103)	30+ (n=71)	
With man known to be positive	Sexual partner	4.4	5.9	5.7	9.9	17.1	
	Unprotected receptive anal	1.8	1.3	1.0	0.0	1.4	
	Receptive oral to ejaculation	0.6	2.1	0.0	0.0	4.4	
	Unprotected insertive anal	1.8	1.3	0.5	0.0	2.9	
With man of unknown HIV status	Sexual partner	48.8	83.3	96.2	90.1	97.1	
	Unprotected receptive anal	14.5	18.3	25.5	25.7	22.9	
	Receptive oral to ejaculation	22.1	34.9	46.9	51.0	64.7	
	Unprotected insertive anal	12.6	18.0	28.5	36.6	39.7	
Condom failure behaviours	Wore a condom	36.0	54.3	70.6	76.7	81.7	
	% of users	use for 30 minutes +	8.2	12.7	14.6	15.0	23.8
		saliva as lubricant	6.6	11.2	11.5	12.5	30.2
		no lubricant	6.6	9.7	10.8	15.0	22.2
		insufficient lubricant	4.9	6.0	5.1	8.8	19.0
		unrolling prior to use	8.2	5.2	3.8	7.5	4.8
		condom too short	1.6	6.0	3.2	6.3	9.5
		put lubricant inside	3.3	5.2	8.9	7.5	11.1
had a failure	9.8	4.5	10.2	6.3	30.2		

Seven (4.4%, n = 160) of the negative or untested men who had one partner only in the last year indicated they knew that partner had HIV. Of these seven men, three (41%) had receptive UAI with that positive partner. Men with thirty or more partners in the last year were, unsurprisingly, much more likely to have a partner they knew to be positive (12 of 70 men, or 17.1%). However, of the twelve who did, only one (8%) had URAI with a known positive partner. This suggests that when men know their partner is HIV sero-discordant to themselves, sexual exposure is much more likely to occur when the partners are in a monogamous relationships, rather than in open or casual relationships.

Men with large numbers of partners were most likely to have partners of unknown status. Interestingly, although they were most likely to have UIAI and take men's ejaculate in their mouths, as in known sero-discordant sex, they were not more likely than men with fewer partners to have URAI with partners of unknown status.

Wearing condoms is most common among the same group of men who were most likely to have unprotected insertive anal intercourse, ie. those with larger numbers of partners. Several condom failure risk behaviours were more common among men with higher numbers of partners, two (using saliva and using insufficient lubricant) significantly so. Unsurprisingly, men with higher numbers of partners were most likely to experience condom failure.

4.5 SUMMARY & IMPLICATIONS FOR PROGRAMME PLANNING

The following recommendations for programme planning arise from the behavioural data reported in this chapter. They are based on the assumption that programmes will have a greater impact on sdUAI and condom failure if they disproportionately benefit men who are more likely to be involved in HIV exposure as a consequence of sdUAI and/or condom failure during protected anal intercourse. We also assume that groups who were more likely to engage in these behaviours in the last year will be most likely to do them in the future. However, since unmet needs do not directly give rise to risk behaviours (but are contributory along with other factors such as opportunities and values), these recommendations are not identical to those based on need in Chapter 5.

4.5.1 Prioritising groups likely to be involved in sdUAI

The first implication for planning drawn from *Scotland Counts* and data presented here is:

- **All HIV prevention programmes (but not all individual interventions) should disproportionately benefit men with diagnosed HIV infection.**

Since men with HIV have far more opportunity to be involved in sexual HIV exposure their unmet HIV prevention needs are more likely to result in HIV exposure. Addressing the needs of men with diagnosed HIV will contribute to reducing HIV incidence and improving the health and well-being of people with HIV. We do not mean that prevention programmes should *only* address the needs of diagnosed positive men. This would be incorrect both because of undiagnosed infection and because positive men do not hold all the power in any sexual interaction they participate in.

Among the majority of men who have not tested positive, the data presented in this chapter supports our previous recommendations from our surveys of residents of England and Wales. In these we have recommended prioritising the HIV prevention needs of younger rather than older men. While not all age differences are statistically significant this data suggests:

- **Programmes to reduce sdUAI should disproportionately benefit men who are under 30 years of age (and especially those under 20).**

In previous years, survey data from England and Wales has suggested that men with lower levels of formal education are more likely to be involved in sdUAI than men with higher levels of education. Data on sexual behaviour from Scottish-resident men does not show a very clear pattern but we feel confident recommending that:

- **Programmes to reduce sdUAI should disproportionately benefit men who have not received university education.**

The contexts in which exclusively homosexually active men and behaviourally bisexual men are involved in sdUAI vary but not in a uniform or predictable way. As a consequence no recommendation can be made about their prioritisation.

In previous years, survey data from England and Wales has suggested that in order to increase their impact on HIV incidence, prevention programmes should prioritise men with larger rather than fewer numbers of male partners. Data from Scottish-resident men strongly reinforces that recommendation:

- **Programmes to reduce sdUAI should disproportionately benefit men with larger numbers of male sexual partners.**

While there are differences in patterns of sexual behaviour between residents of Lothian, Greater Glasgow and elsewhere we do not make recommendations for prioritisation.

4.5.2 Prioritising groups likely to experience condom failure

Taken together, the prevalence of condom failure risk behaviours suggest a range of interventions concerning condom and lubricant use. It also suggests it may be necessary to make available more condoms than there are sexual sessions involving anal intercourse.

In terms of target groups for condom failure interventions, the data suggests similar groups experience condom failure as are involved in sdUAI. The implications are that programmes to reduce condom failure should disproportionately benefit:

- **men with diagnosed HIV infection;**
- **men under 30 years of age (and especially those under 20);**
- **men who have not received university education; and**
- **men with larger numbers of sexual partners.**

5 HIV prevention needs

Scotland Counts (Hickson, Nutland *et al.*, 2001) describes a framework to reduce the number of sexual HIV exposures occurring between men and to reduce the probability of HIV transmission when exposures occur. The ten general health promotion aims are grouped according to the three targets they are intended to reduce. The needs were generated by asking *What do men need to have control over their involvement in sdUAI, to minimise their rate of condom failure and to have other STIs quickly diagnosed and treated?*

One aim of this survey was to generate evidence about the extent to which these aims are not met. The indicators of need we use are simple and the picture they contribute to is cumulative. The data reported here should be put alongside other data about the unmet HIV prevention needs from other previous and future surveys. This survey contributed fourteen indicators of need in two substantial areas, self-identified information need (Aim 2 of *Scotland Counts*) and assumptions of sexual partners' HIV statuses (Aim 4).

Scotland Counts also suggests prioritising aims which are poorly met for a large proportion of the population in order to maximise the impact of HIV prevention initiatives on HIV incidence. Unmet needs shared by many men take fewer resources per target to meet than do less common needs. To aid in prioritisation we look at how need varied across the population groups described in Chapter 2. In this chapter we return to the whole sample (N=877), including those men who did not have sex with a man in the last year but expected to in the future.

5.1 EXPECTATION OF DISCLOSURE OF HIV INFECTION

The fourth aim of *Scotland Counts* is that men are aware of the possible HIV-related consequences of their sexual actions.

Men were asked to indicate on a five-point scale whether they agreed or disagreed with the statement *I'd expect a man with HIV to tell me he was positive before we had sex*. Overall, three quarters of men (76.0%) agreed that they would expect a man with HIV to disclose his status prior to sex (53.6% *agreed strongly*). Of the remainder, 14.3% disagreed and 9.7% were *unsure*. This suggests common unmet need in Aim 4 of *Scotland Counts*, particularly:

- 4.3 Men are aware that some men have undiagnosed HIV infection.
- 4.4 Men are aware that some men believe their HIV status to be other than it actually is.
- 4.7 Men are aware that some men who know they have HIV will engage in UAI without revealing their positive status.

Among the men who had not tested HIV positive (n=848), the majority (81.6%) had sex with a man whose HIV status they did not know in the last year. Whether or not men had UIAI or receptive oral intercourse to ejaculation with partners of unknown status did not vary with agreement to this statement, but having receptive unprotected anal intercourse did. Overall, a quarter (25.5%) of these men had receptive UAI with a partner of unknown HIV status. The following table shows how that proportion varied by whether men agreed or disagreed with the statement.

Men not tested positive who had a partner of unknown HIV status in the last year (n=619, missing 23)	I'd expect a man with HIV to tell me he was positive before we had sex		
	Agree (n=458)	Not sure (n=69)	Disagree (n=92)
URAI with man of unknown status	27.3	27.5	15.2

Those who agreed with (or were not sure about) this statement were more likely to have URAI with a partner of unknown status than those who disagreed. This is evidence for the validity of Aim 4 of *Scotland Counts*. How this need (the need not to expect disclosure) varies across the groups is reported in Section 5.4.

5.2 ASSUMPTION OF SERO-NEGATIVITY OF PARTNERS

Men were asked to indicate on a five-point scale whether they agreed or disagreed with the statement *If my sexual partners don't mention HIV I usually assume they are negative*.

Over a third (39.9%) agreed they would assume sexual partners were negative unless told otherwise (8.0% *agreed strongly*). Of the remainder, 19.9% were *unsure* and 47.2% disagreed (23.5% *disagreed strongly*). Again this suggests common unmet need in Aim 4 of *Scotland Counts*, particularly:

- 4.2 Men know that a man's appearance, age, ethnic group, life experience and behaviour are neither accurate nor reliable ways of telling whether they are infected with HIV or not.

Whether or not men (who had not tested positive and who had a partner of unknown status) had URAI with partners of unknown status did not vary with agreement to this statement, but having URAI and ROIj did, as the following table shows:

Men not tested positive who had a partner of unknown HIV status in the last year (n=614, missing 28)	If my sexual partners don't mention HIV I usually assume they are negative		
	Agree (n=269)	Not sure (n=132)	Disagree (n=213)
URAI with man of unknown status	33.8	24.4	16.4
ROIj with man of unknown status	56.8	47.7	39.2

Those who agreed with this statement were most likely to have URAI and ROIj with a partner of unknown status, those who disagreed were least likely. This is further evidence for the validity of Aim 4 of *Scotland Counts*. How this need (the need not to assume HIV negativity in sexual partners) varied across the groups is reported in Section 5.4.

If we compare this need with the preceding one, we can estimate the proportion of men that expect HIV positive disclosure and would assume the negativity of partners if they did not receive disclosure.

Whole sample (N=844, missing 33)	If my sexual partners don't mention HIV, I usually assume they are negative		
	% Agree (n = 336)	% Not sure (n = 169)	% Disagree (n = 339)
I'd expect a man with HIV to tell me he was positive before we had sex			
% Agree (n = 640)	34.5	16.4	25.0
% Not sure (n = 83)	3.2	2.5	4.1
% Disagree (n = 121)	2.1	1.2	11.0

There is a strong relationship between the given answers for the two statements. More than a third (34.5%) of men would expect positive men to disclose their status prior to sex and assume that lack of disclosure meant their partner was negative. Men who expected positive disclosure were much more likely to assume their partners' were negative compared with men who did not expect positive disclosure.

More than a quarter of men (27.4%) were unsure of their expectations or assumptions on one at least one statement, the majority of these (16.4% of the total) agreed they would expect a positive man's disclosure but were unsure if they would assume negativity in a partner with undisclosed status. A similar proportion (25.0%) and the next largest group agreed that they would expect a positive man to disclose but would not assume that lack of disclosure meant the partner was HIV negative.

Only 11.0% disagreed with both statements, that is, they would neither expect a man with HIV to disclose or assume that a man with undisclosed status was negative prior to sex. This suggests that 89% of men would benefit from an intervention whose aim is reducing naivety about the HIV status of their sexual partners.

5.3 INFORMATION NEEDS

All men were given a list of sexual health topic areas and asked which they would like more information about. The list was compiled from concerns of health promoters and responses to an open-ended question on another survey. The list was very diverse and included, aspects of ('safer') sexual practice (oral, anal, avoiding condom breakage), inter-personal skills (managing relationships, confidence), practical skills (finding partners) and basic medical information (syphilis, hepatitis, anti-HIV treatments).

Just under a fifth (18.4%) of all men ticked a final category called *none of the above* meaning they were not interested in information on any of these topics.

The table below gives the proportion of all men who wanted more information on each topic (excluding 4.8%, n = 45 who did not complete this question). Topics are ordered largest first.

Which of the following would you like more information about?	% entire sample (N=832)
How to suck safely	34.9
Managing relationships	32.9
Confidence in sexual situations	31.0
How to get a boyfriend	28.6
How to fuck safely	27.9
Hepatitis A, B and C	27.0
Where to find casual sexual partners	24.9
Treatments for HIV infection	21.6
What different kinds of condoms are available	21.5
How to stop condoms tearing or slipping	19.8
Syphilis	18.9
Other topics (see below)	1.8

For all the topics offered, between one sixth and one third of all men wanted more information. The order of popularity of the information areas was not consistent or particularly predictable.

Oral sex was the area of greatest unmet information need (34.9%), probably reflecting the continuing lack of consensus on sexual health risks associated with this behaviour. Information on *How to fuck safely* (27.9%) was only somewhat less popular.

Information (or support) on psycho-social areas such as management of relationships and sexual confidence were also commonly indicated.

Other topics men specified included: condom use (where to get the correct size, how to stay hard wearing one, what to do if it bursts); relationships (as a single dad, partners with an ex-wife and children); broader health and life issues (bisexuality, coping with partner bereavement); and clinical (access to confidential HIV testing).

5.4 VARIATION IN NEED ACROSS POPULATION GROUPS

The previous sections describe fourteen indicators of need. Here we report how these indicators varied across the population groups described in chapter 2. In the following tables we are particularly interested in population groups who have many aims poorly met (ie. high levels of need) compared with others.

5.4.0 HIV testing history and need

The following table shows how the indicators of need varied by HIV testing history.

Whole sample (N=846, missing 31)	% by HIV testing history group		
	Never tested (n=465)	Tested negative (n=361)	Tested positive (n=20)
Who'd expect a man with HIV to disclose before sex	82.6	69.3	47.6
Who'd assume negativity without disclosure	45.3	33.8	20.0
Which of the following would you like more information about?			
Would like more information on any of the following	85.6	77.0	65.0
How to suck safely	39.1	29.5	25.0
Managing relationships	31.9	34.1	30.0
Confidence in sexual situations	31.9	29.8	25.0
How to get a boyfriend	31.2	25.0	25.0
How to fuck safely	33.2	21.0	30.0
Hepatitis A, B and C	25.9	28.1	20.0
Where to find casual partners	26.8	22.4	20.0
Treatments for HIV infection	22.1	20.7	20.0
What different kinds of condoms are available	24.6	17.0	20.0
How to stop condoms tearing or slipping	22.6	16.5	15.0
Syphilis	19.2	17.9	15.0

Naive expectations of disclosure and hazardous assumptions about the HIV status of sexual partners were most common among men who had never tested for HIV. Three sexual health topics were more commonly indicated among men who had never tested also. Although this group evidenced most need on these indicators, the majority of all three groups indicated wanting more information about sexual health.

- Men who have never tested for HIV were most likely to expect a positive man to disclose prior to sex.
- Men who have never tested for HIV were most likely to assume a man was HIV negative if he did not disclose he was positive.
- Men who have never tested for HIV were most likely to want more information about sexual health topics.

5.4.1 NHS Board of residence and need

The following table shows how the indicators of need varied in the area sub-samples.

Whole sample (N=873, missing 4)	% by NHS Board of residence		
	Lothian (n=360)	Greater Glasgow (n=224)	Elsewhere (n=289)
Who'd expect a man with HIV to disclose before sex	71.4	73.2	83.7
Who'd assume negativity without disclosure	37.9	40.8	41.8
Which of the following would you like more information about?			
Would like more information on any of the following	77.9	80.5	86.9
How to suck safely	30.8	29.0	44.7
Managing relationships	32.6	32.4	33.8
Confidence in sexual situations	25.6	31.0	37.8
How to get a boyfriend	24.7	31.9	30.9
How to fuck safely	25.3	21.4	36.4
Hepatitis A, B and C	28.2	25.2	26.5
Where to find casual partners	17.4	28.6	30.9
Treatments for HIV infection	20.6	18.6	25.5
What different kinds of condoms are available	18.9	19.0	26.9
How to stop condoms tearing or slipping	18.9	16.2	24.0
Syphilis	17.4	18.6	20.7

Evidence of extensive unmet HIV prevention need was found in all areas. However, expectation of disclosure and need for more information about half the sexual health topics were significantly more common among men living outside the two main metropolitan NHS Boards. This suggests that at a Scotland-wide level, interventions intended to be of benefit to all men should ensure men living outside Edinburgh and Glasgow have equal if not increased access.

- Men resident outside Lothian or Greater Glasgow were most likely to expect a positive man to disclose prior to sex.
- Men resident outside Lothian or Greater Glasgow were most likely to want more information about sexual health topics.

5.4.2 Age and need

The following table shows how the indicators of need varied across the age range.

Whole sample (N=873, missing 4)	% by age				
	< 20 (n=75)	20s (n=343)	30s (n=306)	40s (n=103)	50+ (n=46)
Who'd expect a man with HIV to disclose before sex	85.1	78.4	69.2	75.2	88.9
Who'd assume negativity without disclosure	51.4	46.2	32.3	34.7	37.8
Which of the following would you like more information about?					
Would like more information on any of the following	91.7	82.4	79.4	77.6	81.8
How to suck safely	48.6	36.8	28.3	30.6	47.7
Managing relationships	43.1	37.7	28.3	23.5	31.8
Confidence in sexual situations	50.0	33.4	24.5	29.6	29.5
How to get a boyfriend	41.7	33.1	22.7	17.3	36.4
How to fuck safely	43.1	31.3	23.1	21.4	22.7
Hepatitis A, B and C	38.9	30.7	26.6	17.3	4.5
Where to find casual partners	31.9	25.5	22.7	20.4	29.5
Treatments for HIV infection	44.4	25.8	16.8	11.2	6.8
What different kinds of condoms are available	33.3	24.6	17.5	11.2	27.3
How to stop condoms tearing or slipping	38.9	22.8	14.0	13.3	18.2
Syphilis	31.9	21.9	16.1	13.3	6.8

All of the indicators of need were highest among the under 20 year olds and declined among the 20s, 30s and 40s. Some however rise again among the over 50s, a pattern observed elsewhere. The implication of this pattern is clear. All HIV prevention programmes should disproportionately benefit younger men rather than older men. This does not mean excluding older men from interventions, but planning interventions for settings where they will be disproportionately encountered by younger men, ensuring they are appropriate and acceptable to younger men, and that they address needs commonly unmet among younger men.

- Men under 20 and over 50 years of age were most likely to expect a positive man to disclose prior to sex.
- Men under 20 years of age were most likely to assume a man was HIV negative if he did not disclose he was positive.

5.4.3 Education and need

The following table shows how the indicators of need varied across the education groups.

Whole sample (N=864, missing 13)	% by education group		
	Low (n=175)	Medium (n=297)	High (n=392)
Who'd expect a man with HIV to disclose before sex	85.2	78.8	70.2
Who'd assume negativity without disclosure	43.4	42.0	36.6
Which of the following would you like more information about?			
Would like more information on any of the following	82.6	83.5	79.5
How to suck safely	32.9	40.5	31.8
Managing relationships	28.1	35.9	33.4
Confidence in sexual situations	24.0	37.0	30.2
How to get a boyfriend	28.7	32.7	25.1
How to fuck safely	34.1	27.1	25.9
Hepatitis A, B and C	21.6	32.7	25.1
Where to find casual partners	31.7	25.7	21.3
Treatments for HIV infection	18.0	28.5	17.8
What different kinds of condoms are available	22.2	22.5	19.9
How to stop condoms tearing or slipping	23.4	19.4	18.6
Syphilis	21.0	22.5	15.6

Six of the indicators significantly differed by education but in no case was the higher educated group in most need. Men in the lower education group were more likely to be naive about HIV and disclosure and also more likely to want to know how to find casual sexual partners. Three other topics were most commonly indicated by men in the middle education group. Since the higher education group consists of men who have a university degree, the implication of this data is that programmes should disproportionately benefit men who *have not* been to university.

- Men who left school at 16 were most likely to expect a positive man to disclose prior to sex.
- Men who left school at 16 were most likely to assume a man was HIV negative if he did not disclose he was positive.

5.4.4 Gender of sexual partners and need

The following table shows how the indicators of need varied according to the gender of men's sexual partners in the last year. The nine men who had sex with women only are grouped with the 25 men who had sex with no one.

Whole sample (N=875, missing 2)	% by gender of partners		
	No men (n=34)	Men only (n=767)	Men & women (n=74)
Who'd expect a man with HIV to disclose before sex	88.2	75.1	79.2
Who'd assume negativity without disclosure	41.2	40.1	38.9
Which of the following would you like more information about?			
Would like more information on any of the following	84.4	81.2	84.1
How to suck safely	50.0	33.1	47.8
Managing relationships	25.0	34.7	18.8
Confidence in sexual situations	37.5	31.0	29.0
How to get a boyfriend	34.4	28.8	24.6
How to fuck safely	50.0	25.9	37.7
Hepatitis A, B and C	15.6	28.4	18.8
Where to find casual partners	28.1	23.7	36.2
Treatments for HIV infection	12.5	22.2	20.3
What different kinds of condoms are available	18.8	21.7	21.7
How to stop condoms tearing or slipping	28.1	20.3	11.6
Syphilis	18.8	18.8	18.8

No overall pattern of need emerged according to gender of sexual partners. Three of the knowledge indicators varied significantly. Men who had sex with men only (mainly gay men) were most likely to want to know more about managing relationships. Information about 'safer' anal intercourse and 'safer' oral intercourse was most commonly sought by those who had no sex with men in the last year.

5.4.5 Number of partners and need

The following table shows how the indicators of need varied by whether they had any sex in the last year and the number of male sexual partners they had.

Whole sample (N=849, missing 28)	% by number of male partners					
	None (n=34)	One (n=168)	2,3 or 4 (n=247)	5 to 12 (n=220)	13 to 29 (n=103)	30 + (n=77)
Who'd expect a man with HIV to disclose before sex	88.2	79.8	82.2	77.3	68.0	51.9
Who'd assume negativity without disclosure	41.2	31.5	43.3	42.2	39.2	42.9
Which of the following would you like more information about?						
Would like more information on any of the following	84.4	73.2	81.5	84.3	87.0	83.3
How to suck safely	50.0	26.8	33.2	38.0	32.0	44.4
Managing relationships	25.0	31.5	29.8	36.6	33.0	38.9
Confidence in sexual situations	37.5	25.0	36.1	31.0	33.0	23.6
How to get a boyfriend	34.4	17.3	29.4	32.4	31.0	33.3
How to fuck safely	50.0	24.4	23.9	34.7	21.0	29.2
Hepatitis A, B and C	15.6	22.0	23.9	31.9	30.0	34.7
Where to find casual partners	28.1	15.5	21.4	26.9	32.0	40.3
Treatments for HIV infection	12.5	13.7	18.5	25.0	28.0	33.3
What different kinds of condoms are available	18.8	17.3	21.0	23.6	20.0	25.0
How to stop condoms tearing or slipping	28.1	20.8	17.6	22.2	13.0	20.8
Syphilis	18.8	14.9	16.8	20.4	22.0	18.9

Unmet need varied by volume of sexual partners but not in a simple pattern.

As noted above, men with no male partners appear more naive about positive disclosure than others, while men with 30 or more partners were least likely to expect disclosure (although over half of them still did). Men with no male partners in the last year were also most likely to require information on 'safer' anal and oral intercourse.

Perhaps unsurprisingly, men with one partner only were less likely to want to how to find regular or casual partners. Information on where to find casual partners was most common required by the men with most partners. Men with the largest number of partners were also most likely to want more information on anti-HIV treatments.

- Men who had no male partners in the last year – but intended to in the future – were most likely to expect a positive man to disclose prior to sex.

5.5 SUMMARY & IMPLICATIONS FOR PROGRAMME PLANNING

These implications for programme planning should be read in conjunction with those at the end of Chapters 3 and 4. They are intended to suggest where the emphasis in HIV prevention programmes might have the greatest impact on the achieving equity of HIV health promotion aims.

5.5.1 Aims poorly met for many men

More than three quarters (76.0%) of all homosexually active men expect that an HIV positive man will disclose their infection to them prior to sex. This expectation was especially widespread among men who had not tested HIV positive (but was fairly common among those who had). While the proportion with this expectation is very large, it does not automatically translate into risk-taking. However, well over a third (39.9%) of all homosexually active men would assume a partner was negative if they were not told he was positive. Examining the relationship between these two beliefs we find that over a third (34.5%) of all men would expect positive men to disclose their status prior to sex *and* would assume that the lack of positive disclosure meant that partner was negative.

Debate about whether positive (or negative) men *should* disclose their HIV status is not helpful here. The point is that many positive men often do not disclose their status to new sexual partners. Moreover, some negative men will sometimes decide not to use a condom because, having not been told their partner is positive, will assume them to be negative. The unmet need here is an awareness of what is going on and mass media interventions may be useful.

Instead of testing men's knowledge of matters related to HIV or sexual health we gave men a list of topics and asked what they would like more information about. The list was very diverse and included aspects of ('safer') sexual practice, inter-personal and practical skills and basic medical information. While a fifth of men said they wanted no more information on any of these topics the widespread notion that all gay men are 'tired' of receiving HIV and sexual health information is not supported. For all the topics offered, between more than one sixth and more than a third of all men wanted more information. The order of popularity of specific areas of need was not predictable but information on *How to suck safely* was wanted by the largest number of men.

5.5.2 Groups for whom many aims are poorly met

Men who have never tested for HIV have greater need on almost all of these indicators. Although men who have never tested do not appear to be at increased likelihood of involvement in sexual HIV exposure, these needs may indicate a relative lack of control or choice in sexual actions. While some needs are similarly high among men who have previously tested negative, men with diagnosed HIV are substantially less needy in terms of expectations, assumptions and most aspects of potential information provision.

Men resident elsewhere in Scotland were more likely to indicate unmet need on almost all indicators compared with residents of Lothian or Greater Glasgow. Although men resident outside Lothian or Greater Glasgow do not appear to be at increased likelihood of involvement in sexual HIV exposure, these needs may indicate a relative lack of control or choice in sexual actions.

Men under the age of 20 have greatest need on almost all indicators. On most indicators men aged 20–29 are next most needy but some needs increase again among men over 50.

We have consistently recommended programmes prioritise the needs of men with lower levels of formal education, both because they are likely to be involved in exposure and because nearly all indicators of need that show difference across education groups show more need among men with lower levels of education. The data on Scottish-resident men reported here concurs with this implication.

Similarly, men who expect to have sex with a man in the future but had no sex in the last year (and subsequently no involvement in HIV exposure) had the greatest need on almost all these indicators. This highlights the problems with using only sexual behaviour to determine who would benefit from HIV prevention interventions. It is likely these men will have sex in the future, and their indicators of need suggest they will be more likely to be involved in HIV exposure when they do. Addressing this relatively small group's prevention needs may be a sound investment for the future.

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