Time for more

Findings from the National Gay Men's Sex Survey 2000

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Original Research Report

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ABBREVIATIONS AND JARGON

Letters	What they stand for	Further explanation of their use in this report
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
sdUAI	sero-discordant unprotected anal intercourse	UAI between HIV infected and uninfected men
HA	Health Authority	
HAM	homosexually active men	a man who has had any sex with other men (in this instance, in the last year)
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	a man that has had sex with men and women (in this instance, in the last year)
HIV	human immune deficiency virus	an infectious agent most commonly acquired in England during sex between men
STI	sexually transmitted infection	infectious agents acquired during sex (including HIV)
<	less than	
>	more than	
NS	non significant	if we had done the survey multiple times, this difference would probably be observed in *more than one in twenty* of the surveys, purely by chance
p<.01	probability less than 1%	if we had done the survey multiple times, this difference would probably be observed in *fewer than one in a hundred* of the surveys, purely by chance
p<.001	probability less than 0.1%	if we had done the survey multiple times, this difference would probably be observed in *fewer than one in a thousand* of the surveys, purely by chance
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.

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1 Introduction

1.1 CONTENT OF THE REPORT

This research report outlines the main findings of the fourth annual National *Gay Men's Sex Survey* (henceforth GMSS), carried out during the summer of 2000 by Sigma Research in partnership with 71 health promotion agencies across England and Wales. The information contained here is about HIV infection, sex between men and HIV prevention needs. The audience for the report is people involved in planning HIV prevention programmes to address the HIV prevention needs of homosexually active men. This report complements those from the 1997 (Hickson, Reid *et al*., 1998); 1998 (Hickson, Weatherburn *et al*., 1999) and 1999 (Weatherburn, Hickson *et al*., 2000) surveys.

As well as data from the 2000 survey, this report looks at potential changes in behaviours and needs over time using data from previous years' GMSS, usually 1997, 1998 and 1999. The data from these four surveys has been analysed and reported within the framework of *Making It Count* (Hickson *et al*., 2000) and is intended as evidence for planning within that framework.

Chapter 2 gives a brief description of the 2000 sample of 9,789 men living in England and Wales who had sex with another man in the last year. We describe where they live, whether they also had sex with women in the last year, their ages, education and ethnicities and their current relationship status with men. The sample is remarkably similar to previous years surveys and the associations between these characteristics are not reported.

Chapter 3 reports some measures of the impact of HIV on this large sample of men. We report the proportions who had tested positive, are in sero-discordant relationships and personally know others with HIV. The data show a large proportion of men living with and around HIV on a day-to-day basis. Others, however, have had little contact with the epidemic.

Chapter 4 looks at changes over the past few years in the behaviours that transmit HIV: sero-discordant unprotected anal intercourse and condom failure. The data suggest an increase in the proportion managing sexual exposure and a decrease in condom failure. However they also suggest an increase in the proportion being exposed. We also look in detail at self-reporting of other sexually transmitted infections including those thought to facilitate the transmission of HIV.

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 needs are not met, and how that has changed over time. The data in this chapter demonstrates the naivety of simple, unitary explanations of change in aggregate sexual behaviour. It also supports a targeting of interventions to specific unmet needs as well as on the basis of likelihood of involvement in HIV exposure. Chapter 6 examines other sexual needs probably not directly related to HIV prevention.

Throughout this report we draw attention to recently published research on related topics. These papers and reports are briefly described in boxes with dotted borders (see box). The boxes appear in various places in the report with full listings in the References section.

Layout of 'recent publications boxes'

Authors surname and initial (date)
Title of paper or report.
Journal name, volume (issue), page reference OR
City of publication; publisher (telephone number).

A short description of the paper or report and usually some data pertinent to the section the box appears in.

1.2 BACKGROUND TO THE FOURTH NATIONAL 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.

Sigma Research 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 CHAPS has allowed the survey to expand across England and for the first time in 2000, to include Wales. In 1997, we undertook the survey at Pride-type events in six areas of England with the collaboration of CHAPS partners. Half of all the questions were identical, and together this data formed the first national *Gay Men's Sex Survey*, reported in *Making Data Count* (Hickson *et al*., 1998).

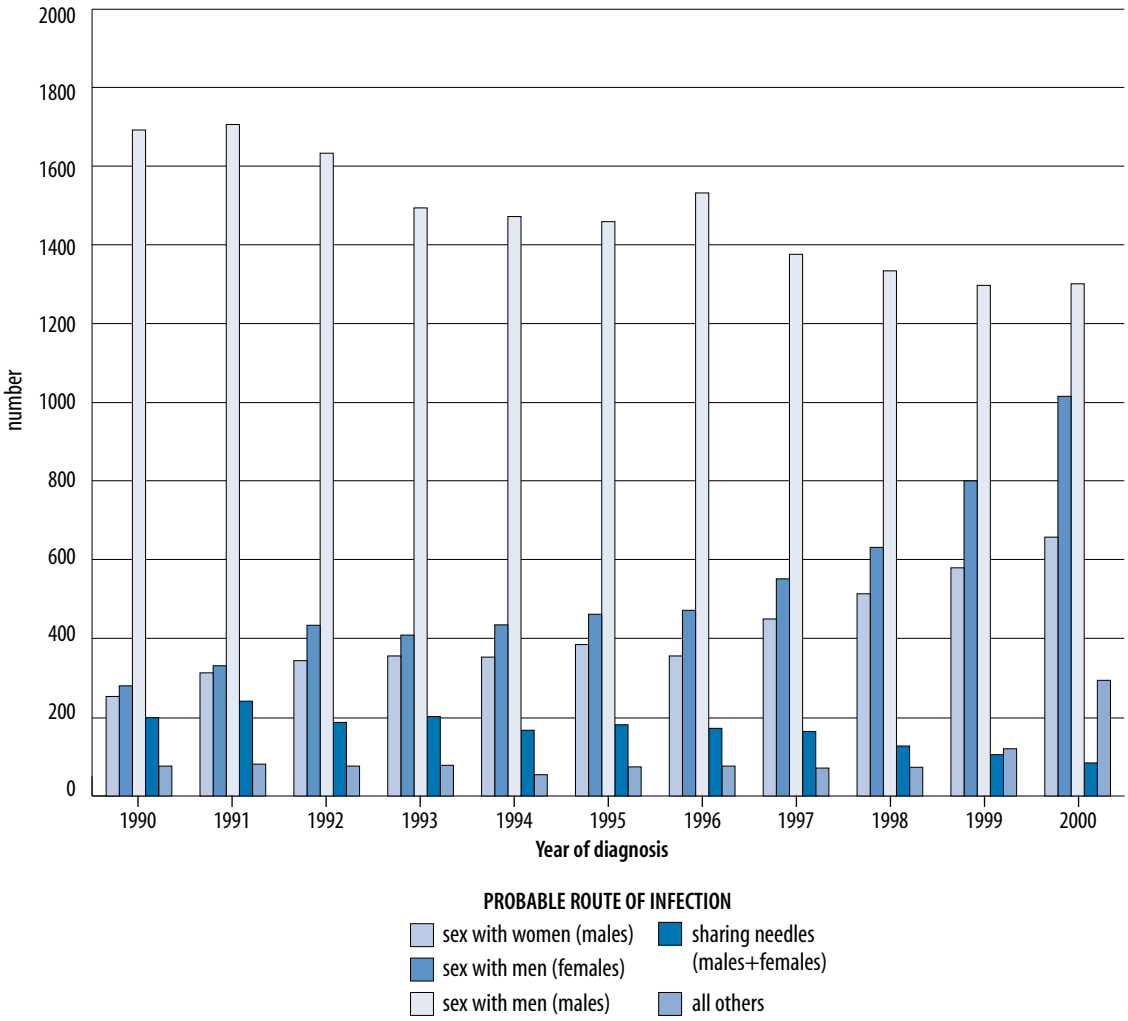
Our second national survey occurred over the summer of 1998. It used a single questionnaire, and was designed to generate evidence of health promotion need within the collaborative planning framework *Making It Count* (Hickson, Nutland, Doyle *et al*., 2000). The content was designed by Sigma Research in collaboration with agencies working within *Making It Count*. In addition to Pride events in CHAPS sites, recruitment occurred at similar events in Blackpool, Newcastle-upon-Tyne, Nottingham and St. Albans. The data was reported in *Evidence for Change* (Hickson *et al*., 1999).

The third national survey was undertaken during the summer of 1999. The content of the survey was designed by Sigma Research in collaboration with 27 HIV health promotion agencies. The Pride event fieldwork was drawn back to our five most productive events from 1998 and the additional resources were used to reprint the entire questionnaire as a small booklet which was self-sealing for Freepost return. The booklet was directly distributed by 64 HIV health promotion agencies.

The fourth national survey was undertaken during the summer of 2000. The content of the survey was designed in collaboration with 20 HIV health promotion agencies after we sent out a questionnaire to assess the priorities of all agencies listed in *Nambase*® as undertaking health promotion with gay men and bisexual men. The Pride fieldwork used the same 5 English events as 1999 (see section 1.3), but Cardiff Mardi Gras was added as a site for the first time after additional monies were made available from the Welsh National Assembly via National AIDS Trust Cymru. Again, the entire questionnaire was re-designed as a booklet which was distributed by at least 56 HIV health promotion agencies, wherever they had contact with homosexually active men (see section 1.4).

Public Health Laboratory Service AIDS Centre and Scottish Centre for Infection & Environmental Health (2001). *AIDS/HIV Quarterly Tables: Cumulative Data to End March 2001. No50:01/1*. London: PHLS (www.phls.org.uk)

These two agencies collate and make available data on the diagnoses of HIV infection in the UK. The year 2000 saw the largest number of reports of HIV diagnoses made in the UK since reporting began. This increase has not been even across the primary routes of infection. Among gay men, the last few years has actually seen a slight decrease in the number of homosexually acquired infections diagnosed, as have those acquired through sharing needles. Conversely, heterosexually acquired infections have increased each year, particularly among women.



UK diagnoses of HIV infection by year of diagnosis, probable route of infection and gender

(Source: PHLS Quarterly Tables No 50:01/1, Table 6a)

1.3 PRIDE EVENTS: RECRUITMENT DATES, EVENTS AND RETURNS

Recruitment occurred at six community-based events in the summer of 2000. The anonymous survey was printed on two sides of A4 for self-completion and was distributed on a clipboard with a pen attached, invariably by personal request from a team of community members. Men completed the forms on the spot and immediately returned them to sealed boxes. The following table shows the events and the number of forms returned to boxes.

City or town	Event	Date in 2000	Returns (% in sample)			
			1997	1998	1999	2000
Birmingham	Birmingham Pride	28th & 29th May	367	661	1228	1455
Blackpool	Fiesta! Fiesta!	—	—	285	—	—
Brighton	Brighton Pride	29th July	762	1309	1081	1574
Bristol	Pride West	—	167	—	—	—
Cardiff	Mardi Gras	2nd September	—	—	—	625
London	Mardi Gras	1st July	1921	1582	2162	2271
Leeds	HydeOut!	23rd July	452	376	554	574
Manchester	Mardi Gras/ Gayfest	26th August	1253	2228	2454	1015
Newcastle	Pride on the Tyne	—	—	176	—	—
Nottingham	Pink Lace	—	—	275	—	—
St. Albans	Pride of Herts.	—	—	56	—	—
Total number of forms returned at Pride events			4,922	6,948	7,479	7,514

In 2000, there was very small increase (1.2%) in the number of men recruited via Pride events compared to 1999. Apart from Cardiff, which was used for the first time, four of the five events previously undertaken showed an increase in the number of men recruited. All these increases in recruitment were off-set by a large fall in the number of men recruited at Manchester Gayfest, which replaced Manchester Mardi Gras. Recruitment at Manchester Gayfest fell because the festival itself was smaller, with less 'market' and 'community' areas and a smaller overall attendance. London Mardi Gras was a fee paying event (£15 per person entry), the others were all free.

1.4 BOOKLET RECRUITMENT

As in 1999, the *Gay Men's Sex Survey* was re-designed and printed as a small (A6) booklet, containing all the same questions as the Pride survey with nine others added. The additional questions concerned three areas: where the respondent got the booklet (2 questions); an open-ended question elaborating on the expected consequences of showing same-sex affection in public; and six questions on same-sex physical, sexual or mental abuse in regular relationships.

The booklet was made available to all HIV health promoters who work with gay men, bisexual men or other men who have sex with men. The central aim of the booklet was to supply HIV health promoters in areas other than the cities used for clipboard recruitment, with a mechanism for collecting local data that did not require independent design, input and analysis. This also allows us to recruit larger numbers of men in demographic groups to which smaller numbers are recruited using Pride events, especially bisexual (and behaviourally bisexual) men, men living away from large urban centres, men at the bottom and top of the age range, men with lower levels of education and men from ethnic groups other than White British. This is not a question of representation, as we do not know the characteristics this sample is drawn from. It is a question of recruiting large enough numbers of men to make estimates of the levels of need in these groups with greater confidence.

In total, 26,450 booklets were requested by and sent out to 61 agencies (see Acknowledgements), many of whom had also distributed the 1999 survey. Agencies were asked to distribute the booklet to men they came into contact with in the course of their work. At the end of the three month period of recruitment, booklets had been returned marked as distributed by 56 different agencies. The average (median) number of booklets returned per agency was 23 (range 1 to 364). We had the responses of twenty or more men from 31 agencies. In March 2001, all these 31 agencies received a targeted data report on the men they had recruited.

The remainder of our 35,000 print run for the booklet (approximately 8,000 booklets) were inserted into an edition of *Boyz*, a free gay weekly newspaper. There were insufficient booklets remaining to insert one in every paper in the print run and insertion took place only two weeks before the closing date. in total 3,590 booklets were returned via Freepost to the Sigma office.

1.5 EXCLUSIONS

The table below gives the number of questionnaires returned during recruitment and a summary of those excluded from the following analysis.

	1997	1998	1999		2000	
			Prides	Booklet	Pride	Booklet
Returns	**4,922**	**6,922**	**7,479**	**3,128**	**7,514**	**3,590**
Less than 25% of questions completed	16 (0.3%)	100 (1.4%)	67 (0.8%)	84 (2.7%)	50 (0.7%)	28 (0.8%)
Residence missing (see below)	79 (1.6%)	103 (1.5%)	0	0	0	0
Visiting Britain from outside the UK	126 (2.6%)	133 (1.9%)	125 (1.7%)	20 (0.6%)	96 (1.3%)	19 (0.5%)
Visiting England from Scotland or N. Ireland	69 (1.4%)	52 (0.8%)	120 (1.6%)	17 (0.5%)	84 (1.1%)	18 (0.5%)
Second forms from the same men	58 (1.2%)	0	187 (2.5%)	137 (4.4%)	204 (2.7%)	131 (3.6%)
No sex with men in the last year	204 (4.1%)	219 (3.2%)	368 (4.9%)	160 (5.1%)	456 (6.1%)	229 (6.4%)
Sample size Homosexually active men resident in England & Wales	**4,370 (88.8%)**	**6,315 (91.2%)**	**6,612 (88.4%)**	**2,710 (86.6%)**	**6,624 (88.2%)**	**3,165 (88.2%)**
			9,322 (87.9%)		**9,789 (88.2%)**	

The proportions of returns that were excluded from the sample in 2000 was very similar to previous years, especially in the clipboard sample. The proportion of incomplete booklets was much lower than the previous year, probably due to a better printing of the design. The proportion of all returns excluded on the basis that the respondent had not been homosexually active in the last year increased, again, partly as a consequence of the changing nature of gay Pride-type events. The proportion of booklet returns that were from men visiting from outside the UK was lower than any year's clipboard recruitment. This is not surprising, as some Pride events attract lesbians and gay men from around the globe. Conversely, repeat respondents were more common in the booklet sample, presumably because men have a much longer period to re-encounter it, in a variety of settings.

2 Sample description

This chapter describes the sample of 9,789 homosexually active men resident in England or Wales. Each section introduces a characteristic, describes how it varies within the sample and compares the answers from men recruited on-the-spot at Pride events with those from men recruited using the booklet distributed by health promoters.

Four of the characteristics described below were used in all of the 1997, 1998 and 1999 *Gay Men's Sex Surveys*. These are their area of residence, age, educational qualifications and ethnicity. In previous years we have reported data by men's preferred term for their sexuality as well as describing the sex they had with women. This year, we concentrate on whether or not men had sex with women as well as men and simply describe below the proportions using different terms to describe themselves. As in 1999 survey we asked men about their current regular relationship/s with men. As in the 1999 and 1998 survey, we again collected data on the number of male sexual partners men had in the last year. This data is not used as a demographic but presented in Chapter 4 on health promotion targets. In the year 2000 survey we did not ask men about their sexual assault history or who they lived with or the types of (non-prescription) drugs they had taken in the last year.

2.1 REGION OF RESIDENCE

First we consider where the sample lived. Prior to 1999 we asked men the first half of their home postcode and reported geographic differences using postcode areas and groupings of them. After discussions with health promoters and health authorities, in 1999 and this year we grouped men according to their health authority of residence. As we felt that men were less likely to know this than to know their local authority (and since in most cases health authority can be deduced from local authority) men were asked *Which Local Authority do you live in*? *(who bills your household for Council Tax?)*. They were asked for their postcode or home town if they did not know their local authority.

Overall, 95.9% of respondents supplied sufficient information to allocate them to a health authority of residence. We have already provided data reports to the 77 health authorities from which at least fifty resident men were recruited. These reports outline the needs of the residents they are responsible for. The ability to undertake at least 28 of these health authority reports was a direct consequence of the local distribution of booklets through collaborating agencies.

Slightly more men (96.2%) gave us sufficient information to allocate them to one of eight English regional offices and Wales. The following table shows each of the English regional offices and Wales, the number of district health authorities each region covers, the number of men resident in each region recruited to this survey, the proportion of the overall sample they represent and the proportion of those men who were recruited using the booklet. This regional breakdown is used for comparative purposes in the rest of this report.

One aim of augmenting our clipboard recruitment with the booklet was to recruit men living in areas where no Pride recruitment occurred. From the table, we can see that the regions where no Pride-based recruitment occurred have some of the highest proportions of booklet recruited men. Especially notable are Trent and the South West where 43.4% and 52.1% of all men were recruited by booklet. We therefore judge the booklets as successful in extending the geographic spread of the sample.

Regional Offices (and Wales)	Number of HAs	number (N)	% of N	% booklet
Eastern	8	470	4.8	33.8
London	16	2035	20.8	15.2
North West	16	1352	13.8	48.9
Northern & Yorkshire	13	691	7.1	32.4
South East	14	1907	19.5	37.3
South West	8	595	6.1	52.1
Trent	11	537	5.5	43.4
West Midlands	13	1263	12.9	28.9
Wales	5	566	5.8	14.0
missing residence info.	—	373	3.8	

It is difficult to say how representative this sample is of the geographic distribution of homosexually active men in England and Wales. As we will see, the majority of these men are gay and have sex with men only. We would therefore probably want to compare this sample to gay men in England and Wales. Although we could use exclusive homosexuality as a surrogate for gay identity (or vice versa), our only denominator study for this sample (Johnson *et al*., 1994) does not differentiate between exclusive homosexuality and behavioural bisexuality and did not ask about sexual identity.

2.2 GENDER OF PARTNERS & TERM USED FOR SEXUALITY

Men were asked *In the last year, have you had sex with: neither men nor women; women only; both men and women; or men only.* As we were trying to recruit homosexually active men (HAM), those who indicated no sexual partners or sex with women only, were excluded from the sample.

The majority of the sample were exclusively homosexually active (referred to as ExHAMs), that is they had sex with men only. The proportion who had sex with women as well as men in the last year is 5.3% (these are referred to as behaviourally bisexual (BB)). This proportion was significantly higher in the booklet sample (7.2%) compared with the clipboard sample (4.4%; $p<.01$), which was one aim of the booklet. However, the majority of men recruited this way were still ExHAMs. In both 2000 and 1999 distribution by booklet has resulted in BB men making up 5.3% of the sample compared to 4.8% and 4.4% in 1997 and 1998 respectively.

Men were also asked *What term do you usually use to describe yourself sexually?* and asked to indicate one of *gay; bisexual; any other term or I don't usually use a term.* Those who indicated *Any other term* were asked to specify what term they used.

While the vast majority of men identified as gay, compared with the clipboard sample, significantly more of the booklet sample identified as bisexual (6.4% versus 3.3%), used another term (1.4% versus 0.6%), or no term for their sexuality (4.4% versus 2.9%). This means 12.2% of the booklet sample did not use the term gay, compared with the 6.8% of the clipboard sample. This difference was similar in all age groups and statistically significant in all but the under 20s.

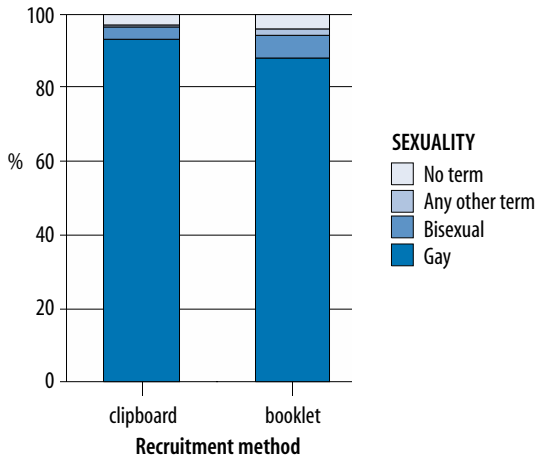


Figure 2.2: Term usually used for sexuality by recruitment method (N=6620, 3160)

Since comparisons of other data by sexual identity were one basis of the 1998 report (Hickson, *et al*., 1999) comparisons in the rest of this report concentrate on differences between behaviourally bisexual and exclusively homosexually active men.

2.3 AGE

The average (mean) age of the 2000 sample was 33.4 years (standard deviation (sd) = 9.9, median 32, range 14 to 80). While a very wide age range was recruited, half were aged between 26 and 39. The median age of the samples was 32 in each year between 1997–2000 (mean 33.6, 33.1, 33.3 & 33.4 years respectively).

The booklet sample (mean age 34.6, median 33) was, on average, older than the Pride sample (mean age 32.9, median 32), even though it included more men under 20 years of age. Figure 2.3 shows the proportion of each sub-sample in each of five age bands. The booklet sample has higher proportions of under 20s (6.7% compared with 5.2%) over 40s (20.2% compared with 16.1%) and over 50s (10.6% compared with 5.5%). The booklet sample has lower proportions of men in their 20s (30.2% compared to 33.8%) and 30s (32.3% compared to 39.4%).

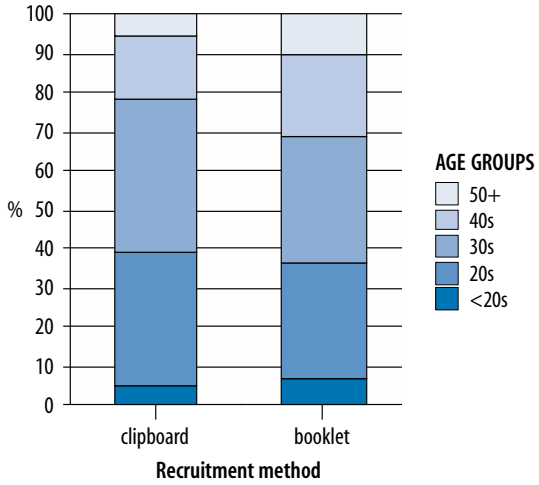


Figure 2.3: Age groups by recruitment method (N=6564, 3113)

An aim of the booklet was to recruit larger numbers of men at the bottom and top of the sexually active age range and these figures suggest this has been successful, especially for men over 40.

2.4 FORMAL EDUCATION

Men were asked *Which of the following educational qualifications do you have?* and instructed to tick each of: *I have no educational qualifications; O-levels / CSE / GCSE; A-levels or equivalent; Degree or higher; or Other qualification.* Those who indicated other qualifications were asked what they were.

Men were then allocated to one of three groups on the basis of their highest educational qualification. Those with no qualifications (5.9%) or O-levels / CSE / GCSE (23.7%, usually leaving education at 16) were classified as 'low'. Those who indicated a degree were classified as 'high' (42.4%). The remaining men were classified as 'medium' (27.9%).

Figure 2.4a shows the proportions in these groups for the two recruitment methods. A significantly higher proportion of the booklet sample were in the 'low' education group

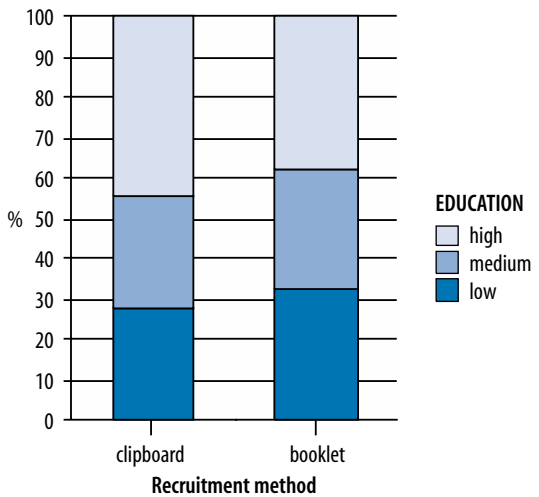


Figure 2.4a: Educational qualification by recruitment method (N=6566, 3149)

(and fewer had a degree) compared to the clipboard sample. This difference was independently statistically significant among men in the 20s, 30s, 40s and those 50+, suggesting it is not simply a result of more older and younger men in the booklet sample. Since one aim of using the booklet was to recruit larger numbers of less well educated men, this confirms the success of the booklet method.

Figure 2.4b shows that the proportion of men who were allocated to one of three education groups was similar in GMSS '97 and '98 and similar in '99 and 2000. Those assigned to medium decreased and those to higher education increased slightly between '98 and '99 when the option 'Diploma' was no longer available. We assume some men who would have previously answered diploma may now chose degree or higher to signify their highest educational qualification.

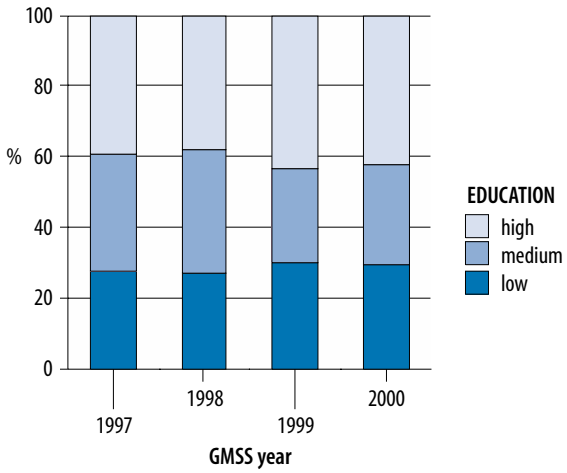


Figure 2.4b: Education groups in GMSS, 1997–2000 (N=4617, 6287, 9277, 9715)

2.5 ETHNICITY

The ethnic group question was derived from the Census (Coleman & Salt, 1996). Men were asked *What is your ethnic group?* and asked to indicate one following (the number in brackets is the number of men in that group): *Chinese* (57); *Asian* (164, composed of 103 *Indians*, 27 *Pakistanis* and 34 *Other Asians*); *Black* (130, composed of 21 *Black Africans*, 88 *Black Caribbeans* and 21 *Other Blacks*); *White* (9246, composed of 7938 *British*, 263 *Welsh*, 485 *Irish* and 560 *other Whites*), *Mixed ethnicity* (106), *or any other group* (61). Men who ticked *Other* were asked to specify their ethnic group.

The pie in Figure 2.5 shows the proportion of men in the entire sample who indicated their ethnicity as White British (81.3% of the entire sample), White Welsh (2.7%), White Irish (5.0%), other White (5.7%) or a non-White ethnicity (5.3%). The column on the right illustrates the ethnic diversity within the non-White group.

The proportion of men from minority ethnic groups in the clipboard and booklet samples did not significantly differ and were in fact remarkably similar. Hence, the booklet method was not effective at recruiting larger numbers of men from groups other than White British compared to the clipboard method. The proportion of men of a non-white ethnicity was similar in the last four years of the survey.

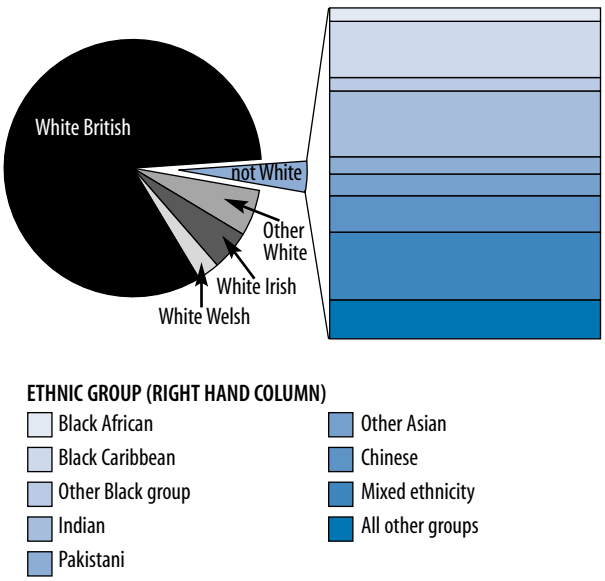


Figure 2.5: Ethnic group in GMSS 2000 (N=9764)

For ethnic group comparisons five groups are used in the rest of the report: Asian / Asian British; Black / Black British; White British (including White Welsh); other White (including White Irish); and other, not White (including Chinese).

2.6 (MALE) RELATIONSHIP STATUS

All respondents were asked *Do you currently have a regular male sexual partner?*: 58.3% said they had (2.4% did not answer).

Men were allocated to one of three groups based on whether they had a regular male partner or not, and if so whether they had been partnered for more or less than a year (Figure 2.6a). Of those who answered, similar proportions were single (42.4%) or had been partnered for longer than one year (38.2%). A smaller group (19.4%) had recently started a regular relationship (ie. within the last 12 months).

These men were asked *How long have you and your primary partner been together?* Figure 2.6b shows the distribution of the length of current relationships. The average (median) length of these primary relationships was 2 1/3 years, with a range from one month to forty years. (As these lengths are current, this should not be confused with the average length of relationships by the time they cease).

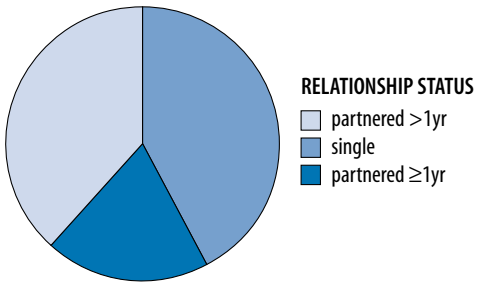


Figure 2.6a: Male relationship status across the sample (N=9075)

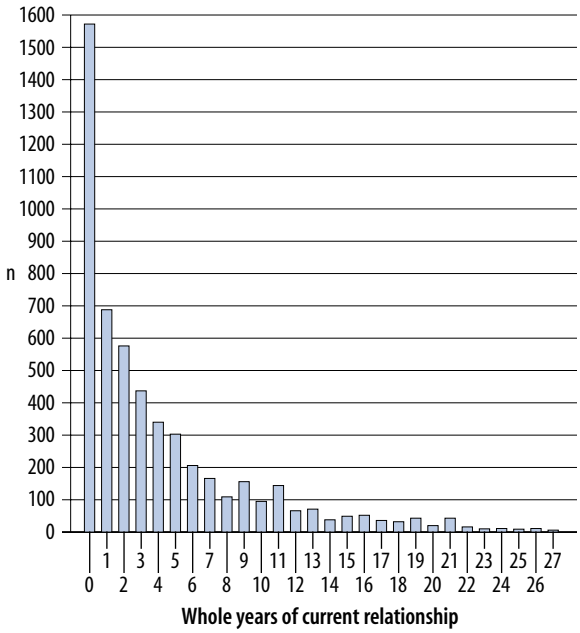


Figure 2.6b: Number of men in regular (male) sexual relationships of increasing duration (N=5229)

3 HIV testing and proximity to the epidemic

The overall goal of *Making It Count is* a reduction in the incidence of HIV infection occurring as a consequence of sex between men. This can be thought of as the proportion of men who do not have HIV but who acquire it over the period of a year. It is crucial to distinguish between infection and the diagnosis of infection. More diagnoses may mean either more new infections or more people with infection having it diagnosed. However, although there is a time lag between infection and diagnoses, the vast majority of infections will be diagnosed eventually (see upper box).

Although reports of HIV diagnoses can tell us the number of men being diagnosed, they cannot tell us what proportion of men they represent. In the *1998 Gay Men's Sex Survey* (Hickson *et al*., 1999) we found that 1.3% of the men who had not been diagnosed with HIV twelve months previously had been by the time of the survey. A recent survey of scene-using gay men in London (Hickson *et al*., 2001) estimated the incidence of HIV diagnoses to be 2.0%. Both these figures are similar to the 1.8% found by a more direct method at a London clinic (see lower box).

In GMSS 2000 we asked a number of questions which we have used to construct a scale of 'proximity to the HIV epidemic'. In this chapter we report on: whether or not men had ever tested; whether they had tested HIV positive; and what they believed their HIV status to be currently. We then look at whether men thought they had the same or a different HIV status to their regular partner and, if not in a sero-discordant relationship, whether they personally knew someone with HIV. We then look at how these measures varied across the groups.

Catchpole M, McGarrigle A, Rogers P, Jordan L, Mercey D & Gill O (2000)
Serosurveillance of prevalence of undiagnosed HIV-1 infection in homosexual men with acute sexually transmitted infection. *British Medical Journal*, 321, 1319–1320.

The PHLS carry out an 'Unlinked Anonymous HIV Survey' with 15 GUM clinics in England and Wales. Blood left over after testing for syphilis is 'unlinked' from the patients name and tested for HIV. This short paper reports change in the prevalence of HIV among 'homosexual' men in the six years 1993 to 1998. Among men presenting with an acute STI (gonorrhoea, chlamydia or 1st episode of viral STI) at a London clinic, HIV-1 prevalence dropped from 16.5% in 1993 to 9.0% in 1998. However, this drop was in men with diagnosed HIV infection. When men with diagnosed HIV infection were excluded, prevalence of undiagnosed HIV infection was stable at about 5%.

A reduction in the proportion of men with an acute STI who have diagnosed HIV infection suggests either that men with diagnosed HIV infection became less likely to acquire acute STIs, or men with diagnosed HIV infection who acquired an acute STI became less likely to have it diagnosed and treated at one of the participating clinics. Stability in the proportion of men with an acute STI who have undiagnosed HIV infection suggests:

- new HIV infections are keeping pace with new HIV diagnoses.

Elford J, Leaity S, Lampe F, Wells H, Evans A, Miller R, Johnson M & Sherr L (2001)
Incidence of HIV infection among gay men in a London HIV testing clinic, 1997–1998 (letter)
AIDS, 15(5), 650–653.

Data from 275 gay men attending a London same-day testing service between September 1997 and July 1998 and who had already tested HIV negative in the past. The median time since their last test was 24 months and between them they totalled 655.2 person-years between tests. Twelve men tested HIV positive. This is an incidence of 1.8 per 100 person-years, or 1.8% of negative men sero-converting each year.

3.1 HIV TESTING

3.1.1 Prevalence of HIV testing

Men were asked, *Have you ever received an HIV test result? (yes or no)*. Overall, 59.5% (missing 141, or 1.4%) had tested at some point in the past. The table below shows the proportion of men in the *Gay Men's Sex Surveys* between 1997 and 2000 who had ever tested for HIV.

Year of survey	N (missing)	% ever tested (95% CI)
1997	4338 (65)	58.4 (56.9–59.9)
1998	6206 (109)	57.4 (56.2–58.6)
1999	9246 (76)	57.6 (56.6–58.6)
2000	9648 (141)	59.5 (58.5–60.5)

All confidence intervals overlap. We found no evidence that the proportion of men who had tested for HIV has changed between 1997 and 2000.

3.1.2 Prevalence of diagnosed HIV infection

These men who had ever tested were asked *What was your most recent test result? (Negative or Positive)*. In GMSS 2000, of those who had tested, 6.0% (or 3.5% of the entire sample) declined to tell us their result. Of those who had tested (n=5398, missing 344), 9.9% (n = 532) had tested positive. This is 5.4% of the entire sample who had received a positive diagnosis. The table below shows the proportion of men in the *Gay Men's Sex Surveys* between 1997 and 2000 who had ever tested positive for HIV.

Year of survey	N (missing)	% tested HIV positive (95% CI)
1997	4297 (106)	5.7 (5.0–6.4)
1998	6101 (214)	6.2 (5.6–6.8)
1999	8858 (464)	5.2 (4.7–5.7)
2000	9304 (485)	5.7 (5.2–6.2)

As the number of gay or bisexual men living with diagnosed HIV infection is increasing (thanks to better medical interventions and falling death rates), we had expected to see an increase in the prevalence of diagnosed infection. One possible explanation for why this is not the case may be an increase in the size of the gay population. However, if this were the case we would expect the average age of the samples to be falling and they do not.

Figure 3.1 shows HIV testing – a composite variable constructed from the two questions described above. It distinguishes men who have never tested from those that have tested and whose last test result was negative from those who have tested positive.

In GMSS 2000, 42.0% had never tested, 52.3% had tested and their last test result was negative, and 5.7% had been diagnosed HIV positive. We found no evidence for a significant change in HIV testing history between 1997 and 2000.

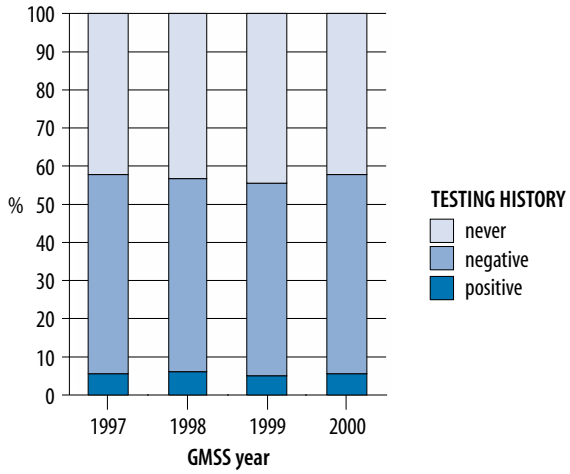


Figure 3.1: HIV testing history in GMSS 1997–2000 (N=4207, 6101, 8858, 9304)

3.2 HIV TESTING HISTORY ACROSS THE DEMOGRAPHIC GROUPS

This section looks at how HIV testing history varied by each of the characteristics described in Chapter 2. This shows the differences in testing history among different groups of men and the demographic differences between men with different testing histories. The implications for programme planning at the end of the chapter should be read in conjunction with those in Chapter 4. The implications are intended to suggest where an emphasis in HIV prevention programmes may have the greatest impact on HIV incidence. They do not suggest that there is more extensive unmet need in a particular group or that one group has a greater right to having their HIV prevention needs met than any other.

3.2.1 Region of residence & HIV testing history

The following table shows how HIV testing history varied by region of residence. As with GMSS 1997, 1998 and 1999 we would underline the general similarity in levels of having tested and having tested positive in the different regions of the country. In all regions there are men living with diagnosed HIV infection and in all regions those men are in the minority.

As in previous years, having ever tested for HIV and having been tested positive is most common among men resident in London. The proportion having ever tested is substantially higher in London than any other region, with Trent and the South East having the next highest rates of testing. Overall, 21.5% of the sample lived in London but 36% of the diagnosed positive men lived there. Hence the majority of men living with diagnosed HIV infection in this sample did not live in London.

Region of residence	Number	% by HIV testing history		
		Never tested	Tested negative	Tested positive
London	1929	34.0	56.4	9.6
Eastern	452	47.6	51.1	1.3
South East	1819	40.7	53.1	6.2
South West	559	43.1	52.8	4.1
West Midlands	1204	47.1	48.7	4.2
Trent	519	40.1	55.1	4.8
North West	1288	43.9	49.9	6.2
Northern & Yorkshire	657	44.6	51.6	3.8
Wales	543	49.7	48.4	1.8

If we consider the proportion of men tested that have tested positive, London has the highest rate (14.6% of men who have tested), followed by the North West (11.1%) and South East (10.5%). All the other regions have a rate between 6.9% and 8.0% except Eastern (2.5%) and Wales (3.7%) which have substantially lower prevalence of HIV. Both HIV prevalence and the proportion of men tested have decreased from the GMSS 1999 data in Wales, which is probably an effect of differences in sample size and recruitment methods between the two years. In 1999 the Welsh-resident sample was much smaller and most were recruited by AIDS service organisations including a self-help group for people with HIV. In 2000 the sample size is far larger and more diverse and majority were recruited at Cardiff Mardi Gras.

- The prevalence of HIV infection is highest among gay men in London and the South East and in the North West.

3.2.2 Gender of partners & HIV testing history

HIV testing history significantly varied by gender of partners in the last year. Men who had sex with men only were significantly more likely to have ever tested (59.9%) compared to men who had sex with both men and women (53.6%).

Among men who had ever tested, those who had sex with men only were more likely to have tested positive than those who had sex with women as well. Overall, 5.9% of the exclusively homosexually active men had tested positive compared with 2.7% of the behavioural bisexuals.

- The prevalence of HIV infection is higher among exclusively homosexually active men than behaviourally bisexual men.

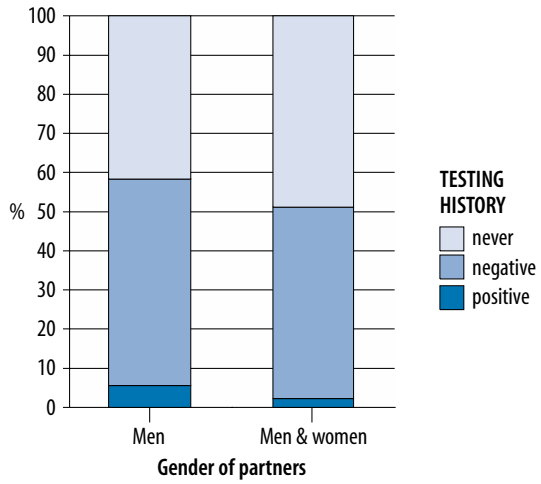


Figure 3.2.2: HIV testing history by gender of partners (N=8725, 482)

3.2.3 Age & HIV testing history

Testing history varied across the age range in a similar pattern to previous years. Men who never tested (mean age 32.6 years) were, as a group, significantly younger than those who had tested (mean age 33.9). Among those who had tested, those who had tested positive (mean age 36.3) were significantly older than those who had tested negative at their last test (mean age 33.6).

Having ever tested was least common among men under 20 (32.5% had tested) and increased to a peak of 64.8% among men in their 30s. It became less common again among older men.

- Most men acquiring HIV infection are under 40.

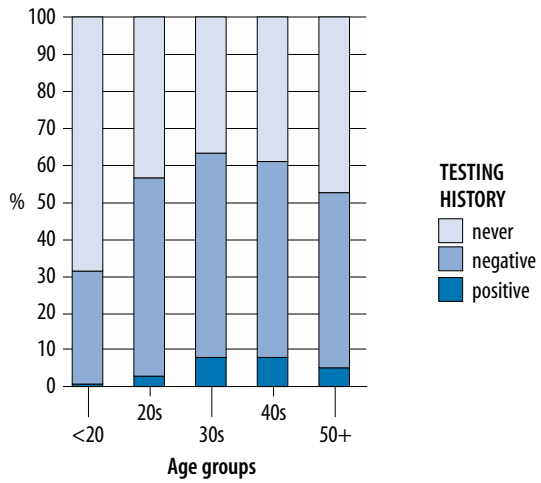
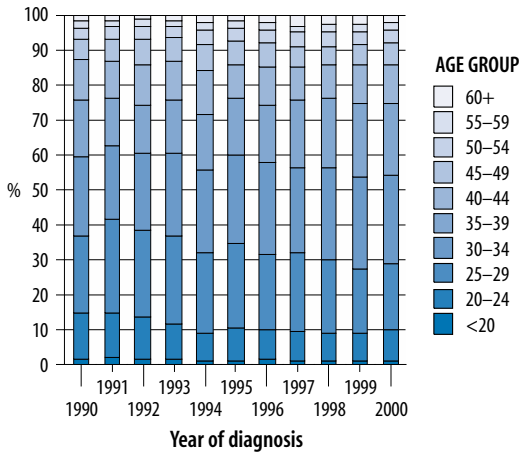


Figure 3.2.3: HIV testing history by age groups (N=536, 3029, 3418, 1580 and 641)

Public Health Laboratory Service and Scottish Centre for Infection & Environmental Health (2001) *AIDS / HIV Quarterly Surveillance Tables: Cumulative UK data to end March 2001*. (www.phls.org.uk)

The PHLS collates reports of HIV diagnoses made by clinics and GPs. The figure opposite shows the ages at which gay men and bisexual men are diagnosed with HIV. In each year, the column represents all the diagnoses of homosexually acquired infections made that year. Each column is proportionately broken down into age groups.

The proportion of men under 20 has remained small while the proportion under 30 has gradually declined. Although the majority of men being diagnosed remain under the age of 40 these data do not support the hypothesis that HIV infection is increasingly affecting younger men.



UK diagnoses of HIV infections probably acquired through sex between men by year of diagnosis and age

(Source: PHLS Quarterly Tables No 50:01/1, Table 9a)

3.2.4 Education & HIV testing history

There was a clear association between having lower levels of formal education and HIV testing history. In previous years we found no association between ever having tested and education. However in 2000, men with lower levels of education were less likely to have tested.

As in previous years though, those with lower education were more likely to have tested positive. In 2000, among those who had tested, 12.4% of men with low education had tested positive, compared with 10.2% of men in the middle group and 8.0% of those with highest levels of education (p<.01).

- HIV prevalence is higher among men with lower levels of education.

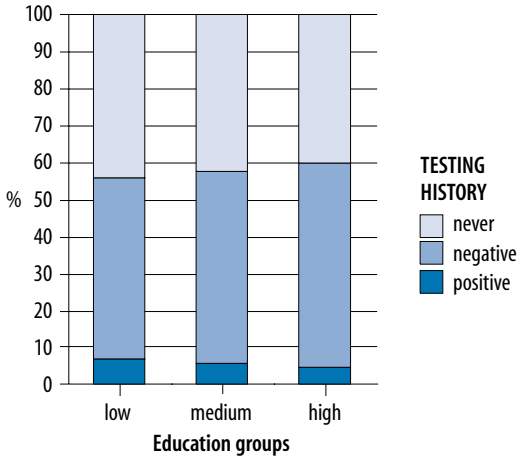


Figure 3.2.4: HIV testing history by education groups (N=2710, 2582, 3946)

3.2.5 Ethnicity & HIV testing history

In 1998 and 1999 we found Black / Black British men to be most likely to test and men from Asian ethnicities the least. In 2000, Black and Asian men were no more or less likely to have tested for HIV than the ethnic majority. However, there was a higher prevalence of testing in the 'other white', and to a less extent 'other not white' groups.

In 1998 we found significant evidence that Black men were more likely to have tested HIV positive than other groups. In 2000, we observed a similar trend (9.2% of all Black men were diagnosed

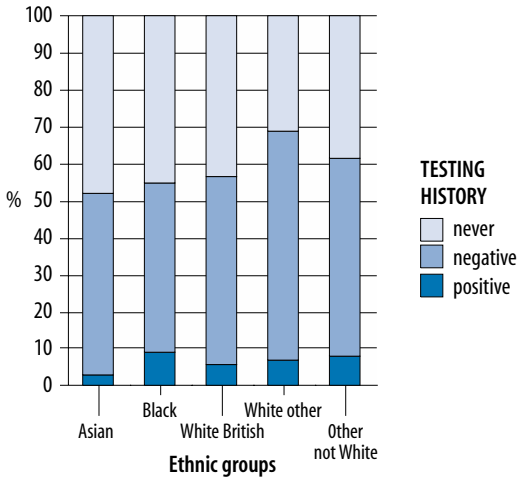


Figure 3.2.5: HIV testing history by ethnic groups (N=150, 120, 7817, 982, 210)

positive compared to 2.7% of Asian, 5.5% of White British, 7.1% of other White and 8.1% of others, not White). However, this was not statistically significant.

3.2.6 Relationship status & HIV testing history

In the 2000 survey, men who had been partnered longer than 12 months were slightly more likely to have ever tested for HIV (62.6%) compared to those recently partnered (59.1%) and those who were single (57.3%). This relationship has not been observed previously.

In both GMSS 1998 and 2000 there was no evidence that relationship status had any relationship to HIV test results.

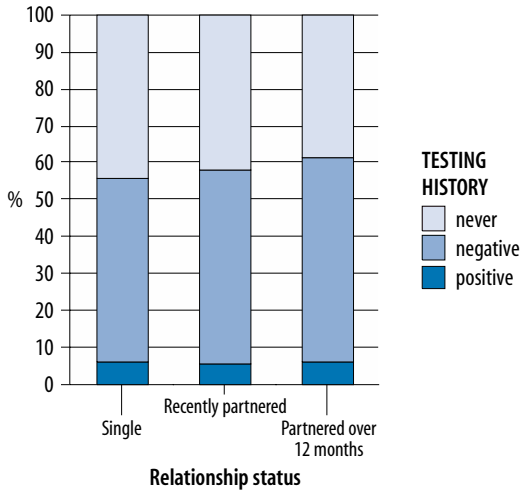


Figure 3.2.6: HIV testing history by relationship status (N=3697, 1708, 205)

3.3 CURRENT STATUS BELIEF

After being asked about their HIV testing history, all men were asked *What do you believe your HIV status is currently?* and asked to indicate one of the following: *don't know / couldn't say; definitely negative; probably negative; probably positive or definitely positive.* Overall, 76.9% thought they were definitely or probably negative, 8.6% thought they were definitely or probably positive, 10.2% were unsure and 4.3% declined to answer this question (The men who declined to tell us their result look similar to those who indicated their result suggesting men who are diagnosed positive are no less likely to reveal their test results (see Weatherburn *et al*., 2000 for fuller explanation)).

As in GMSS 1999, responses to the question on current HIV status belief were not co-terminus with men's HIV testing histories and there were men with every combination of testing history and current status belief. The following table shows the proportions in each of the HIV testing history groups who indicated each of these status beliefs. It excludes those men (8.2% of the total) who declined to answer any of the three questions (ever tested, test result or current status belief). The table shows the **proportion of all men** in each cell.

% of total sample (N = 8988)		HIV testing history		
		Never tested (41.6%, n = 3736)	Tested negative (52.7%, n = 4739)	Tested positive (5.7%, n = 513)
current status belief	Definitely negative (48.8%, n = 4385)	17.3 (n = 1559)	31.2 (n = 2804)	0.2 (n = 22)
	Probably negative (31.6%, n = 2842)	15.0 (n = 1347)	16.5 (n = 1485)	0.1 (n = 10)
	Don't know / not sure (10.8%, n = 967)	7.6 (n = 685)	3.1 (n = 279)	<0.1 (n = 3)
	Probably positive (1.8%, n = 163)	0.9 (n = 77)	0.9 (n = 82)	<0.1 (n = 4)
	Definitely positive (7.0%, n = 631)	0.8 (n = 68)	1.0 (n = 89)	5.3 (n = 474)

The largest group were men whose last test was negative and who currently believed themselves to be definitely (31.2%) or probably (16.5%) negative. This is followed by another group who had never tested but who currently believed themselves to be definitely (17.3%) or probably (15.0%) negative. A small proportion (0.3%) believed themselves negative despite having received a positive test result. This adds up to 80.4% of men who thought they were uninfected (first two rows).

On the third row are 10.8% of all men were unsure of their HIV status. Most of these men (70%) had never tested and a third had tested negative in the past. A very small number of men had received a positive result in the past but were currently unsure of their status.

Of the 8.8% of men who thought they were HIV positive, 60% had been diagnosed positive. This is a very similar proportion to what we believe the extent of diagnosis of infection among gay men to be from PHLS's Unlinked Anonymous Prevalence Surveys (see box). Among men who had not tested positive, the proportion who thought they had undiagnosed infection was identical among men who had never tested and those who had tested negative at some point in the past.

Unlinked Anonymous Surveys Steering Group (2000). *Prevalence of HIV and hepatitis infections in the United Kingdom 1999*. London: Department of Health, Public Health Laboratory Service, Institute of Child Health (London), Scottish Centre for Infection and Environmental Health (NHS Response Line: 0541 555 455).

The Unlinked Anonymous Surveys directly measure HIV prevalence in a variety of populations and estimate the proportion of infections that have been diagnosed. The population of homosexually active men in the study are GUM clinic attenders having blood taken for syphilis testing. HIV prevalence among homosexually active men was far higher and less concentrated in London compared with all other groups examined.

In 1999, among 3,930 homosexually active men attending one of seven clinics in London, 283 (7.2%) were found to be infected with HIV (compared with 8.4% in 1998), although the range at individual clinics taking part in the study was from 3.9% to 13.9%.

Of 1,562 men attending one of eight clinics elsewhere in England, Wales or Northern Ireland, 36 were infected (2.3%, compared with 2.7% in 1998) with a range of zero to 3.2%.

The study estimates that at the end of 1999, 63% of men with homosexually acquired HIV infection living in the UK had been diagnosed with HIV.

3.4 HIV CONCORDANCY IN RELATIONSHIPS

Men who had a current regular male sexual partner (see section 2.6) were asked *Do you and your regular partner have the same HIV status?* and were instructed to indicate one of:

- Yes, we have the same HIV status (either both HIV positive or both negative);
- No, one of us is positive and the other is negative; or
- Don't know whether we have the same status or not.

Overall 9.0% of men with a regular partner declined to answer this question. Of those who did, 7.1% indicated they were in discordant relationships, 55.4% in concordant relationships and the remaining 37.4% did not know whether they had the same or different HIV status to their partner. In the following, men who declined to answer the question were grouped with those who indicated 'don't know'. The table below includes only those men who currently have a regular partner. It compares what men indicated their relationship concordancy to be for each of the three testing history groups.

HIV concordancy of current relationship	% with a current regular male partner (n = 5426)	% by HIV testing history (of men with a regular partner)		
		Never tested (n = 2194)	Tested negative (n = 2920)	Tested positive (n = 312)
Concordant	55.8	45.4	65.7	35.6
Don't know	37.2	51.8	28.9	11.9
Discordant	7.1	2.8	5.4	52.6

Men who had never tested were most likely to say they did not know the concordancy of their relationship (51.8%). Almost as many men reported that their status was concordant (45.4%) and a small minority (2.8%) said their current relationship was HIV discordant.

Among men who had tested negative the majority reported their relationship was HIV concordant (65.7%), less did not know or were unsure (28.9%) and 5.4% were discordant.

The majority of men in relationships who had tested positive reported any current relationship was HIV discordant (52.6%). Just over a third (35.6%) reported concordancy and 11.9% were unsure.

3.5 PERSONALLY KNOWING SOMEONE WITH HIV

Those who had not tested HIV positive (n = 9257) were asked *Do you personally know someone who is HIV positive*. Just under two-thirds (62.6%, missing 372) said 'yes'. If we add in those who had tested positive this makes 64.7% of the total sample (of 9417 men, CI = 63.1% – 65.1%) knowing someone who has HIV (including themselves). An identical question was asked of gay men in our London Pride survey in 1993 (Hickson *et al*., 1993) where 73% (of 1633 men, CI = 70.8%–75.2%) indicated they knew someone with HIV (all men were asked but the survey did not ask HIV testing history). In 1993, men in London had been more likely to know someone with HIV than those elsewhere (78% compared with 65%). This was still the case in 2000 (75.2% compared with 61.8%). The decrease in the proportion of men knowing someone with HIV was similar in London and elsewhere. These data suggest:

- Fewer men know someone with HIV than seven years ago.

Why this is the case is unclear. As with the prevalence of diagnosed HIV we would expect this proportion to increase as the number of men living with diagnosed HIV increases. It may be the case that men with HIV are less public about their infection than in the past, and / or that anti-HIV therapies have made HIV infection less visible.

3.6 PROXIMITY TO THE EPIDEMIC

Using all the measures previously reported in this chapter, we constructed a five category grouping to represent men's proximity to the HIV epidemic: having tested HIV positive; not having tested positive but believing they are infected; currently having an HIV positive partner; not having tested positive nor currently having an HIV positive partner but personally knowing someone with HIV; not personally knowing someone with HIV. The overall proportions in each of these groups are as follows.

Proximity to the HIV epidemic (N = 9430, missing 359)	% of total sample
Diagnosed HIV positive	5.6
Thinks he is HIV positive but not diagnosed	3.8
Does not think that he is positive but has a diagnosed HIV positive partner	2.3
Knows someone diagnosed HIV positive	54.2
Does not know anyone diagnosed HIV positive	34.1

In 2000 two thirds of men recruited had some contact with a person with HIV, although the vast majority knew someone else who was HIV positive who was not their partner. The following sections show how this variable differed across the demographic groups. Because the variable has been constructed using a number of questions (not all of which respondents answered) the denominators and proportions of men who had tested positive vary slightly from those given above.

3.6.1 Region of residence & proximity to the epidemic

The following table shows how proximity to the epidemic varied by region of residence.

Proximity to HIV	% by region of residence								
	London (n=1979)	North West (n=1292)	South East (n=1844)	Trent (n=522)	West Mids. (n=1215)	South West (n=580)	North & York (n=658)	Wales (n=541)	Eastern (n=455)
Diagnosed HIV positive	9.4	6.2	6.1	4.8	4.2	4.0	3.8	1.8	1.3
Thinks he is HIV positive	5.6	2.8	3.8	1.9	3.9	3.1	3.2	2.0	4.4
Has positive partner	2.5	1.5	3.2	0.8	2.2	1.9	2.4	1.3	2.0
Knows someone positive	59.2	55.3	53.4	48.9	53.3	53.6	46.8	55.3	50.5
Does not know someone positive	23.2	34.1	33.5	43.7	36.4	37.4	43.8	39.6	41.8

The proportion of men who knew no one with HIV was highest in areas with the lowest proportion of positive men. Men living in London, the South East and North West had the greatest proximity to the HIV epidemic and were most likely to have tested positive and least likely to know no one with HIV. However, even among the sample of predominantly 'out' gay men in London, almost a quarter personally knew no one with HIV. Men in Northern & Yorkshire and Eastern regions and Wales were least likely to have tested positive and were most likely to know no one with HIV. Trent region stands out from this pattern with a relatively high proportion of men tested positive but also with a large proportion not knowing anyone with HIV. Trent also had the smallest proportion of men with a positive partner, relative to the proportion of positive men in the area.

3.6.2 Gender of partners & proximity to the epidemic

The following table shows how proximity to the epidemic varied by the gender of men's sexual partners in the last year.

Proximity to HIV	% by gender of sexual partners	
	Men only (n=8846)	Men and women (n=488)
Diagnosed HIV positive	5.9	2.7
Thinks he is HIV positive	3.9	2.9
Has positive partner	2.3	1.4
Know someone positive	54.5	48.4
Does not know someone positive	33.5	44.7

Men who had sex with men only were significantly more likely to have tested positive, but if they had not, they were no more or less likely to think they had undiagnosed infection. Nor were they more or less likely to have a positive partner. Men who only had sex with men were, however, more likely to know someone who is positive than are men who have sex with women also. Overall then, these figures suggest the HIV epidemic is closer to exclusively homosexually active men than to behaviourally bisexual men.

3.6.3 Age & proximity to the epidemic

The following table shows how proximity to the epidemic varied across the age groups.

Proximity to HIV	% by age groups				
	<20 (n=531)	20s (n=3058)	30s (n=3468)	40s (n=1614)	50+ (n=655)
Diagnosed HIV positive	0.9	3.0	7.9	7.7	5.2
Thinks he is HIV positive	3.4	3.7	4.5	3.4	2.0
Has positive partner	1.1	1.4	2.4	3.1	4.1
Knows someone positive	32.0	48.6	58.4	61.2	57.6
Does not know someone positive	62.5	43.3	26.8	24.5	31.1

As noted above, having tested positive was highest among men in their 30s and 40s. The age group with the largest proportion of men who thought they were positive (but had not tested positive) was men in their 30s. However, relative to the proportion who had tested positive, the proportion who thought they had undiagnosed infection was very high among those under 20 and high among those in their 20s. This may suggest extensive unmet need among men under 30 related to HIV knowledge and HIV testing. Having a positive partner became increasingly common with increasing age as did personally knowing someone with HIV.

3.6.4 Education & proximity to the epidemic

The following table shows how proximity to the epidemic varied by education.

Proximity to HIV	% by education groups		
	Low (n=2758)	Medium (n=2616)	High (n=3988)
Diagnosed HIV positive	6.8	5.8	4.8
Thinks he is HIV positive	3.8	3.6	4.0
Has positive partner	2.8	1.8	2.2
Knows someone positive	48.4	53.2	58.8
Does not know someone positive	38.2	35.5	30.3

Although men with lower education were more likely to have tested positive, they were not more likely to think they had undiagnosed HIV infection. Nor were they more or less likely to have a positive partner. However, men with lower education were less likely to know someone who was positive than men with higher education.

3.6.5 Ethnicity & proximity to the epidemic

The following table shows how proximity to the epidemic varied by ethnicity.

Proximity to HIV	% by ethnic groups				
	Asian/ Asian British (n=158)	Black/ Black British (n=123)	White British (n=7893)	other White (n=1016)	other not White (n=216)
Diagnosed HIV positive	2.5	8.9	5.4	6.9	7.9
Thinks he is HIV positive	4.4	6.5	3.9	3.4	1.4
Has positive partner	3.8	0.8	2.1	2.8	5.1
Knows someone positive	44.3	56.9	53.9	57.2	56.5
Does not know someone positive	44.9	26.8	34.7	29.7	29.2

There were few significant differences between the ethnic groups with regard to proximity to the epidemic. We found no evidence for testing positive, thinking they were positive or having a positive partner being greater or lesser in any particular ethnic group. However, Asian men were less likely to know someone with HIV compared to men from other ethnic groups.

3.7 SUMMARY AND IMPLICATIONS FOR PROGRAMME PLANNING

These implications for programme planning should be read in conjunction with those at the end of Chapter 4. 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.

The number of men who report ever testing for HIV has remained stable for the past four years as has the proportion of men who have been diagnosed with HIV. Infection is still highest in London closely followed by the rest of the South East and the North West. This suggests that to increase their impact on incidence:

- Nationally, programmes should concentrate on the HIV prevention needs of men in London and the South East and in the North West.

The remaining implications hold for each area of the country separately. Compared with behaviourally bisexual men, those who are exclusively homosexually active are more likely to have ever tested and to have been diagnosed with HIV. They are also more likely to know someone who is positive. 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:

- Prioritise the HIV prevention needs of exclusively homosexually active men before those of behaviourally bisexual men.

Men in their 30s and 40s were most likely to have ever tested for and to have been diagnosed with HIV. The number of new HIV diagnoses suggests the incidence of HIV infection is highest among gay men in their 20s and 30s and that men in their 30s are most likely to think they have undiagnosed infection. Hence, in order to increase their impact on incidence HIV prevention programmes should:

- Prioritise the HIV prevention needs of men under 40.

Men with higher levels of education were slightly more likely ever to have tested but men with lower levels of formal education were more likely to have been diagnosed with HIV. This robust finding suggests that incidence of HIV infection is higher among gay men with lower levels of formal education. Hence, in order to increase their impact on incidence HIV prevention programmes should:

- Prioritise the HIV prevention needs of men who have less formal education before those of men with higher education.

In the *Gay Men's Sex Surveys* in 1998 and 1999, Black men were significantly more likely ever to have tested for HIV. In 1998 only they were also significantly more likely to have been diagnosed with HIV. In 2000, we observed a similar trend but this was not statistically significant. This suggests we should reiterate our recommendation of 1998 that HIV programmes should:

- Pay particular attention to the HIV prevention needs of Black men.

4 Health promotion targets

This chapter reports data concerning all three strategic targets identified in *Making It Count* (Hickson, Nutland, Doyle *et al*., 2000). These are:

- The number of occasions that unprotected anal intercourse occurs between HIV infected and uninfected men.
- The rate of condom failure.
- A reduction in the average duration of gonorrhoea and NSU infections.

4.1 MEASURES OF SEXUAL BEHAVIOUR

Sexual behaviour is the key determinant of HIV incidence among gay men and bisexual men and is the central target of most HIV prevention strategies. Obviously the collective sexual behaviour of a large number of gay men is extremely varied. In 2000 we looked at men's numbers of sexual partners and the proportions that had regular and casual partners, anal intercourse with those partners, and unprotected anal intercourse with those partners.

4.1.1 Numbers of sexual partners

In GMSS 2000 all respondents were asked *In the last year, how many different men have you had sex with?* No definition of 'sex' or 'a sexual partner' was provided, so the criteria of who 'counts' as a sexual partner are men's own and will vary. This variable was used in the 1998 and 1999 analysis and showed substantial associations with HIV testing history, sexual behaviour and certain unmet HIV prevention needs. Ensuring that HIV prevention programmes disproportionately benefit men with larger numbers of sexual partners has been an recommendation from the *Gay Men's Sex Survey* for the last two years.

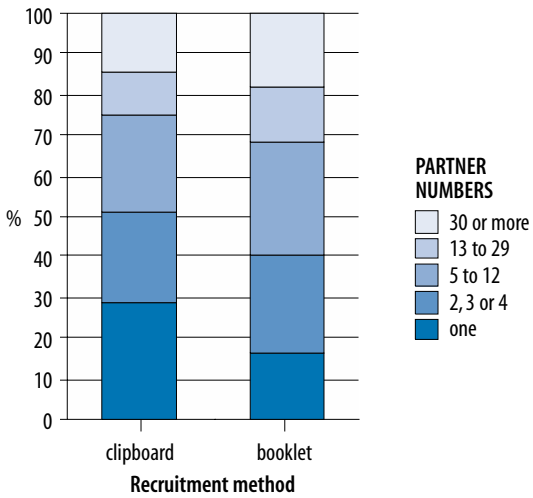


Figure 4.1.1: Number of partners groups by recruitment method (N=6249, 3029)

In the 2000 sample, 24.6% had one male partner in the last year, 23.2% had two, three or four, 25.0% had from five to twelve, 11.7% had 13 to 29 and the remaining 15.6% had thirty or more. As in 1999, the booklet sample averaged a higher number of sexual partners than the clipboard sample (Figure 4.1.1). This is very good news. The booklet sample were recruited by HIV health promoters during the course of their work which implies that HIV health promotion is disproportionately encountering men with higher numbers of sexual partners.

4.1.2 Regular and casual sex

In GMSS 2000 we also repeated a series of detailed sexual behaviour questions that were used in our London Pride surveys between 1993 and 1995. These give us comparable measures across time (see 4.3) as well as more detailed cross-sectional data on sexual behaviour with regular and casual sexual partners. Men were asked:

- *In the last year how many different **REGULAR male** partners have you had sex with?*
  *Of those, how many did you **fuck with either way**, with or without a condom?*
  *How many of those did you fuck with **without** a condom (even if it was just once)?*

- *In the last year how many different **CASUAL male** partners have you had sex with?*
  *Of those, how many did you **fuck with either way**, with or without a condom?*
  *How many of those did you fuck with **without** a condom?*

In the table below we report the proportions of men who said one or more to each of the above questions. Men were also asked the direct question *In the last year have you fucked or been fucked without a condom?* and to indicate 'yes' or 'no'. The proportion of men saying yes to this question is given at the bottom of this (and each subsequent) table.

GMSS 2000 (N=9789) Sexual behaviours in the last year	n / total n	% of all sample
Any regular male sexual partner	8702 / 9493	91.7
Any anal intercourse with a regular male partner	6951 / 9267	75.0
Any unprotected anal intercourse with a regular male partner	3794 / 9112	41.6
Any casual male sexual partner	6495 / 9110	71.3
Any anal intercourse with a casual male partner	3956 / 9019	43.9
Any unprotected anal intercourse with a casual male partner	1502 / 9001	16.7
Any unprotected anal intercourse at all	4138 / 8941	42.3

Having had a regular male partner during the last year was more common than having casual sex (71.3%). Anal intercourse was also more common with regular rather than casual partners: 81.8% of men with a regular partner had anal intercourse with a regular partner compared with the 61.6% of men with a casual partner who had AI with a casual. Finally, while 55.5% of men having AI with a regular partner did not always use a condom, 38.0% of those having a AI with a casual partner did not always use a condom. This meant that, as has been found previously in the UK and internationally, more men have UAI with regular than with casual partners. Overall, 42.3% of the sample said they had UAI in the last year when asked the direct question. This suggests that almost all the men who had casual UAI had UAI with a regular partner also.

The following sections look at how these measures of sexual behaviour varied across the characteristics previously described in this report.

4.2 SEXUAL BEHAVIOURS ACROSS THE DEMOGRAPHIC GROUPS

In the following tables we look at how the preceding measures of sexual behaviour varied across the demographic groups. We are particularly interested in differences in levels of unprotected anal intercourse.

4.2.0 HIV testing history and sexual behaviour

All the sexual behaviours were more common among men who had tested HIV positive and least common among men who had never tested.

GMSS 2000 (N=9789) Sexual behaviours in the last year	% by HIV testing history		
	Never tested	Tested negative	Tested positive
Median no. of male partners	4	6	10
Regular partner	89.9	92.7	93.3
Regular AI	70.9	77.6	79.7
Regular UAI	36.6	44.8	46.3
Casual partner	67.5	73.2	81.6
Casual AI	38.3	46.2	62.1
Casual UAI	13.6	16.7	35.7
Any UAI at all	38.6	48.3	54.1

Men who had tested positive were more sexually active overall and those who had never tested were least active. Positive men had more partners, were more likely to have both regular and casual partners, and to have had AI and UAI with them. Perhaps most striking is the difference in casual UAI, which over a third of positive men had engaged in. Conversely, while 5.7% of the entire sample had tested positive, 12.2% of men who had casual UAI in the last year had, rising to 15.2% of those living in the North West who had casual UAI and 21.9% of Londoners who had casual UAI. This data is in line with that from surveys in London fitness clubs (see box) which add further detail on HIV sero-concordancy.

Elford J, Bolding G, Maguire M & Sherr L (2001). HIV positive and negative homosexual men have adopted different strategies for reducing the risk of HIV transmission (letter). *Sexually Transmitted Infections*, 77(3), 224.

Further data from surveys among gay men using London's fitness clubs. In January–February 2000 a total of 792 men self completed a questionnaire: 16.3% had tested HIV positive, 61.8% had last tested negative and 21.9% had never tested. The paper focuses on the sexual behaviours of the 601 men who had ever tested. The proportion of men currently in a relationship was similar for positive (50.0%) and negative (58.1%) men. Overall, 36.1% had UAI *in the past three months* of whom 46.5% had UAI with a man whose HIV status they did not know or which they knew to be different to their own (what the authors call 'non-concordant' UAI). This is 16.8% of the entire sample who could have been involved in sexual HIV exposure in the last three months. The proportion who had UAI and the proportion of those who had non-concordant UAI varied by HIV diagnosis and current relationship status:

- 34.5% of **negative** men had UAI
  of whom 45.7% had non-concordant UAI = 15.8%
  43.1% of those in a relationship
  of whom 33.6% had non-concordant UAI = 14.5%
  22.6% of single men
  of whom 77.8% had non-concordant UAI = 17.6%
- 42.1% of **positive** men had UAI
  of whom 49.1% had non-concordant UAI = 20.7%
  44.4% of those in a relationship
  of whom 50.0% had non-concordant UAI = 22.2%
  39.7% of single men
  of whom 48.0% had non-concordant UAI = 19.1%

Among negative men, single men were much less likely to have UAI than those in a relationship. However, single men's UAI was much more likely to be non-concordant. This suggests that among negative tested men, there is a similar opportunity for sexual HIV exposure in casual and regular UAI. Positive men were more likely than negative men to have UAI. The proportion did not significantly vary by relationship status, nor did the proportion having non-concordant UAI. Again, this suggests similar opportunity for HIV exposure during casual and regular UAI among positive men. Considering casual UAI in particular in the past three months:

- 12.4% of negative men had casual UAI
  of whom 84.7% had non-concordant = 10.5%
- 34.1% of positive men had casual UAI
  of whom 55.8% had non-concordant = 19.0%

Although positive men were more likely to know their casual UAI was concordant if they had it, because they were almost three times more likely to have casual UAI than negative men, positive men were also most likely to have non-concordant casual UAI.

4.2.1 Region of residence & sexual behaviour

Men were equally likely to have a regular partner or a casual partner irrespective of which region they lived in. But AI with regular partners was most common in Eastern region and Wales, while AI with casual partners was most common in London and the North West. Casual UAI was most common in the North West and South West.

GMSS 2000 (N = 9789) Sexual behaviours in the last year	% by region of residence								
	London	South East	North West	Trent	West Mids.	N & Y	Eastern	South West	Wales
Median no. of male partners	6	4	5	4	4	4	5	5	5
Regular partner	92.2	91.4	89.2	91.9	91.5	90.8	93.0	93.1	92.6
Regular AI	75.7	74.9	72.0	75.0	72.4	77.2	78.4	76.6	77.4
Regular UAI	39.5	42.9	40.9	42.2	38.9	45.0	42.8	43.8	43.2
Casual partner	73.2	71.3	72.5	67.7	69.1	69.1	70.0	71.9	70.6
Casual AI	46.5	42.5	46.1	39.0	40.7	41.6	43.7	44.9	42.9
Casual UAI	16.8	16.1	18.8	12.3	14.9	15.8	15.5	18.1	17.7
Any UAI at all	43.1	44.9	44.2	47.1	41.8	46.6	47.2	48.9	46.1

Differences in sexual behaviour by region of residence are small and overall experience of any UAI in the last year was equally common across the regions. However, as HIV infection is not equally common across the regions there will be different potential for sexual HIV exposure.

4.2.2 Gender of partners & sexual behaviour

Although there was no overall difference in the proportion of men who had UAI in the last year by the gender of their sexual partners, there were differences in the individual measures.

GMSS 2000 (N = 9789) Sexual behaviours in the last year	% by gender of sexual partners	
	Men only	Men and women
Median no. of male partners	5	6
Regular partner	92.0	86.5
Regular AI	75.4	70.8
Regular UAI	42.1	33.8
Casual partner	70.7	83.2
Casual AI	43.2	56.3
Casual UAI	16.2	23.5
Any UAI at all	46.5	41.9

Exclusively homosexually active men (ExHAMs) were most likely to have a regular partner, to have AI with a regular and UAI with a regular. Behaviourally bisexual (BB) men were more likely to have a casual partner, AI with a casual and UAI with a casual partner.

4.2.3 Age & sexual behaviour

Younger men were most likely to have a regular partner, to have AI with a regular partner and to have UAI with a regular partner. Having a casual partner was equally common among the age range (although remember we had already excluded men who had no sex in the last year). But AI and UAI with casual partners became less common with increasing age.

GMSS 2000 (N = 9789) Sexual behaviours in the last year	% by age groups				
	<20	20s	30s	40s	50+
Median no. of male partners	5	4	5	6	5
Regular partner	91.8	93.2	92.4	89.0	86.5
Regular AI	80.5	79.5	74.6	69.6	64.6
Regular UAI	45.8	46.1	40.3	37.3	34.8
Casual partner	75.5	70.7	70.7	72.5	70.7
Casual AI	55.1	44.0	42.8	43.5	40.0
Casual UAI	25.8	17.2	15.7	15.5	15.1
Any UAI at all	49.0	50.3	43.9	39.0	34.5

Overall, these differences meant that experience of any UAI in the last year was highest among the under 30s and became less common through the 30s, 40s and 50+ age groups.

4.2.4 Education & sexual behaviour

As we demonstrated in the 1998 and 1999 GMSS surveys, men with lower education were more likely to have experienced UAI in the last year than those with higher education.

GMSS 2000 (N=9789) Sexual behaviours in the last year	% by education groups		
	Low	Medium	High
Median no. of male partners	4	5	5
Regular partner	93.0	91.3	91.0
Regular AI	76.4	75.9	73.5
Regular UAI	44.2	44.0	38.5
Casual partner	70.6	72.1	71.0
Casual AI	45.9	44.7	41.8
Casual UAI	20.8	17.2	13.4
Any UAI at all	47.8	48.3	40.4

Those with lower education were equally likely to have a casual partner but were more likely to have a regular partner, both regular and casual AI partners, and both casual and regular UAI partners.

4.2.5 Ethnicity & sexual behaviour

Although there was no overall difference across the ethnic groups in the proportion who experienced any UAI in the last year, there were differences in the individual measures.

GMSS 2000 (N = 9789) Sexual behaviours in the last year	% by ethnic groups				
	Asian/ Asian British	Black/ Black British	White British	other White	other not White
Median no. of male partners	8	5	5	5	5
Regular partner	92.3	95.8	91.5	93.2	89.6
Regular AI	72.1	85.2	75.0	76.2	69.6
Regular UAI	36.4	47.7	41.8	41.1	40.2
Casual partner	80.0	74.1	70.6	74.7	69.8
Casual AI	45.9	52.3	43.5	45.6	43.8
Casual UAI	24.5	29.1	16.1	18.2	17.5
Any UAI at all	47.0	49.2	44.7	44.2	43.6

There were no differences in terms of likelihood of having had a regular partner, but Black men were significantly more likely to have had AI with regulars and Asian men were significantly less likely to have done so. There were no differences in likelihood of UAI with regulars. Asian men were more likely to have a casual sexual partner compared to other groups, but there was no difference in probability of AI with casuals. Black men were most (and White British men were least) likely to have any UAI with casual partners. Asian men had the highest number of male partners overall.

4.2.6 Relationship status & sexual behaviour

Relationship status was taken at the time of the interview, while sexual behaviour measures considered the preceding year. We have seen that sex, AI and UAI are more common with regular than with casual partners so we should expect to see sexual behaviour varying with relationship status. The following table shows the measures for men in relationships of different HIV sero-concordancy.

GMSS 2000 (N = 9789) Sexual behaviours in the last year	% relationship status groups			
	single	partnered, HIV discordant	partnered, HIV concordant	partnered, don't know concordancy
Median no. of male partners	8	6	2	4
Regular partner	81.5	98.7	98.3	98.4
Regular AI	65.4	79.8	83.1	79.6
Regular UAI	29.4	36.8	54.4	46.2
Casual partner	87.1	71.2	54.8	67.4
Casual AI	55.0	50.7	31.3	41.5
Casual UAI	20.3	26.6	11.6	15.8
Any UAI at all	34.9	41.3	55.1	47.5

Most men who were currently single had also had a regular sexual partner in the last year. All previous surveys asking about different partner types have shown that gay men are more likely to have had a regular partner than a casual partner in the last year. Having had AI or UAI with a regular partner was, however, least common among men who were currently single.

A small number of men (in each concordancy group) may be indicating they are (perhaps long-term) partnered but do not have sex with that partner or did not in the last year (and had no other regular sexual partner). Having AI was most common among men who knew they were sero-concordant, while men who knew they were discordant and those who did not know their concordancy were equally likely to have AI.

UAI was again most common among men who knew they were concordant, and here men who knew they and their partner were discordant for HIV were less likely to have UAI with a regular partner than those who did not know their concordancy. Strikingly, casual UAI was most common among men in sero-discordant relationships, which may be accounted for by the trend observed above for men who have tested positive to be most likely to have casual UAI. The following table shows casual UAI and relationship status among the three testing histories separately.

% had casual UAI in last year			% by relationship status groups			
			single	partnered, HIV discordant	partnered, HIV concordant	partnered, don't know concordancy
			20.3	26.6	11.6	15.8
% by HIV testing history	never tested	13.6	15.3 228 / 1488	23.6 13 / 55	10.5 98 / 937	13.6 144 / 1061
	last test negative	16.6	21.7 372 / 1717	20.4 30 / 147	11.1 202 / 1813	17.4 138 / 794
	tested positive	35.7	43.0 83 / 193	32.5 49 / 1551	27.6 29 / 105	33.3 11 / 33

As previously stated, men who had tested positive were much more likely to have UAI (35.7%) than men who had tested negative (16.6%) or those who had never tested (13.6%). However, within each testing history group casual UAI significantly varied by relationship status. Among positive men it was those who were single who were most likely to have casual UAI (43.0%), and those who were in relationships with another positive man were least likely to (27.6%). This may reflect a strategy on the part of HIV positive couples who have UAI with each other to prevent their bringing other infections into their relationship. A similar pattern is observed among tested negative men, where those in concordant relationships are least likely to have casual UAI (11.1%). Unlike positive men, negative single men are no more or less likely to have had casual UAI. However, among men who had never tested, it was those who thought they were in sero-discordant relationships who were most likely to have casual UAI. Although small, this group may be a substantial priority for HIV health promotion. All of the preceding data suggest:

- There is considerable opportunity for sexual HIV exposure among gay and bisexual men in both regular and casual sex.

4.2.7 Numbers of partners & sexual behaviour

The sexual behaviour measures show two distinct patterns for regular and casual partners when they are examined by numbers of male sexual partners groups.

GMSS 2000 (N = 9789) Sexual behaviour in the last year	% by partner numbers groups				
	one	2, 3 or 4	5 to 12	13 to 29	30+
Regular partner	94.6	89.7	91.5	91.5	91.4
Regular AI	75.1	70.4	76.9	77.9	78.7
Regular UAI	51.9	35.1	39.7	37.7	43.6
Casual partner	15.1	73.6	94.7	97.7	98.8
Casual AI	9.6	35.1	56.4	67.2	75.8
Casual UAI	6.6	11.3	18.6	24.6	32.4
Any UAI at all	51.5	37.0	42.6	43.4	51.3

Men who had one partner in the last year were most likely to have had a regular partner and to have had UAI with a regular partner. Those who had two, three or four partners were least likely to have a regular partner, regular AI or regular UAI. Conversely, the likelihood of having a casual partner increased with partner numbers, as did having casual AI and casual UAI. Together, these measures mean the men who were most likely to have UAI were those with either one partner only, or a very large number of partners.

4.3 CHANGES IN SEXUAL BEHAVIOURS OVER TIME

Sexual behaviour is the key determinant of HIV incidence among gay men and bisexual men and is the central target of most HIV prevention strategies. Obviously, the collective sexual behaviour of a large number of gay men is extremely varied. In the following we look at change in three areas: in numbers of sexual partners, in UAI with regular and casual partners and in sero-discordant UAI.

4.3.1 Changes in numbers of sexual partners

We have seen that larger numbers of sexual partners is associated with a greater likelihood of engagement in UAI. If men were having more sexual partners, we might expect an increase in levels of UAI. However, partner numbers appear to have remained stable.

Looking at the clipboard recruited samples only, the number of male partners has not significantly changed over the last three years.

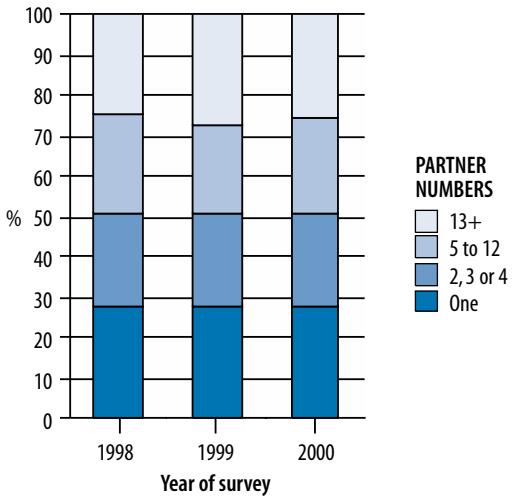


Figure 4.3.1: Number of partners 1998–2000 in the clipboard samples (N=5872, 6309, 6249)

4.3.2 Changes in regular and casual sex

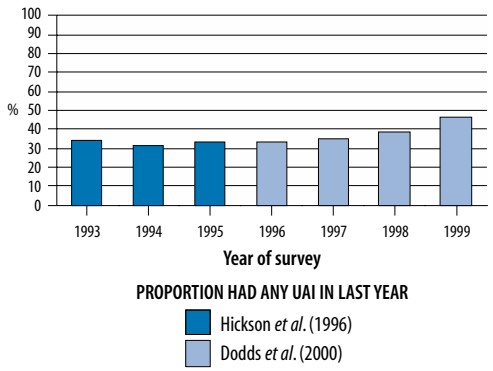
A recent paper reported an increase in the proportion of men who had UAI in the preceding year (see box). The following table compares findings from men recruited at the 1995 London Lesbian and Gay Pride festival (data taken from Hickson *et al*., 1996) with those from men recruited at the London Lesbian and Gay Mardi Gras in 2000.

Dodds J and Mercey D (2000)
Monitoring High Risk Sexual Behaviour Amongst Gay Men in London, 1999.
London; Royal Free & University College Medical School (020 7380 9879)

Hickson F, Reid D, Davies P, Weatherburn P, Beardsell S & Keogh P (1996)
No aggregate change in homosexual HIV risk behaviour among gay men attending the Gay Pride festivals, United Kingdom, 1993–1995. *AIDS, 10*, 771–774.

Between 1993 and 1995, Hickson *et al*. carried out annual, self-completion surveys using a single-sheet questionnaire and opportunistic samples of gay men recruited at London Pride. The proportion of men who had UAI in the preceding year was 33%, 32%, 33% in 1993, 1994 and 1995.

From 1996 Dodds *et al*. have collected similar data in an annual, self-completion survey again using a single-sheet questionnaire with opportunistic samples of gay men but recruited in London's bars, clubs and GUM clinics. A higher proportion therefore live in London than the Pride surveys. However, in 1996, they also found the proportion of men who had UAI in the preceding year to be 33%. However, since 1996 this



proportion has been observed to rise each year through 35%, 39% to 46% in the 1999 survey.

- After at least a three year period of no aggregate change, in the three years between 1996 and 1999, there was a 40% increase in the proportion of men who engaged in UAI in the year preceding interview.

Among men who had UAI, the proportion who had unknown or known discordant UAI did not significantly vary over the four years of Dodds *et al*.'s survey (61%, 58%, 62% and 58%). This suggests comparable increases in the proportion of men who had known concordant UAI only and in the proportion who had UAI not known to be concordant.

	Men recruited at London gay festivals who were homosexually active in the last year				
Year	**1995 (Hickson *et al*, 1996)**		**2000 (current survey)**		
Sample size	1168		2015		
Mean age	32.0 years		32.2 years		
% resident in London	50.4%		53.5%		
Sexual behaviours in the last year	**n / total**	**% (95% CI)**	**n / total**	**% (95% CI)**	**overall change**
Any regular sexual partner	1008 / 1121	89.9 (88.1–91.7)	1801 / 1953	92.2 (91.0–93.4)	no significant change
Any regular penetrative partner	788 / 1112	70.9 (68.2–73.6)	1460 / 1908	76.5 (74.6–78.4)	significant increase of 8% of base
Any regular unprotected penetrative partner	331 / 1105	30.0 (27.3–32.7)	782 / 1860	42.0 (39.8–44.2)	significant increase of 40% of base
Any casual sexual partner	819 / 1091	75.1 (72.5–77.7)	1261 / 1877	67.2 (65.1–69.3)	significant decrease of 11% of base
Any casual penetrative partner	462 / 1089	42.4 (39.5–45.3)	767 / 1863	41.2 (39.0–43.4)	no significant change
Any casual unprotected penetrative partner	108 / 1105	9.8 (8.0–11.6)	266 / 1851	14.4 (12.8–16.0)	significant increase of 48% of base

These findings concur with those of Dodds *et al*. (2000) in that they strongly suggest an overall increase in the proportion of men who engaged in UAI in the preceding year. They also add further detail concerning the nature of any population-level changes.

Considering regular partners first, there was no significant change over this six year period in the proportion of men who had a regular partner (although it approaches significance). However, there was an increase in the proportion of men who had anal intercourse with a regular partner. In 1995, 78.8% of those with a regular had AI with one, while 83.0% had in 2000.

- More men have AI with their regular partners compared to six years ago.

More striking is the increase in the proportion of those who had unprotected AI with a regular partner. *Of those who had* anal intercourse with a regular, 42.3% had any UAI, while 54.9% had in 2000.

- Fewer men having AI with their regular partners always use a condom compared to six years ago.

Together (more men having regular AI and a smaller proportion of those always using a condom), these changes suggest an overall increase in the proportion of men having UAI with a regular partner to be around 40% (from 30.0% to 42.0%).

The pattern with casual partners differs slightly although the overall change is similar. These data suggest a significant *decrease* (of about 11%) in the proportion of men who had a casual partner in the preceding year.

- Fewer men are having casual sex compared to six years ago.

However, there was no overall change in the proportion who had AI with a casual partner. Moreover, among those men who had casual AI, fewer always used a condom in 2000 than in 1995. Among those having casual AI, 23.1% had not always used a condom in 1995 while 35.0% had not always used a condom in 2000.

This meant that overall, 9.8% of all the men in the 1995 sample had casual UAI in the preceding year (or 13.0% of those who had a casual partner). Six years later this figure was 14.4% (or 21.4% of those with a casual partner).

- Fewer men having AI with casual partners always use a condom compared to six years ago.

For some time it has been acknowledged in HIV prevention that it is HIV sero-discordant unprotected anal intercourse (sdUAI) that is driving the HIV epidemic among gay men and that this, not all unprotected anal intercourse, is the actual behavioural target of our interventions. If the above increase was all in HIV sero-concordant UAI then it will make no contribution to increasing incidence. Given the increase in casual UAI (where ensuring sero-concordancy is problematic) it makes it unlikely this is wholly the case. The following section looks at this in more detail.

4.3.3 Change in HIV sero-discordant UAI

This section presents unpublished data from the GMSS 1998 and 1999. It looks at population-level change between those two years in AI, UAI and probable sdUAI. The following table gives the aggregate HIV-related sexual behaviours for the clipboard recruited samples in 1998, 1999 and 2000. The sample sizes are similar, all of the men were resident in England or Wales, and had sex with man in the last year.

	1998	1999	2000	change
sample size	6315	6612	6623	—
% had any AI in last year	**83.7**	**82.1**	**81.2**	decrease
(95% CI)	(82.8–84.6)	(81.2–83.0)	(80.2–82.2)	
n / N	5090 / 6081	5257 / 6406	5045 / 6215	
missing n (% of base)	234 (3.7)	206 (3.1)	408 (6.2)	
% had any UAI in last year (of those that had AI)	**47.0**	**54.2**	**56.0**	increase
(95% CI)	(45.6–48.4)	(52.8–55.6)	(54.4–57.6)	
n/N	2371 / 5049	2797 / 5158	2722 / 4857	
missing (% of base)	41 (0.8)	99 (1.9%)	188 (3.7)	
% had concordant UAI only (of those that had UAI)	21.1	27.5	24.8	increase
(95% CI)	(19.5–22.7)	(25.9–29.2)	(23.2–26.4)	
% had any unknown UAI but no discordant (of those that had UAI)	73.0	68.0	69.9	decrease
% had any discordant UAI (of those that had UAI)	5.9	4.5	5.4	no change
(95% CI)	(5.0–6.9)	(3.7–5.3)	(4.6–6.2)	

The proportion of men who had any anal intercourse declined very slightly over the two years. However, the proportion of those men who had any unprotected anal intercourse rose significantly from 47% to 54% to 56%. This is a rise from 39% of the entire sample having any UAI in the last year in 1998, to 44% in 1999 and levelling off at 45% in 2000 (compare 39% in 1998 and 46% in 1999 in Dodd's *et al*., 2000). The rise in UAI is not because more men are having AI, but because fewer of those who had AI always used a condom when they did so.

In all years the majority of men who had UAI had done so without knowing their HIV concordancy with their UAI partner/s (ie. most men had unknown UAI). However, there was a significant rise in the proportion who had concordant only UAI and a corresponding decrease in men who had any unknown UAI. The proportion who had known discordant UAI stayed the same.

- A larger proportion of men having UAI knew they are sero-concordant with their partner than did two years ago.

Figure 4.3.3 presents this information for the whole GMSS clipboard samples. The largest change is the decrease in the proportion who had protected AI (PAI) only. The main increase is in the proportion who had concordant UAI only. However, there has also been an increase in the absolute number of men who had unknown UAI.

Because these three samples are cross-sectional (ie. they are different people) we cannot comment on change at an individual level. Although the overall changes are relatively small, there will be far more change at the individual level than these figures suggest.

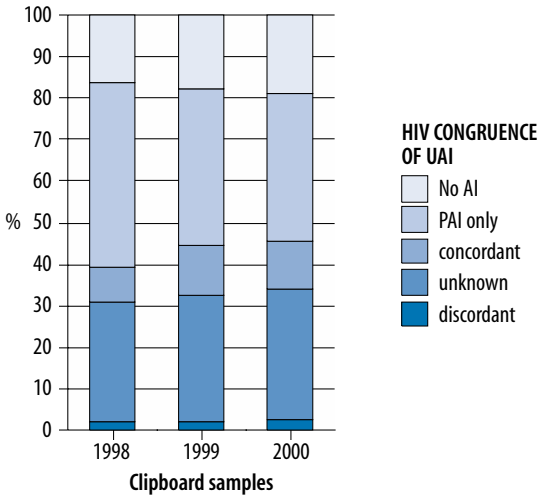


Figure 4.3.3: Proportion who had engaged in UAI in the last year and the knowledge of their UAI partners' HIV status, 1998, 1999 and 2000 surveys (N=6315, 6612, 6623)

4.4 MEASURES OF CONDOM FAILURE

As well as during unprotected anal intercourse sexual HIV exposure can occur when condoms fail during protected sero-discordant anal intercourse. *Making It Count* proposes reducing the overall rate of condom failure in order to reduce failure when partners are sero-discordant. In the past few years, the *Gay Men's Sex Survey* has been describing how the experience of failure varies across different groups, to help health promoters prioritise the needs of those men with regard to condom failure.

Condom failure is a term for a collection of incidents (eg. tearing, slipping, before / during AI etc.) which occur as a result of a number of other behaviours and characteristics (eg. lubricant use, the way it was put on, penis size, etc.). Each of these characteristics will make a greater or larger contribution to overall failure when it is present. Some proposed characteristics may not make condoms more (or less) likely to fail. An experimental trial of the behaviours which contribute to condoms tearing and slipping (and their relative importance when they are present) recently published its findings (see box below). This valuable research extends our knowledge of the *relative risk* of behaviours contributing to failure and should impact on the behavioural targets of HIV prevention (and hence the aims of interventions). The *2001 Gay Men's Sex Survey* is measuring these behaviours to contribute to an assessment of the *attributable risk* of each of them to the overall experience of condom failure described above. In GMSS 1999 we asked separately about tearing and slipping. In 1998 we asked a composite question and it was these questions we repeated in 2000. Men were asked:

- *Have you fucked a man (been active)* ***with*** *a condom in the last year?*
  If yes, Have any of the condoms ***you've*** *worn in the last year* ***split*** *or* ***come off*** *while you were fucking?*
  If yes, How many times?

Golombok S, Harding R & Sheldon J (2001)
An evaluation of a thicker versus a standard condom with gay men.
AIDS, *15*, 245–250.

Results of a randomised, controlled trial in which 2547 condoms were used for anal intercourse by 283 male couples in the UK. Couples were randomly allocated either standard or thicker condoms and were supplied with lubricant. They did not know whether they were using standard or thicker condoms. All couples had previously been using no condoms or standard condoms.

After each occurrence of intercourse, men completed questions on what had happened. Associations were examined between condom failure and characteristics of the condom, the man wearing it, and how it was used.

Overall, 7.9% of condoms failed, comprising: 1.5% that broke before intercourse commenced; 3.3% that broke during intercourse; and 3.2% that slipped off during intercourse. Compared to standard condoms, thicker condoms were no less likely to break (before or during) or slip.

Breakage was associated with:

- longer penis length;
- unrolling the condom before putting it on the penis;
- the type of lubricant used: 3.0% broke using water-based, 7.7% using an oil-based lubricant, 10.8% using saliva and 21.4% using no lubricant;
- insufficient lubricant: breakage was less likely if additional water-based lubricant was applied in the anus, around the anus or all over the outside of the condom;
- longer duration of intercourse.

Condom breakage was clustered in users, so that breakage was associated with previous experience of breakage and subsequent lack of confidence in using condoms. Compared to men not experiencing breakage, these men were younger and from lower social classes. Breakage was also clustered in couples so that a man was more likely to experience breakage when wearing a condom if his partner experienced breakage when wearing one.

Slippage was associated with:

- putting lubricant on the penis before putting the condom on;
- not putting lubricant on the outside of the condom.

As with breakage, slippage was more common among men from lower social classes. Slippage became less common with greater experience of condom use.

- The data from this trial suggests that health promotion intended to reduce condom failure should adopt the following behavioural targets:
  - reduce the % of condoms that are unrolled before being put on the penis;
  - increase the % of condom uses that are accompanied by water-based lubricant;
  - increase the amount of water-based lubricant used on the outside of the condom;
  - reduce the amount of water-based lubricant used on the inside of the condom.

Which of these behaviours account for the condom failure currently occurring among gay men in England can not be deduced from the data reported. Nor can the needs associated with them. The latter include knowledge, skills and access to water-based lubricant.

4.4.1 Change in condom failure

The following table shows the answers to these questions in 1998 and in 2000. The first lines are the proportions of the entire samples who used a condom for insertive anal intercourse in the last year. The second is the proportion of those men (who used a condom for IAI) who had any of the condoms split or come off. The third line is the proportion of those men (who experienced failure) who had more than one failure.

	GMSS 1998		GMSS 2000		
Condom failure measures	**n / total (95% CI)**	**% (95% CI)**	**n / total**	**%**	**overall change**
% used condom for IAI (of entire sample)	3391 / 5983	56.7 (55.5 – 57.9)	5364 / 9293	57.7 (56.7 – 58.7)	no change
% experienced failure (of IAI condom users)	460 / 2929	15.7 (14.4 – 17.0)	657 / 4942	13.3 (12.4 – 14.2)	decrease
% experienced >1 failure (of those experiencing failure)	243 / 436	55.7 (51.0 – 60.4)	281 / 551	51.0 (46.8 – 55.2)	no change

The proportion of men who used a condom for IAI in the last year did not significantly change between 1998 and 2000. Although this may at first appear contradictory with findings of increases in UAI, it should be remembered that UAI and condom use are *positively* associated (ie. they are differentially likely to occur in the same men (see Hickson, Hartley and Weatherburn, 2000)). This finding suggests that the increase in UAI is not simply a result of men 'giving up condoms' altogether but stopping using condoms with some (but not all) AI partners.

Among men who had used a condom, there was a significant decrease in the proportion who experienced any kind of condom failure in the last year, from 15.7% to 13.3%. Although there was a slight decrease in the proportion who experienced multiple failure, this was not significant.

- 15% fewer condom users experienced failure in 2000 compared with 1998.

In 1998, the proportion of condom users who experienced failure significantly varied by men's HIV testing history and across the education range. The following tables look at changes in these inequalities in 2000.

4.4.2 Change in condom failure & HIV testing history

The following table shows how the condom failure measures varied across the three HIV testing history groups in 1998 and 2000.

IAI condom users who experienced condom failure	% by HIV testing history		
	Never tested	Last test negative	Tested positive
1998	11.3	18.0	20.0
2000	11.6	13.9	14.2
% change of base	+2.7%	–22.8%	–29.0%

In 1998, among those who had used a condom for IAI, men who had never tested were significantly less likely to have experienced any failure than men who had tested, particularly those who had tested HIV positive. In 2000 this inequality had declined to a non-significant difference. This suggests that the overall decrease in experience of condom failure has been disproportionate among those groups with higher levels of failure. While the overall reduction in condom failure was 15%, it was 29% among men who had tested positive and 23% among those who had tested negative and did not change among men that had never tested.

- Between 1998 and 2000 there was a reduction in the inequality in condom failure across HIV testing history.

4.4.3 Change in condom failure & education

The following table shows how the condom failure measures varied across the three education groups in 1998 and 2000.

IAI condom users who experienced failure	% by education groups		
	Low	Medium	High
1998	18.6	15.7	14.0
2000	14.5	13.0	12.8
% change of base	–22.0%	–17.2%	–8.6%

In 1998, there was a trend among condom users for men with lower education to be more likely to experience failure ($p<.04$). The reduction in condom failure was differentially among men with higher levels of failure, so that in 2000 this difference was less apparent and statistically non-significant. While the overall reduction in condom failure across the two years was 15%, it was 22% among men with low education, 17% among those with medium education and 9% among those with higher education.

- Between 1998 and 2000 there was a reduction in the differential in condom failure across education groups.

4.5 OTHER SEXUALLY TRANSMITTED INFECTIONS

Making It Count specifically suggests gonorrhoea and NSU as targets for health promotion because of their high prevalence (as evidenced in the data below) and evidence of their impact on the relative risk of HIV infection. The prevalence of gonorrhoea and non-specific urethritis (NSU) may contribute to HIV incidence by increasing the probability of HIV transmission when exposure occurs, by increasing the infectivity of men with HIV (Bonnel *et al*., 2000). Our precise target is the proportion of the HIV positive partners in occasions of sdUAI who have either gonorrhoea or non-specific urethritis at the time. As the probability of a positive man picking up gonorrhoea or NSU is related to the overall prevalence of these STIs (and since both are the cause of considerable ill health among gay men), our target is best considered the overall prevalence of these infections.

While being mindful of not confusing acquiring infections with having them diagnosed, respondents in 2000 were asked two questions about sexually transmitted infections:

- *In the last year, have you **picked up** a sexually transmitted infection?*
- *In the last year, have you **passed on** a sexually transmitted infection?*

Men were asked to indicate *no, yes* or *maybe.* If their answer was *yes* or *maybe,* men were asked *what?* infection they had picked up or passed on.

Overall, 11.9% said they had picked up an STI in the last year and a further 1.6% thought they may have picked one up. Conversely, only 2.5% said they had passed on an STI but a further 4.3% said they may have passed one on. Of the 13.5% of men who said they had or may have picked up an STI, 15.3% did not specify an infection while 27.9% of those who said they had passed on an infection did not specify one. The following table shows how commonly specified each of thirteen infections and infestations were, expressed as a proportion of those who picked up or passed on an infection. In the third column is the number of diagnoses of that infection made in 1999 which were reported to the Public Health Laboratory Services and considered to have been acquired during sex between men.

STIs picked up in the last year	% who picked up each infection (of those who picked up an STI in the last year, N = 1262)	% who passed on each infection (of those who passed on an STI in the last year, N = 637)	Number of homosexually acquired infections reported in 1999
Any STI (whole sample)	**13.5**	**6.8**	—
crabs	25.0	20.4	860 includes scabies
gonorrhoea / clap	20.9	16.6	2434
NSU	16.2	11.9	4616
scabies	8.8	8.3	included in crabs
warts / HPV	7.3	5.7	3136
chlamydia	4.4	4.1	969
thrush	3.2	2.2	judged not applicable
herpes	2.8	2.7	801
HIV	1.9	3.5	1067
syphilis	1.7	1.3	180
hepatitis	1.3	1.1	194
gut infection	0.5	0.2	not recorded
molluscum contagiosm	0.4	0.0	235
other STI	1.4	0.9	—
no STI specified	15.3	27.9	—

(source for third column: PHLS, DHSS&PS and the Scottish ISD(D)5 Collaborative Group, 2000)

Since the treatment of crabs and scabies is available over-the-counter, it is likely that the majority of men who acquire these parasites treat themselves. This explains the very large discrepancy between the proportion of men who said they acquired them and the number of diagnoses made in GUM clinics.

The remainder of this chapter examines the incidence of self-reported STIs across the population groups previously described in this report. The tables use whole population figures for each sub-sample, rather than just proportions of those men that had an STI. In each table only those STIs that significantly vary across that population group are included.

4.5.0 HIV testing history & sexually transmitted infections

Men who had tested positive for HIV were most likely to have picked up an STI while men who had never tested were least likely to.

STIs picked up in last year (% of all)	% by HIV testing history		
	Never tested (N = 3729)	Tested negative (N = 4654)	Tested positive (N = 512)
Any STI	9.6	15.9	21.9
crabs	3.3	3.8	1.8
gonorrhoea	1.3	3.7	6.1
NSU	0.8	3.1	2.9
HPV	0.6	1.2	1.8
chamlydia	0.3	0.8	0.8
herpes	0.3	0.4	1.2
HIV	0.0	0.0	3.7
syphilis	0.1	0.2	1.4

HIV positive men were also more likely to have picked up several of the individual STIs, with the exception of crabs, which was least common among this group. HIV does not make men more susceptible to parasitic infections but may do to other infections. This suggests that positive men may be more likely to pick up STIs (but not crabs) because of their biological susceptibility rather than simply their sexual behaviour.

Nineteen (3.7%) of the 512 men who had earlier indicated they had tested HIV positive specified HIV as the STI they had picked up in the last year. This is very similar to the 4.6% of HIV positive men in the 1998 survey who said they had tested positive for the first time in the preceding year.

Positive men were much more likely to have acquired syphilis in the last year than other men. Of the twenty men who acquired syphilis, seven (35%) had diagnosed HIV. These findings clearly suggest that HIV prevention programmes should:

- Prioritise the STI needs of HIV positive men.

4.5.1 Region of residence & sexually transmitted infections

STIs were more common in London and the North West, the two regions with the largest gay populations (in Inner London and Manchester). Men in these regions were more likely to have picked-up any STI in the last year but, which STI differed by region. Gonorrhoea, NSU and HPV were all more common in London, while scabies and syphilis (see following box) were more common in the North West.

STIs picked up in last year (% of all)	% by region of residence								
	London (N=1950)	South East (N=1821)	North West (N=1292)	Trent (N=511)	West Mids. (N=1210)	North & Y (N=665)	Eastern (N=447)	South West (N=565)	Wales (N=537)
Any STI	18.5	12.8	14.3	11.4	10.7	12.6	11.9	12.0	9.1
gonorrhoea	5.0	2.1	2.3	1.2	2.4	2.0	2.7	2.3	2.0
NSU	4.3	2.3	1.7	1.6	1.2	2.3	1.3	1.8	0.4
scabies	1.5	1.1	2.2	0.8	0.6	0.3	0.4	1.4	1.5
warts / HPV	1.5	0.8	1.3	0.8	0.3	1.1	1.3	1.1	0.2
syphilis	0.3	0.2	0.8	0.0	0.1	0.0	0.0	0.2	0.0

- In national programmes, prioritise the gonorrhoea and NSU needs of men in London.

Increased transmission of syphilis in Manchester. *Communicable disease report weekly*, *10(10)*, 89.

Increased transmission in men who have sex with men reported from Brighton and Hove. *Communicable disease report weekly*, *10(20)*, 177–180.

Increased transmission of syphilis in Brighton and Greater Manchester among men who have sex with men. *Communicable disease report weekly*, *10(43)*, 383–386.

Between 1996 and 1998 only one or two cases of syphilis were diagnosed each year in Manchester Health Authority. In 1999, there were 34 cases diagnosed, 24 of which were in gay or bisexual men. Similarly in East Sussex, Brighton & Hove Health Authority there were one or no cases diagnosed each year since 1996 but nine cases in the nine months from June 1999, all among gay or bisexual men.

By August 2000 a total of 68 cases of syphilis had been diagnosed in gay or bisexual men in Greater Manchester (53 cases) and Brighton (15 cases). The median age of the men was 31 and they were more likely to be HIV positive than the local gay population (13/53 or 26% in Greater Manchester and 5/15 or 33% in Brighton). A qualitative investigation of 26 of the Manchester cases found that "condoms were used inconsistently during anal intercourse" although eight men belived they picked up syphilis during oral sex and "an association with oral sex was also observed in the Brighton cluster." Although some commentators have suggested these outbraks were due to changing sexual practices in the poppulation, it is safer to conclude that:

- Syphilis can spread rapidly among networks of men with large numbers of partners, especially those who are engaging in unprotected anal intercourse.

It is not the case that men in East Sussex, Brighton and Hove are being obscured by being grouped with the rest of the South East, as only 11.1% of these men had picked up any STI. Nor was syphilis higher among men in East Sussex, where only one out of 647 indicated he had acquired it in the last year.

4.5.2 Gender of partners & sexually transmitted infections

The following table shows the STIs which significantly varied by whether or not men had sex with women as well as men.

STIs picked up in last year (% of all)	% by gender of sexual partners in the last year	
	Men only	Men and women
Any STI	13.4	16.3
chlamydia	0.5	1.5
thrush	0.4	1.9

There was no overall difference in STI acquisition between men who had sex with men only and those who had sex with women as well. However, men who had sex with women as well were more likely to pick up two specific STIs, chlamydia and thrush (genital candidosis). Both these infections are far more common in women than men. There were six times as many diagnoses of each of these infections in women than in men in England in 1999 (PHLS, DHSS&PS and the Scottish Collaborative Group, 2000, table 2, page 29). It is clear that female partners are a source of sexually transmitted infections to bisexual men and possible that these men may pass their infections to other homosexually active men. Behaviourally bisexual men should be made aware of the risks posed to them by their female sexual partners. Although all of the men who acquired syphilis had sex with men only (none of the behaviourally bisexual men had picked up it up), the overall prevalence was too low for this to reach statistical significance.

4.5.3 Age & sexually transmitted infections

The following table shows the STIs which significantly varied across the age groups.

STIs picked up in last year (% of all)	% by age group				
	<20 (n=522)	20s (n=2979)	30s (n=3453)	40s (n=1630)	50+ (n=636)
Any STI	14.8	15.8	14.3	10.4	6.4
crabs	6.3	4.6	3.3	1.6	0.6
gonorrhoea	1.5	3.2	3.2	2.6	1.1
NSU	1.0	1.8	2.8	2.1	1.6
scabies	3.1	2.1	0.5	0.7	0.2

Picking up any STI in the last year was most common among men in their 20s although it was only marginally lower among men under 20 or in their 30s. Having any STI was less common among men in their 40s and least common in the 50 and over age group. Which STI men acquired varied by age. Parasitic infestations such as crabs or scabies were most common among the youngest group of men, while gonorrhoea and NSU, the two STIs of most relevant to HIV incidence, were highest among men in their 30s.

- Prioritise the gonorrhoea and NSU needs of men under 40.

4.5.4 Education & sexually transmitted infections

The following table shows the STIs which significantly varied by education.

STIs picked up in last year (% of all)	% by education groups		
	Low (N = 2711)	Medium (N = 2594)	High (N = 3946)
Any STI	11.3	14.0	14.8
crabs	2.5	3.5	3.9
NSU	1.6	2.3	2.6
chamlydia	0.3	0.8	0.7

Overall, men with lower levels of education were less likely to say they had picked up an STI in the past year than were men with higher education. This was the case for three STIs in particular: crabs, NSU and chlamydia. This may be a function of men with higher education being more likely to know or recall the name of their infections but this seems unlikely, not least because the first question about any STI was closed (tick-a-box) and men with less education had the lowest levels of all STIs also.

4.5.5 Ethnicity & sexually transmitted infections

The following table shows the STIs which significantly varied by ethnicity.

STIs picked up in last year (% of all)	% by ethnic groups				
	Asian/ Asian British (N = 148)	Black/ Black British (N = 119)	White British (N = 7834)	Other White (N = 988)	Other not White (N = 206)
Any STI	14.2	21.8	13.2	15.3	13.6
crabs	7.4	6.7	3.3	3.4	1.5

Black and Black British men were more likely than all other ethnic groups to indicate they had picked up an STI in the last year. However, Black men were not significantly more likely to report any of the individual STIs. Among all the individual STIs only the incidence of crabs varied significantly between the ethnic groups: it was most common among Asian and Asian British men.

4.5.6 Relationship status & sexually transmitted infections

The following table shows the STIs which significantly varied by current relationship status.

STIs picked up in last year (% of all)	% by relationship status groups			
	Single (N = 3729)	Partnered, HIV discordant (N = 393)	Partnered, HIV concordant (N = 3105)	Partnered, don't know concordancy (N = 2059)
Any STI	16.3	14.8	9.5	14.4
crabs	4.2	1.3	2.4	3.7
gonorrhoea	3.2	4.3	2.3	2.8
NSU	2.6	3.3	1.4	2.4
scabies	1.5	1.8	0.7	1.1
chlamydia	0.8	0.3	0.3	0.8
herpes	0.5	0.8	0.2	0.3
HIV	0.3	1.3	0.1	0.2
hepatitis	0.3	0.0	0.0	0.2
gut infections	0.1	0.3	0.0	0.0

Single men were more likely to have acquired an STI than men in a relationship and this was true both for those who had tested HIV positive and those who had not. However, this difference was not significant when we considered men with similar numbers of sexual partners. Men who are single are more likely to acquire STIs than men in relationships because they had more sexual partners.

Men in HIV sero-discordant relationships were more likely than men in the other relationship groupings, to acquire six of the individual STIs including gonorrhoea and NSU. This may partly be because these relationships, by definition, include a man with diagnosed HIV who is likely to be more susceptible to most of the non-parasitic STIs.

4.5.7 Numbers of partners & sexually transmitted infections

Unsurprisingly, picking up any STI was increasingly common with increasing numbers of sexual partners.

STIs picked up in last year (% of all)	% by numbers of partners groups				
	One (N = 2192)	2, 3 or 4 (N = 2054)	5 to 12 (N = 2203)	13 to 29 (N = 1046)	30+ (N = 1373)
Any STI	3.2	7.1	16.5	23.1	28.6
crabs	0.8	1.5	4.7	7.1	5.9
gonorrhoea	0.3	0.7	3.0	4.3	8.6
NSU	0.5	0.9	2.1	3.7	6.1
scabies	0.1	0.5	2.1	2.3	2.0
HPV	0.2	0.5	1.6	1.7	1.6
chlamydia	0.1	0.3	0.7	0.8	1.6
thrush	0.1	0.2	0.5	0.8	0.7
herpes	0.0	0.2	0.4	0.5	1.1
HIV	0.0	0.2	0.3	0.3	0.7
syphilis	0.0	0.0	0.1	0.5	0.7
gut infections	0.0	0.0	0.0	0.3	0.2

Almost all the individual STIs were significantly more common among men with larger numbers of sexual partners. Clearly, men with higher numbers of sexual partners are central to the patterns of STI transmissions.

4.6 IMPLICATIONS FOR PLANNING

4.6.1 Prioritising groups likely to be involved in sdUAI

As a group, homosexually active men are more likely to be involved in sexual HIV exposure than any other group in the country. This implies:

- All HIV prevention programmes concerned with reducing HIV incidence should prioritise the needs of gay men and bisexual men above all other groups.

The proportion of men who risk involvement in sexual HIV exposure has increased. This cannot be taken simply as an indicator of failure on the part of individual HIV prevention interventions as involvement in sexual exposure is a function of more than single interventions can hope to change. However, it is an indication that the national investment in gay men's HIV prevention is insufficient. It is widely recognised that there is a considerable disparity between what health authorities say they are spending on gay men's prevention and what can be accounted for by considering the prevention activity that is occurring (see Hickson, Hartley & Weatherburn, 2001). In the past four years the *National Gay Men's Sex Surveys* have described extensive unmet HIV prevention need among gay and bisexual men and how that need varies across different groups (see Chapter 5). The implications of the preceding chapter for gay and bisexual men's prevention programmes are the same as the last few years. In order to increase their impact on incidence, programmes should:

- Prioritise the sdUAI related needs of men who have tested HIV positive;
- Prioritise the sdUAI related needs of younger men; and
- Prioritise the sdUAI related needs of men with lower levels of formal education.

4.6.2 Prioritising groups likely to experience condom failure

The reduction in experience of condom failure in the last few years is very good news. While further change is desirable, no increase in resources to address condom failure seems necessary. The decline in condom failure appears to have occurred disproportionately among those most likely to experience it. Broad-based rather than targeted interventions may be of greater use in the future.

4.6.3 Prioritising groups likely to pass on gonorrhoea or NSU

At a national level, both gonorrhoea and NSU were higher in London than elsewhere. This suggests a National programme may have greatest impact if any intervention concentrated on London. However, gonorrhoea and NSU are common among gay men in all areas of the country. In each area, they are associated with specific groups of men. It has been suggested that the prevalence of gonorrhoea in a population can be influenced by changes in a small sub-group of highly sexually active individuals. As with all STIs, the central implication of the preceding data is to:

- Prioritise the gonorrhoea and NSU needs of men with larger numbers of sexual partners.

There was also an association between having tested positive and acquiring gonorrhoea, independent of numbers of sexual partners. This may be due to an increased biological susceptibility to infectious agents. As well as increasing the health of men with HIV infection, ensuring these men's STI needs are met may contribute to fewer new HIV infections. Hence, programmes should:

- Prioritise the gonorrhoea and NSU needs of men who have tested HIV positive and their regular sexual partners

5 Changing needs

In this chapter we consider what might be influencing the changes in health promotion targets observed in Chapter 4, particularly in sexual behaviour. First, we distinguish between HIV prevention need and other factors influencing HIV related behaviour. We then introduce those indicators of need asked in 2000 and compare them with previous years in which they were included.

Making It Count suggests 'prioritising aims which are poorly met for a large proportion of the population' in order to maximise impact 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 population groups for each year the indicator was asked.

5.1 TREATMENTS, IGNORANCE AND PERCEPTIONS OF HIV SEVERITY: WHAT IS A NEED?

Changes in the number of sexual HIV exposures occurring are the outcome of many factors, not all of which can be considered HIV prevention needs. For example, where a man lives in the country and how many men with HIV live in his socio-sexual networks will influence the probability of his involvement in exposure, but we are not attempting to get men to 'move home'.

It has been proposed that knowledge of changes in the clinical management of HIV have reduced the perception of the severity of HIV disease, which in turn has influenced sexual actions. If this knowledge is faulty, perhaps filtered through optimistic media, then this ignorance can be considered a need. However, it is unclear what need a man is in if his sexual actions change, based on robust and accurate knowledge. We often hear claims of increasing 'complacency' among (young) gay men towards HIV and the risks of their sexual behaviour. The notion of 'treatment optimism' as a psychological construct influencing HIV exposure has added to this narrative and, we believe, diverted attention from the real task of HIV education. At its extreme it would suggest men who are ignorant of treatment advances are more fearful and therefore more careful, so let us keep as many men as possible ignorant.

In 1999, men were asked to agree or disagree with the statement *'HIV is still a very serious medical condition'*. This question was also asked in 1997 but only in *London Pride* (Hickson *et al*., 1998).

Figure 5.1 shows the extent of agreement among men resident in England and Wales other than London, and who had not tested HIV positive, in 1997 and 1999. The proportion who indicated either *not sure or disagree* significantly decreased from 5.9% (95% CI 4.2–7.6) to 1.5% (95% CI 1.2–1.8) indicating a decline in the number of men unsure or sceptical about the severity of HIV infection. This suggests a decline in complacency. However, a smaller proportion of those who agreed did so *strongly* in 1999 than 1997. This difference may be pointed to as increasing complacency if such a statement needs be made.

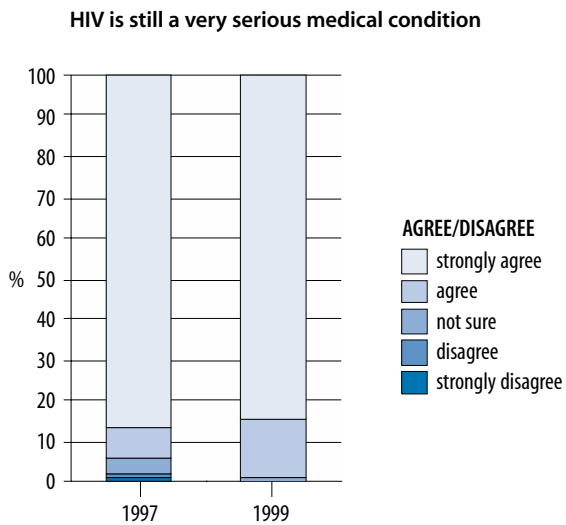


Figure 5.1: Perception of HIV severity among men *not* resident in London and *not* tested HIV positive, GMSS 1997 (N=723) and 1999 (N=6210)

Among men living in London with a positive HIV diagnosis we see a similar change. Of the twenty four men in the 1997 survey one disagreed and one was not sure (making 8% who did not agree). In 1999, no men were unsure, and seven disagreed (4%). Fewer men were complacent about the seriousness of HIV. These figures do not suggest increasing complacency about HIV infection and do not support the hypothesis that the changes in aggregate sexual behaviour are being driven by treatment optimism.

Currently, our health promotion aims are that men are knowledgeable about HIV infection. *Making It Count* includes aims of interventions that: men know that HIV is a virus that can result in AIDS, a serious, incurable and often fatal disease (Aim 3.1); and men know that a positive HIV test result means a person may benefit from health monitoring, medical treatment and support services that would be unavailable if their infection remained undiagnosed (Aim 6.8). How severe men think this infection is will depend on their personal and collective circumstances and values, as well as the extent of their knowledge about HIV and its treatment. Ignorance, not disagreeing with statements such as that above, should be our indicator of need.

In the following sections we report on the findings from the questions about HIV prevention need. For each of these questions, we should be able to say what answer would mean that men may potentially benefit from our interventions in a way that disagreeing or agreeing with *HIV is still a very serious medical condition* cannot. The indicators of need reported on are:

- Answering '*yes*' to *In the last year have you been forced to have sex when you didn't want it?*
- Disagreeing with *The sex I have is always as safe as I want it to be.*
- Disagreeing with *I find it easy to say 'no' to sex I don't want.*
- Agreeing with *I sometimes have a problem getting hold of condoms.*
- Agreeing with *I sometimes feel lonely.*

- Not knowing that:
  - AIDS is caused by a virus called HIV.
  - Men can have HIV without knowing it.
  - There is no vaccine against HIV.
  - There is no test to tell whether or not someone is immune to HIV.
  - Gonorrhoea is caused by a bacteria.
  - Men can have gonorrhoea without knowing it.
  - Gonorrhoea is easily treated with antibiotics.
  - No one is immune to gonorrhoea.

The indicators are generated from what HIV prevention is trying to achieve: that men have a choice and are knowledgeable, able and aware when it comes to HIV and sex.

5.2 FREEDOM FROM SEXUAL FORCE

Control over sex is a prerequisite for having choice and control over sdUAI. *Making it Count* proposes, that *No man is raped or otherwise sexually assaulted*. In order to ascertain the incidence of sexual assault, men were asked *In the last year have you been forced to have sex when you didn't want it?* Those men who answered yes were then asked *How many times* this had occurred.

In the last year have you been forced to have sex when you didn't want it?		% of entire 2000 sample (N = 9761)
No		89.4
Yes	Once	2.1
	More than once	2.4
	(Number of times missing)	1.3
Left this item blank (but answered subsequent questions)		4.8

Overall, 5.8% of men said they had been forced to have sex when they did not want it and a further 4.8% (who went on to complete other questions) left this question blank. When asked how many times this occurred almost a quarter (22%) of those who said they had been assaulted did not answer. Of those who answered the median number of occurrences was 2 with 50% between 1 and 3 (range 1–400, mean 6.3, standard deviation 33.2).

Having been forced into sex was positively associated with having been involved in UAI. Of those men who had been forced 59.0% had been involved in UAI compared to 45.6% of those who had not been. The 1998 survey found 1.9% of men had been raped (anally penetrated against their will) in the last year (and a further 2.0% declined the question) and found an association with sero-discordant UAI. The above findings suggest that the use of sexual force is more common than rape and that sexual force contributes to sexual HIV exposure. However, we can say nothing about changes in needs for sexual autonomy.

5.3 'AS SAFE AS I WANT TO BE'

In 1997, 1999 and 2000 men were asked to indicate on a five point scale whether they agreed or disagreed with the statement *The sex I have is always as safe as I want it to be*. Disagreement with the statement was taken as a general indicator of need for control over sexual safety.

The sex I have is always as safe as I want it to be.	% of entire samples		
	Agree	Middle of scale / Not sure	Disagree (95% CI)
1997 (N = 665)	80.9	8.6	10.5 (8.2–12.8)
1999 (N = 9207)	89.0	5.2	5.8 (5.3–6.3)
2000 (N = 9396)	83.5	7.7	8.7 (8.1–9.3)
% change of base			no change

The proportion in need on this indicator fell then rose again. However, the confidence intervals for 1997 and 2000 overlap indicating no overall change in need over the four years. It is important to note that the proportion in need on this indicator is less than the proportion of men who may be involved in sexual HIV exposure. This suggests that at least some of those men are comfortable with the risks they are taking.

5.4 SEXUAL ASSERTIVENESS

The second aim of *Making It Count* is that men are equipped and competent to negotiate sex. This includes both access to the physical resources of condoms and lubricant and the social and interpersonal skills to allow them to have the sex they choose. Sexual assertiveness, being able to state one's desires clearly without impinging on the rights of others, is hypothesised to reduce the probability men will be involved in sexual HIV exposure. In 1998 and 2000 men were asked to indicate on a five point scale whether they agree or disagree with the statement *I find it easy to say 'no' to sex I don't want*. Again, disagreement with the statement was taken as an indicator of need, in this case for greater sexual assertiveness.

Does not find it easy to say 'no' to unwanted sex.	% of entire samples		
	Agree	Middle of scale / Not sure	Disagree (95% CI)
1998 (N= 6205)	69.0	10.9	20.1 (19.1–21.1)
2000 (N=9409)	81.8	8.6	9.6 (9.0–10.2)
% change of base			–52.2

In 1998 a fifth of men disagreed with the statement and in 2000 this had fallen to half that level. Confidence intervals do not overlap, suggesting a significant decrease in unmet need between 1998 and 2000. Fewer men lack sexual assertiveness than in 1998.

Making It Count assumes HIV health promotion programmes are concerned with both their overall impact on unmet need in the population (as above) as well as reducing inequalities in need. As such, it is desirable that the overall reduction observed above is disproportionately experienced by those in most need. In the following sections we look at change in the indicator of need for sexual assertiveness across the demographic groups. In 1998, we found that sexual assertiveness was a more commonly unmet need for men who had tested HIV positive, bisexual men, men with lower levels of education and men with higher numbers of sexual partners. In the following tables, we look at how this overall decrease in need varied across the groups, reporting differences where they were observed.

5.4.0 HIV testing history & sexual assertiveness

Does not find it easy to say 'no' to unwanted sex.	% in need by HIV testing history		
	Never tested	Tested negative	Tested positive
1998	19.1	19.3	27.3
2000	9.9	9.5	11.4
% change of base	–48.2	–50.8	–58.2

In 1998 men who had tested positive for HIV showed significantly more need than others. With a slightly larger decrease in need among these men this difference was not observed in 2000. This suggests an increase in equity of aim as well as a decrease in overall unmet need.

5.4.1 Region of residence & sexual assertiveness

In both 1998 and 2000 the proportion of men in need of sexual assertiveness did not vary by their region of residence.

5.4.2 Gender of partners & sexual assertiveness

Does not find it easy to say 'no' to unwanted sex.	% in need by gender of sexual partners	
	Men only	Men and women
1998	19.7	27.1
2000	9.5	12.3
% change of base	–51.8	–54.6

In 1998 behaviourally bisexual men had significantly more need in relation to sexual assertiveness than exclusively homosexual men. The decrease was slightly higher among the former so that no statistically significant difference was observed in 2000. Again this suggests men in greatest need changing the most.

5.4.3 Age & sexual assertiveness

Does not find it easy to say 'no' to unwanted sex.	% in need by age groups				
	<20	20s	30s	40s	50+
1998	18.3	20.8	18.9	19.8	24.7
2000	13.9	11.3	8.8	7.3	7.9
% change of base	–24.0	–45.7	–53.4	–63.1	–68.0

In 1998 need for sexual assertiveness did not significantly differ by age although it appeared slightly more common among older men. However, in 2000 men in their 20s and under were more likely than older men to indicate need. A similar pattern was found in a further survey in London (Hickson, Hartley & Weatherburn, 2001). The decrease in need has been disproportionate among older men, so that it now appears younger men have a greater lack of sexual assertiveness. This suggests increasing inequality across the age range with regard to sexual assertiveness and the need for targeted interventions for younger gay men. This is especially pressing given the disproportionate likelihood that younger men will experience sexual force.

5.4.4 Education & sexual assertiveness

In both years men with a high level of education showed significantly less need than men with medium or low formal education and the decrease in need was similar across the three groups.

5.4.5 Ethnicity & sexual assertiveness

Need did not differ in either year by ethnicity and the decrease in need is observed across all ethnic groups.

5.4.6 Relationship status & sexual assertiveness

Does not find it easy to say 'no' to unwanted sex.	% in need by relationship status		
	Single	Recently partnered	Partnered over 12 months
1998	21.3	19.1	18.8
2000	11.4	10.2	7.7
% change of base	–46.5	–46.5	–59.0

Need differed in 2000 by (male) relationship status where men partnered for longer than 12 months had less need. The decrease in need is observed across all groups although more prominently in those partnered over 12 months. This can be considered undesirable as single and recently partnered men had greater need in relation to sexual assertiveness and this difference has created another inequality.

5.4.7 Numbers of partners & sexual assertiveness

Does not find it easy to say 'no' to unwanted sex.	% in need by numbers of partners groups				
	One	2, 3 or 4	5 to 12	13 to 29	30+
1998	19.1	18.1	18.0	21.8	22.1
2000	5.6	8.4	10.0	12.3	14.7
% change of base	–70.7	–53.6	–44.4	–43.6	–33.5

In both years men with larger numbers of sexual partners were more in need of sexual assertiveness than those with fewer partners. As the decrease in need was greatest among those with fewer sexual partners, this difference in need was even more pronounced in 2000 than in 1998, again suggesting that an increase in inequality.

5.5 ACCESS TO CONDOMS

Having access to condoms is hypothesised to reduce the probability men will be involved in sexual HIV exposure. In 1998 and 2000 men were asked to indicate on a five point scale, whether they agreed or disagreed with the statement *I sometimes have a problem getting hold of condoms.*

I sometimes have a problem getting hold of condoms.	% of entire samples		
	Disagree	Middle of scale / Not sure	Agree (95% CI)
1998 (N = 6145)	87.1	6.2	6.7 (6.1–7.3)
2000 (n = 9351)	83.4	4.1	12.5 (11.8–13.2)
% change of base			+86.6

Agreement with the statement indicated need. Confidence intervals do not overlap and men in 2000 had significantly greater need related to condom access than men in 1998.

- Problems accessing condoms have increased since 1998.

5.5.0 HIV testing history & access to condoms

In neither year did need vary by HIV testing history.

5.5.1 Region of residence & access to condoms

I sometimes have a problem getting hold of condoms. (2000)	**% in need by region of residence**		
	Disagree	**Middle of scale / Not sure**	**Agree (95% CI)**
Wales (n = 532)	74.4	4.3	21.2 (17.7–24.7)
London (n = 1958)	82.0	4.4	13.6 (12.1–15.1)
West Midlands (n = 1213)	83.6	3.5	12.9 (11.0–14.7)
Eastern (n = 446)	82.3	5.2	12.6 (9.5–15.7)
South West (n = 577)	84.1	3.8	12.1 (9.4–14.8)
Northern & Yorkshire (n = 668)	85.6	3.3	11.1 (8.6–13.6)
Trent (n = 510)	85.7	3.3	11.0 (8.1–13.9)
South East (n = 1828)	84.9	4.2	10.9 (9.5–12.3)
North West (n = 1309)	87.5	3.7	8.7 (7.2–10.2)

As information on residence was asked differently prior to 1999, comparison by region of residence between 1998 and 2000 is not possible. Confidence intervals comparing need by different geographic regions all overlap with the exception of Wales where need is highest. Men in Wales have greater problems accessing condoms than men in England

5.5.2 Gender of partners & access to condoms

Sometimes has a problem getting hold of condoms.	**% in need by gender of sexual partners**	
	Men only	**Men and women**
1998	6.2	16.2
2000	12.4	13.7
% change of base	+100.0	–15.4

In 1998 behaviourally bisexual men had considerably greater need than exclusively homosexual men. By 2000 need had increased to similar levels amongst exclusively homosexual men. This increase in equality of unmet need has been at the expense of an overall increase in need.

5.5.3 Age & access to condoms

Sometimes has a problem getting hold of condoms.	**% in need by age groups**				
	<20	**20s**	**30s**	**40s**	**50+**
1998	10.5	7.6	5.8	5.8	6.9
2000	15.3	13.5	12.0	11.1	10.7
% change of base	+45.7	+77.6	+106.9	+91.4	+55.1

In both years need varied significantly by age, where those under 20 had the greatest level of need. In 2000 a straightforward relationship appears where increasing age is accompanied by decreasing need. Younger men still have greater problems accessing condoms.

5.5.4 Education & access to condoms

Sometimes has a problem getting hold of condoms.	% in need by education groups		
	Low	Medium	High
1998	8.1	6.8	5.4
2000	14.0	11.8	11.8
% change of base	+72.8	+73.5	+118.5

In both years men with low educational level showed greater need than men with medium or high. Men with low education still have greater problems accessing condoms.

5.5.5 Ethnicity & access to condoms

Sometimes has a problem getting hold of condoms.	% in need by ethnicity			
	Asian	Black	White	Other
1998	10.4	7.1	6.4	13.3
2000	22.0	13.3	12.1	20.5
% change of base	+111.5	+87.3	+89.1	+54.1

Need varied in both years by membership of different ethnic groups, with men in 'other' groups having the greatest need and white men the least. In both years Asian men had higher need than white or black men.

5.5.6 Relationship status & access to condoms

Need did not differ in either year by relationship status. The increase in need from 1998 to 2000 was observed across all groups.

5.5.7 Numbers of partners & access to condoms

Sometimes has a problem getting hold of condoms.	% in need by numbers of partners groups				
	One	2, 3 or 4	5 to 12	13 to 29	30+
1998	5.5	7.3	7.0	7.4	6.7
2000	9.2	13.5	12.4	14.2	13.9
% change of base	+67.3	+84.9	+77.1	+91.9	+107.5

Need did not vary by number of male partners in 1998 but did in 2000 where men with one partner had less unmet need for condoms than others.

Elford J, Bolding G, Maguire M & Sherr L (2000) Combination therapies for HIV and sexual risk behaviour among gay men. *Journal of Acquired Immune Deficiency Syndrome*, *23(3)*, 266–271.

Cross sectional data from 1018 gay men recruited in five central London fitness centres during March and April 1998. Overall, 18% had neither heard of protease inhibitors nor of combination therapy for HIV infection.

- Almost one in five gay men in London was entirely ignorant of treatment advances for HIV infection.

Those who had heard of either protease inhibitors or combination therapy (n=837) were asked to rate the statement "I believe that the new drug therapies make people with HIV less infectious" on a five-point scale.

Anti-HIV therapy works by reducing viral load and viral load is one of the key factors influencing infectivity. Relative to not being on therapy, people with HIV are less infectious when they are on the new drug therapies. People who were ignorant of this would say 'not at all' to the above statement. Of the 82% of men who had heard of combination therapy, 81% said 'not at all'. The proportion who were ignorant varied by testing history. Men who had never tested were most likely to think new therapies have no impact on infectivity (87% thought this) and men who had tested positive were least likely to think this (73%). Men who had last tested negative (81%) were in between.

- Ignorance about HIV therapies among fitness centre-using gay men in London is widespread, even among men who have tested HIV positive.

5.6 HIV KNOWLEDGE

The 2000 survey repeated a set of eight knowledge items that were asked in the 1998 survey; four about HIV and four about gonorrhoea. The question form gives men a true statement and asked whether they already knew that this was the case, they were not sure, or they did not already know this. The questions were designed in this way (rather than a mixture of true / false statements) so that men would not be mis-led. It also increases the educational impact of completing the survey. The following table shows the proportion of men who did not already know each of the four HIV/AIDS statements.

All of the following statements are TRUE. Did you know this already?	Year	Not sure, didn't know, or left blank (95% CI)
• AIDS is caused by a virus called HIV	1998 (N = 6283)	2.2 (1.8–2.6)
	2000 (N = 9395)	2.3 (2.0–2.6)
% change of base		no change
• Men can have HIV without knowing it	1998 (N = 6283)	3.6 (3.2–4.1)
	2000 (N = 9395)	3.8 (3.4–4.2)
% change of base		no change
• There is no vaccine against HIV	1998 (N = 6283)	8.7 (8.0–9.4)
	2000 (N = 9395)	8.0 (7.5–8.5)
% change of base		no change
• There is no test to tell whether or not someone is immune to HIV	1998 (N = 6283)	31.3 (30.2–32.4)
	2000 (N = 9395)	30.3 (29.4–31.2)
% change of base		no change

Answering *not sure or don't know* or leaving the question unanswered indicates need. The level of need on individual indicators did not change between 1998 and 2000. Less than 5% of men had need in relation to knowing that AIDS was caused by a virus called HIV and that men could have HIV without knowing it. There was greater need in relation to knowledge about the absence of a vaccine and in particular an immunity test for HIV. As we found no evidence of an overall change in need for HIV knowledge, we have not looked at these variables any further.

5.7 GONORRHOEA KNOWLEDGE

The second set of four items concerned gonorrhoea, which was chosen as a population target for *Making It Count* because it is a common, specific, bacterial infection thought to facilitate HIV transmission (Weatherburn *et al*., 1999, Bonell *et al*., 2000). The following table shows the proportions of men who did not already know each of the knowledge items.

All of the following statements are TRUE. Did you know this already?	Year	Not sure, didn't know, or left blank (95% CI)
• Gonorrhoea is caused by a bacteria	1998 (N = 6283)	34.8 (33.6–36.0)
	2000 (N = 9395)	37.8 (36.8–38.8)
% change of base		+8.6
• Men can have gonorrhoea without knowing it	1998 (N = 6283)	35.9 (34.7–37.1)
	2000 (N = 9395)	35.0 (34.0–36.0)
% change of base		no change
• Gonorrhoea is easily treated with antibiotics	1998 (N = 6283)	20.1 (19.1–21.1)
	2000 (N = 9395)	25.0 (24.1–25.9)
% change of base		+24.4
• No one is immune to gonorrhoea	1998 (N = 6283)	27.3 (26.2–28.4)
	2000 (N = 9395)	29.0 (28.1–29.9)
% change of base		no change

In both years knowledge about gonorrhoea was less common than about HIV/AIDS. Around a third of men in each year were unaware that gonorrhoea was caused by a bacteria, that men can be infected and not know and that no one has immunity to gonorrhoea. If men are to get gonorrhoea treated swiftly if they pick it up, these are vital pieces of information. Need increased between 1998 and 2000 for two of the indicators.

5.7.0 HIV testing history & gonorrhoea knowledge

		% in need by HIV testing history		
		Never tested	Tested negative	Tested positive
Gonorrhoea is caused by a bacteria	1998	38.2	32.2	27.7
	2000	43.6	34.2	31.1
% change of base		+14.1	+6.2	+12.3
Gonorrhoea is easily treated with antibiotics	1998	24.2	16.4	12.2
	2000	31.7	21.5	12.2
% change of base		+31.0	+31.1	no change

In both years these indicators of gonorrhoea knowledge significantly varied by testing history and the increase in need was among those already in greatest need. Men who have never tested for HIV are still in greatest need of knowledge about gonorrhoea.

5.7.1 Region of residence & gonorrhoea knowledge

2000 survey	% in need by region of residence								
	Wales	North West	North & Y	South West	Eastern	South East	London	West Mids.	Trent
Gonorrhoea is caused by a bacteria	41.7	37.2	38.1	39.0	38.9	38.0	34.1	37.5	40.6
Men can have gonorrhoea without knowing it	39.1	33.9	37.6	39.5	38.0	35.3	27.7	37.2	37.7
Gonorrhoea is easily treated with antibiotics	32.1	23.3	26.9	28.6	26.2	23.5	19.2	28.0	28.5
No one is immune to gonorrhoea	31.0	27.3	30.4	35.3	30.1	28.8	24.4	29.7	32.2

In 2000, all gonorrhea knowledge indicators differed significantly by region of residence. Need was lowest in the London region and generally highest in Wales.

5.7.2 Gender of partners & gonorrhoea knowledge

		% in need by gender of sexual partners	
		Men only	Men and women
Gonorrhoea is caused by a bacteria.	1998	34.4	42.2
	2000	37.5	42.1
% change of base		+9.0	no change
Gonorrhoea is easily treated with antibiotics.	1998	19.7	28.9
	2000	24.6	33.1
% change of base		+24.9	+14.5

The increase in need for gonorrhoea knowledge was greatest among those in least need, evening out the existing inequality. However, it was still the case in 2000 that behaviourally bisexual men had greater need than those who were exclusively homosexual.

5.7.3 Age & gonorrhoea knowledge

		% in need by age groups				
		<20	20s	30s	40s	50+
Gonorrhoea is caused by a bacteria	1998	45.1	38.8	33.8	28.7	28.0
	2000	57.1	41.2	35.4	33.8	29.3
% change of base		+26.6	+6.2	+4.7	+17.8	+4.6
Gonorrhoea is easily treated with antibiotics	1998	43.7	28.8	16.3	9.7	8.0
	2000	51.7	32.9	22.0	13.3	12.6
% change of base		+18.3	+14.2	+35.0	+37.1	+57.5

In both years men under 20 were in most need for knowledge about gonorrhoea. This difference has been exacerbated with regard to one of the items.

5.7.4 Education & gonorrhoea knowledge

		% in need by education groups		
		Low	Medium	High
Gonorrhoea is caused by a bacteria	1998	38.8	33.9	32.9
	2000	44.2	38.8	32.7
% change of base		+13.9	+14.5	no change
Gonorrhoea is easily treated with antibiotics	1998	25.8	20.1	15.8
	2000	30.8	26.6	20.1
% change of base		+19.4	+32.3	+27.2

All knowledge indicators used in the survey over the past four years have shown greater need among men with less education. These two indicators show the same pattern, with an increasing inequality in one of the indicators.

5.7.5 Ethnicity & gonorrhoea knowledge

		% in need by ethnic groups			
		Asian	Black	White	Other
Gonorrhoea is caused by a bacteria	1998	36.1	30.4	34.8	34.9
	2000	46.5	31.9	37.8	37.3
% change of base		+28.8	+4.9	+8.6	+6.9
Gonorrhoea is easily treated with antibiotics	1998	23.6	17.4	19.9	22.2
	2000	40.0	25.0	24.8	26.4
% change of base		+69.5	+43.7	+24.6	+18.9

Only in 2000 did one of the indicators significantly vary by ethnic group, although the other indicators suggests a similar specific need. Knowledge about gonorrhoea appears particularly poor among Asian men.

5.7.6 Relationship status & gonorrhoea knowledge

Relationship status was not asked in both years. In 2000, all gonorrhea indicators of need were lower among men in relationships over 12 months in length. Single and recently partnered men had greater levels of need for gonorrhoea knowledge.

5.7.7 Numbers of partners & gonorrhoea knowledge

		% in need by numbers of partners groups				
		One	2, 3 or 4	5 to 12	13 to 29	30+
Gonorrhoea is caused by a bacteria	1998	33.4	39.4	36.0	34.8	28.9
	2000	38.2	43.2	37.6	36.8	30.5
% change of base		+14.4	+9.6	+4.4	+5.7	+5.5
Gonorrhoea is easily treated with antibiotics	1998	21.3	24.6	20.2	17.0	12.7
	2000	26.8	32.0	24.7	21.3	14.8
% change of base		+25.8	+30.1	+22.3	+25.3	+16.5

Knowledge about gonorrhoea was most wanting among men with two, three or four partners. The pattern of need is similar for both indicators in both years. Men with the greatest number of partners had the least unmet need with regard to gonorrhoea knowledge.

5.8 LONELINESS

In 2000 and in 1999 men were asked whether they agree or disagree with *I sometimes feel lonely.* Agreeing with the statement is taken as an indicator of social need.

I sometimes feel lonely.	% of entire samples		
	Disagree	Not sure	Agree
1999 (n = 8941)	29.4	7.3	63.3 (62.30–64.30)
2000 (n = 9389)	33.3	8.0	58.7 (57.7–59.7)
% change of base	+13.3	+9.6	–7.3

In both years almost two thirds of men agreed with the statement. However, 4.6% fewer men agreed in 2000 than in 1999 a decrease in base of 7.3%. The confidence intervals on these proportions do not overlap, suggesting a significant decrease in need between 1999 and 2000. A corresponding increase was observed in men disagreeing (overall increase of 4.1%) rather than indicating the middle of the scale (overall increase of 0.7%).

- The proportion of men reporting loneliness decreased between 1999 and 2000.

5.8.0 HIV testing history & loneliness

I sometimes feel lonely.	% in need by HIV testing history		
	Never tested	Tested negative	Tested positive
1999	61.7	64.4	64.7
2000	58.7	58.6	62.7
% change of base	–3.3	–9.0	–3.1

In 1999 men who had never tested showed less need than those who had. The decline was seen in all three groups but was highest among those who had tested negative. In 2000 there was no significant difference in loneliness by testing history groups.

5.8.1 Region of residence & loneliness

Due to changing groupings for region of residence we do not comment on change in loneliness across residence groups. Need did not significantly vary by region of residence in 2000.

5.8.2 Gender of partners & loneliness

Loneliness did not significantly differ in either year by gender of sexual partners and the same decline was seen in both groups.

5.8.3 Age & loneliness

I sometimes feel lonely.	% in need by age groups				
	<20	20s	30s	40s	50+
1999	69.1	67.1	61.1	59.9	60.4
2000	66.1	60.0	56.3	58.9	59.2
% change of base	–4.3	–10.6	–7.9	–1.7	–2.0

In both years, loneliness was significantly higher among men under 30, particularly among those under 20. The decline in loneliness was observed in all age groups.

5.8.4 Education & loneliness

I sometimes feel lonely.	% in need by education groups		
	Low	Medium	High
1999	65.6	62.5	62.2
2000	59.2	59.6	57.8
% change of base	–9.8	–4.6	–7.1

In 1999 only, less well educated men had slightly more need in relation to loneliness than others. This difference was not observed in 2000.

5.8.5 Ethnicity & loneliness

Need in relation to loneliness did not differ by ethnic group in either year.

5.8.6 Relationship status & loneliness

Questions about relationship status were not asked in both years and we can say nothing about differences in changes in loneliness by relationship status.

5.8.7 Numbers of partners & loneliness

I sometimes feel lonely.	% in need by numbers of partners groups				
	One	2, 3 or 4	5 to 12	13–29	30+
1999	47.8	68.6	69.3	69.3	67.4
2000	41.1	66.5	66.1	62.2	61.2
% change of base	–14.0	–3.1	–4.6	–10.2	–9.2

In both years loneliness was less common among men who had one sexual partner only. The decrease was greatest among men with least need (ie. those with one sexual partner) although this difference was small.

5.9 SUMMARY AND IMPLICATIONS FOR PLANNING

Making It Count proposes three principles for the prioritisation of need in HIV prevention programmes:

- Prioritise the needs of men likely to be involved in sexual HIV exposure.
- Prioritise target groups who have many aims poorly met relative to other groups.
- Prioritise health promotion aims that are unmet for a large proportion of the population.

These principles do not concern changing needs except in that any decision should be reviewed in the light of knowledge of how needs in the population do change. Here, we briefly describe what we think are the overall implications of these data.

The first principle is intended to increase the impact of programmes on HIV incidence. The implications of the survey data with regard to this principle are given in Chapter 4. There we recommended prioritising the needs of:

- men who have tested HIV positive;
- younger men; and
- men with lower levels of formal education.

These recommendations do not clash with those arising from the second principle, whose aim is to increase the equity of HIV health promotion these groups of men experience. It is not the case over the course of the last four surveys that men who have tested HIV positive have all needs more poorly met than other men. Knowledge in particular is significantly lower among men who have never tested for HIV, for example. Positive men appear to have disproportionately benefited from aggregate increases in sexual assertiveness. However, the preceding data does not contradict earlier recommendations to prioritise the needs of this group.

Younger men have consistently been shown to have greater need on all but a few indicators and this pattern cannot be said to be changing. Some needs are shown to rise again among men over 50. However, given the increased likelihood of involvement in exposure among younger men, this should remain the priority age group.

We have consistently recommended that 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 reported here concurs with this implication.

The third principle is intended to increase both the impact of programmes on HIV incidence and to contribute to a reduction in inequality. We have described some patterns of changing needs: need for sexual assertiveness may be declining while need for easy access to condoms is increasing. Aggregate levels of other needs do not appear to be changing, including men's overall rating of their own sexual safety.

Basic levels of knowledge about HIV and AIDS appear high, although we need not look far to find ignorance. On the other hand, large proportions of men seem unaware of basic facts about gonorrhoea. Social isolation still appears to be a major problem.

6 Other sexual needs

The first three national *Gay Men's Sex Surveys* (1997 to 1999) were entirely focussed on the prevention of primary HIV infection. All the behaviours we asked about were related to HIV prevention and all the needs we asked about were related to those behaviours. In 2000, after several requests from gay men's workers we asked two questions about broader sexual needs (ie. need not primarily concerned with preventing HIV).

We did not presume to know what the other sexual needs of gay men were. Earlier in 2000, Sigma Research had collaborated with The Lesbian and Gay Foundation and the National AIDS Trust on a sexual health survey among lesbians, gay men and bisexual people. The conclusions of that survey included:

- HIV and AIDS and other STIs are major health concerns for gay men, as are most of the broader health concerns of the general population.
- The desire to have children is widespread amongst gay men.
- Emotional intimacy, sexual pleasure and autonomy were cited far more often as valued aspects of sexuality and sexual activity than freedom from STIs or control over conception.
- An unsatisfying sex life and absence of emotional intimacy were cited far more often as obstacles to sexual health than were concern about or contact with STIs.
- Inability to express emotional intimacy in public due to homophobia was the most common obstacle to sexual health for both women and men.

The questions we asked about in the 2000 *National Gay Men's Sex Survey* concerned men's dissatisfaction with their sex lives and exclusion from demonstrating same-sex affection. After describing these variables we again look at how they varied across the groups.

6.1 DISSATISFACTION WITH SEX LIFE

In order to generate broader sexual needs data, men were initially asked *Are you happy with your sex life?* Men who indicated *'no'* were then asked *Why are you not happy with your sex life?* and were offered a list of possible reasons. These were based on the survey referred to above where men who had indicated 'no' to the same question were asked the open-ended question *Why are you not happy with your sex life?* The items reflect the range of reasons men gave in that survey. The twelve possible reasons (of which they could tick as many as apply) were offered in the following order:

- I'm not having any sex
- I'd like more sexual partners
- I'd like more sex with the man/men I have sex with
- I want a regular relationship with someone
- My health problems interfere with sex
- My partner's health problems interfere with sex
- I have problems getting or keeping a hard-on (erection)
- I have problems in my relationship
- I'm not as sexually confident as I want to be
- My sex drive is too low

- I worry too much about HIV / 'safer sex'
- I worry about having too many sexual partners
- Other reasons, *specify*: _____

Overall, 29.5% of men (n=9646) indicated 'no' to the first question (they were not happy with their sex life). A further 4.9% indicated 'yes' to that question and then ticked one of the offered reasons even though they had been asked to skip that question. We consider these men to be expressing dissatisfaction with their sex lives also.

- Overall, a third (34.4%) indicated they were not happy with their sex life.

The table below gives the proportion of the entire sample and the proportion of those who were currently not happy indicating each of the reasons offered. They are ordered by the overall highest first. No specific reason was given by 48 men who indicated they were not happy.

Why are you not happy with your sex life?	% of entire sample (N = 9598)	% of those not happy with their sex life (N = 3316)
I want a regular relationship with someone	19.0	55.1
I'm not as sexually confident as I want to be	8.8	25.4
I'd like more sexual partners	8.1	23.5
I'd like more sex with the man / men I have sex with	8.1	23.6
I'm not having any sex	4.6	13.3
I worry too much about HIV / 'safer sex'	3.8	11.1
I have problems getting or keeping a hard-on (erection)	3.5	10.1
I have problems in my relationship	3.4	9.9
I worry about having too many sexual partners	3.4	9.8
My sex drive is too low	3.3	9.5
My health problems interfere with sex	2.6	7.7
My partner's health problems interfere with sex	1.1	3.1
Various other reasons (see below)	1.5	4.3

Other reasons include: • dissatisfaction or boredom with current sexual repertoire • problems relating to sexuality and disclosure to others • geographically distant partner/s • previous relationship or breakup affecting current sexual behaviour • dissatisfaction with perceived sexual attractiveness • poor sexual performance by partner/s • partner/s who are sexually unattractive to them • dissatisfaction with gay scene / participants and infrastructure • desire for more sexual intimacy • orgasm or ejaculation problems • stress and depression in general life affecting sex life • problems with drugs and alcohol affecting sex life • lack of time to meet and socialise with sexual partners • past sexual abuse having an effect on current sex life • sex drive perceived as too high • communication problems • sexual behaviour leading to sexually transmitted infections.

By far the most common reason men were currently unhappy with their sex life was wanting a regular sexual partner or relationship. Over half the men indicating unhappiness gave this as a reason. Next most common was wanting: more sexual confidence, more sexual partners, or more sex with a partner they already had (each cited by about a quarter of dissatisfied men).

Although only one in eight of men who were not satisfied cited not having any sex as a reason for unhappiness, it should be remembered that we had already excluded those men who had no sex in the last year from the sample, and this figure is likely to be higher if our population of concern is gay and bisexual men (including those who had no sex in the last year). Excessive concern about HIV and 'safer sex' was problematic for about one in ten men.

- Sexual dissatisfaction was most commonly related to lack of a relationship or sexual partner, a lack of sexual confidence, or less sexual activity with a current partner than was desired.

6.2 EXCLUSION FROM DEMONSTRATING AFFECTION IN PUBLIC

It is clear that close personal relationships are very important for large numbers of gay men. To examine the impact of homophobia we asked *In the last year, have you avoided same-sex affection in public because of fear of the consequences?*. Over half (51.9% of 9240 men) indicated 'yes', they had avoided same-sex affection in public in the previous year because of fear of the consequences.

An additional open-ended question was asked in the booklet (but not of the Pride sample). Those 1440 men who had avoided same-sex affection in public were asked *What were you afraid of happening?* The table below categorises the reasons these men gave and the proportion of those avoiding affection who gave that answer. Men could give more than one reason.

What were you afraid of happening? (if you expressed same-sex affection in public)	**% of those avoiding affection (n = 1277)**
Physical assault / physical abuse / attack / aggression / threats / injury / death	57.8
Verbal assault / verbal abuse / ridicule / gossip / derision / taunts / comment	31.0
Unspecified abuse / assault	8.5
Arrest or harassment by police	6.7
Unpredictable / unspecified negative reaction from onlookers	6.4
Unwanted disclosure of homosexual behaviour to onlookers or others	4.3
Hostile reaction / hate / anger / vilification / harassment	3.8
Disapproving / intolerance / judgmental reaction	3.5
Causing offense or embarrassment to onlookers	3.4
Stares / gawping / funny looks	3.4
Feeling embarrassed / uncomfortable / humiliated	3.0
Offending partner or self because prefer private displays of affection	2.7
Discrimination from workplace / in general / friends and family	2.1
Psychological / emotional / mental health consequences of expected abuse	1.4
Loss of privacy / unwelcome attention being drawn to affection	1.3
Sexual assault	0.2

The majority of those men who avoided same sex affection in public feared that those observing them may attack or physically assault them. Their affection could result in 'being hit', 'beaten up', 'disfigured', 'injury', 'hospitalisation' or 'death'. Some men reported having been attacked in the past.

Almost a third including some of those who feared physical assault reported fearing verbal assault including 'shouting', 'taunting', 'name calling' and 'ridicule'; 8.5% feared abuse or assault but did not specify the nature; 6.4% feared a negative and / or unpredictable reaction from onlookers but did not specify what the reaction may be; 6.7% of men feared arrest or attention from the police.

Less than 5% referred each to hostile or disapproving reactions from onlookers or receiving stares and disgusted looks or having unwelcome attention drawn to them. Some men talked about how reactions made them or their partner feel either embarrassed, uncomfortable, humiliated, rejected, alienated or upset. Some said that their partner or themselves did not like to show affection in public or had been brought up to avoid it and they avoided it because their partner or they would feel uncomfortable. 4.3% would avoid public affection because they wanted to avoid disclosing their sexuality either to the onlooker or those the onlooker may come into contact with. A few men feared sexual assault.

- Half (51.9%) of all the men avoided same sex affection in public primarily fearing verbal or physical assault.

6.3 VARIATION IN OTHER SEXUAL NEEDS ACROSS DEMOGRAPHIC GROUPS

The following tables show how the preceding measures varied across the demographic characteristics described in Chapter 2 and those introduced in chapters 3 and 4.

6.3.0 HIV testing history & other sexual needs

The following table shows how the indicators of broader sexual needs varied across the HIV testing history groups.

% of sample in need	% by HIV testing history		
	Never tested (n = 3860)	Tested negative (n = 4815)	Tested positive (n = 528)
% Not happy with their sex life	35.0	34.0	38.6
Why are you not happy with your sex life?			
I want a regular relationship with someone	20.3	18.5	17.8
I'm not as sexually confident as I want to be	9.8	8.1	10.0
I'd like more sexual partners	8.2	8.0	9.1
I'd like more sex with the man / men I have sex with	8.1	8.3	9.8
I'm not having any sex	5.2	4.3	4.4
I worry too much about HIV / 'safer sex'	3.8	3.7	5.9
I have problems getting or keeping a hard-on (erection)	2.9	3.4	8.9
I have problems in my relationship	3.3	3.5	3.6
I worry about having too many sexual partners	3.5	3.6	1.9
My sex drive is too low	2.9	3.2	6.3
My health problems interfere with sex	1.7	2.0	15.9
My partner's health problems interfere with sex	0.6	1.2	3.2
Avoided same sex affection in public	54.0	52.1	38.2

Although men who had tested positive were not overall more or less likely to be unhappy with their sex life, they were more likely to experience a number of specific problems including worrying about HIV and 'safer sex', having problems with erections, having a low sex drive and both their own and their partners health interfering with their sex life. They were also, along with men who had never tested, slightly more likely to want more sexual confidence than men who had tested negative.

Men with diagnosed HIV infection were less likely than men who had not tested positive to avoid same-sex affection in public.

- HIV negative and untested men were more likely than HIV positive men to avoid public affection.

6.3.1 Region of residence & other sexual needs

The following table shows how the indicators of broader sexual needs varied across the regions.

% of sample in need	% by region of residence								
	London (N=2008)	South East (n=1871)	North West (n=1330)	Trent (n=526)	West Mids. (n=1234)	North & York (n=679)	Eastern (n=464)	South West (n=577)	Wales (n=559)
Not happy with their sex life	32.4	33.8	38.8	33.2	33.3	36.4	34.3	36.8	32.8
Why are you not happy with your sex life?									
I want a regular relationship with someone	16.7	19.1	20.2	21.1	18.0	23.3	19.0	21.8	18.1
I'm not as sexually confident as I want to be	8.5	8.4	11.1	9.5	7.8	11.6	8.6	9.9	6.4
I'd like more sexual partners	7.8	8.3	9.5	6.1	7.1	9.6	7.3	10.4	7.0
I'd like more sex with the man/men I have sex with	8.3	8.4	9.5	7.6	7.1	8.5	9.5	7.8	5.9
I'm not having any sex	4.2	4.4	5.3	4.0	4.7	5.9	4.3	4.5	3.6
I worry too much about HIV / 'safer sex'	3.4	3.5	4.8	3.4	3.9	3.7	4.5	4.0	4.1
I have problems getting	3.3	3.8	3.7	4.6	2.8	5.0	4.1	2.3	3.6
I have problems in my relationship	3.1	3.0	3.9	3.0	4.1	3.1	3.4	4.7	3.9
I worry about having too many sexual partners	2.9	3.3	4.0	3.0	3.3	3.7	3.7	3.5	3.4
My sex drive is too low	3.9	3.3	3.8	3.2	2.9	2.8	3.0	3.1	3.0
My health problems interfere with sex	2.7	2.7	3.4	3.4	2.7	2.7	1.5	2.6	1.8
My partner's health problems interfere with sex	1.0	1.3	1.1	0.6	1.4	1.0	0.6	1.0	1.3
Avoided same sex affection in public	51.0	48.9	49.0	56.1	53.4	58.0	57.5	53.5	53.7

There are slight but significant regional differences in sexual needs. Men in the North West and the South West were slightly more likely to be dissatisfied with their sex lives compared to men resident elsewhere, whist those in London or Wales were most likely to be satisfied.

Avoiding same sex affection in public was very common in all areas of the country. However, it was more common in the Northern & Yorkshire and Eastern regions and less common in London, the South East and North West regions. However, it would be a mistake to think that London provides a "hospitable environment" (Johnson *et al.*, 1994, p.195) in which to be gay. Half the men who live there avoid showing affection with other men in public because of fear of physical attack or ridicule etc.

- Men from the North West and South West regions had higher levels of sexual dissatisfaction
- Men from Northern & Yorkshire and Eastern were most likely to have avoided same sex affection in public, and men from London, the South East and the North West regions were least likely to have done so.

6.3.2 Gender of partners & other sexual needs

The following table shows how the indicators of broader sexual needs varied by the gender of men's sexual partners.

% of sample in need	% by gender of partners	
	Men only (n=8994)	Men and women (n=502)
Not happy with their sex life	34.0	38.7
Why are you not happy with your sex life?		
I want a regular relationship with someone	19.1	17.7
I'm not as sexually confident as I want to be	8.8	8.0
I'd like more sexual partners	7.8	12.4
I'd like more sex with the man / men I have sex with	8.0	10.4
I'm not having any sex	4.6	3.6
I worry too much about HIV / 'safer sex'	3.7	6.6
I have problems getting or keeping a hard-on (erection)	3.5	3.6
I have problems in my relationship	3.4	4.0
I worry about having too many sexual partners	3.3	4.8
My sex drive is too low	3.3	3.0
My health problems interfere with sex	2.7	2.4
My partner's health problems interfere with sex	1.0	1.6
Avoided same sex affection in public	52.1	48.6

Men who had sex with women as well as men were slightly more likely to be dissatisfied with their sex lives. In particular they were more likely to want more sexual partners and to worry more about HIV and safer sex than men who had sex only with men. Otherwise, particular sexual problems appear equally common among these two groups.

6.3.3 Age & other sexual needs

The following table shows how the indicators of broader sexual needs varied across the age range.

% of sample in need	% by age group				
	< 20 (n = 546)	20s (n = 3100)	30s (n = 3529)	40s (n = 1648)	50+ (n = 669)
Not happy with their sex life	35.8	31.4	33.5	38.4	41.3
Why are you not happy with your sex life?					
I want a regular relationship with someone	25.1	17.9	17.1	21.4	23.3
I'm not as sexually confident as I want to be	9.2	7.0	8.8	10.9	11.1
I'd like more sexual partners	9.7	7.1	7.5	9.5	10.6
I'd like more sex with the man / men I have sex with	7.7	5.8	8.7	9.6	12.3
I'm not having any sex	8.8	5.1	4.2	3.3	3.4
I worry too much about HIV / 'safer sex'	5.1	3.5	3.7	3.8	4.6
I have problems getting or keeping a hard-on (erection)	2.6	1.3	3.0	5.9	11.7
I have problems in my relationship	3.1	2.9	3.7	4.2	3.0
I worry about having too many sexual partners	5.5	3.5	3.3	2.8	2.4
My sex drive is too low	1.8	2.7	3.4	3.4	6.0
My health problems interfere with sex	0.9	1.5	2.4	4.6	5.8
My partner's health problems interfere with sex	0.9	0.6	1.1	1.6	1.8
Avoided same sex affection in public	51.4	53.7	51.9	52.1	46.0

Overall, being unhappy with ones sex life became less common as men moved into their 20s but then became more so again with increasing age. Men over 50 were most likely to be unhappy with their current sex lives. Two of the specific problems followed the same overall pattern. Wanting a regular partner and wanting more sexual partners was common for men under 20, less common for men in their 20s and 30s and more common again for men in their 40s and 50s. Two problems become less common with increasing age: being unhappy about not having any sex, and worrying about having too many partners. Five problems become increasingly common with advancing age: lacking sexual confidence, wanting more sex with one's partner, low sex drive, erection problems and health problems of both self and partner.

Avoiding same sex affection in public was common in all age groups, but was significantly less common among older men.

6.3.4 Education & other sexual needs

The following table shows how the indicators of broader sexual needs varied by education.

% of sample in need	% by education groups		
	Low (n = 2816)	Medium (n = 2668)	High (n = 4047)
Not happy with their sex life	32.4	34.5	35.6
Why are you not happy with your sex life?			
I want a regular relationship with someone	17.1	19.5	20.1
I'm not as sexually confident as I want to be	7.7	9.3	9.1
I'd like more sexual partners	8.0	8.6	7.9
I'd like more sex with the man / men I have sex with	7.8	8.3	8.3
I'm not having any sex	5.1	5.1	3.9
I worry too much about HIV / 'safer sex'	3.7	4.1	3.9
I have problems getting or keeping a hard-on (erection)	3.7	3.4	3.5
I have problems in my relationship	3.6	4.1	2.8
I worry about having too many sexual partners	3.0	3.8	3.4
My sex drive is too low	3.5	3.3	3.0
My health problems interfere with sex	2.8	2.9	2.4
My partner's health problems interfere with sex	0.7	1.2	1.3
Avoided same sex affection in public	49.9	51.3	53.8

Overall, men with higher levels of formal education were more likely to be dissatisfied with their sex lives, compared with those with less formal education who experienced lower levels of dissatisfaction. On individual measures men with higher education being more likely to want a regular partner but less likely to have problems with an existing regular partner. They were less likely to be having no sex. Again, although men with higher education were slightly more likely to avoid same-sex affection in public doing so was very common for all education groups.

6.3.5 Ethnicity & other sexual needs

There were few, small, differences across ethnic groups in dissatisfaction with current sex lives. No overall difference was found, although Asian men were slightly more likely to worry about having too many partners and the mixed group of 'Other, not white' were more likely to feel they worried about HIV and 'safer sex' too much.

% of sample in need	% by ethnic groups				
	Asian / Asian British (n = 159)	Black / Black British (n = 128)	White British (n = 8087)	other White (n = 1028)	other not White (n = 219)
Not happy with their sex life	38.4	41.4	34.2	33.8	35.6
Why are you not happy with your sex life?					
I want a regular relationship with someone	21.4	23.6	19.0	18.5	18.0
I'm not as sexually confident as I want to be	5.7	7.1	9.0	7.8	7.4
I'd like more sexual partners	10.7	7.1	8.2	7.1	9.2
I'd like more sex with the man / men I have sex with	11.3	8.7	8.2	7.0	9.7
I'm not having any sex	3.1	6.3	4.7	3.9	4.1
I worry too much about HIV / 'safer sex'	5.0	6.3	3.7	3.3	7.4
I have problems getting or keeping a hard-on (erection)	5.0	3.9	3.6	2.4	4.6
I have problems in my relationship	4.4	5.5	3.3	2.9	5.5
I worry about having too many sexual partners	6.3	5.5	3.3	2.5	6.0
My sex drive is too low	1.9	2.4	3.3	3.6	3.7
My health problems interfere with sex	1.3	1.6	2.8	2.2	2.3
My partner's health problems interfere with sex	1.3	0.8	1.0	1.4	2.3
Avoided same sex affection in public	50.0	50.0	52.1	49.9	56.7

Avoiding same-sex affection in public was equally common among all ethnic groups.

6.3.6 Relationship status & other sexual needs

Since wanting a regular sexual partner was the most common reason given for being unhappy with their sex life, it is not surprising that single men showed more dissatisfaction than men who were partnered. Among the latter, being in an HIV sero-concordant relationship was associated with fewest problems.

Single men were more likely than partnered men to be having no sex, to want a regular partner, to want more sexual partners and more sexual confidence but also to worry about having too many partners. It is interesting to note also that it was single men who were most likely to be unhappy because they worried too much about HIV and 'safer sex'. More single men indicated this than did men in relationships they knew were sero-discordant.

% of sample in need	% by relationship status			
	Single (n = 3797)	Partnered, HIV discordant (n = 390)	Partnered, HIV concordant (n = 3123)	Partnered, don't know concordancy (n = 2097)
Not happy with their sex life	54.5	29.6	17.8	23.0
Why are you not happy with your sex life?				
I want a regular relationship with someone	40.8	5.9	2.8	6.4
I'm not as sexually confident as I want to be	15.0	6.2	4.0	5.4
I'd like more sexual partners	12.2	8.2	4.8	5.7
I'd like more sex with the man / men I have sex with	7.8	10.0	8.1	8.1
I'm not having any sex	8.8	3.1	1.3	1.8
I worry too much about HIV / 'safer sex'	6.5	3.8	1.4	2.7
I have problems getting or keeping a hard-on (erection)	5.0	6.4	1.8	2.7
I have problems in my relationship	3.0	4.1	3.3	4.4
I worry about having too many sexual partners	6.0	0.8	1.2	2.4
My sex drive is too low	4.1	6.2	2.3	2.8
My health problems interfere with sex	4.0	7.4	1.1	1.7
My partner's health problems interfere with sex	0.5	5.1	1.0	1.2
Avoided same sex affection in public	44.7	46.4	57.7	57.5

Men in HIV sero-discordant relationships were most likely to experience health problems interfering with their sexual satisfaction, including erection problems and low sex drive. Men with a regular partner who was HIV concordant or status unknown, avoided same-sex public affection far more than single men or those in HIV sero-discordant relationships. While the finding that single men were least likely to avoid same-sex affection in public is easily understood (less opportunity, less need) the finding concerning men in HIV sero-discordant relationships is more complex. Effectively sero-discordant relationships will include men with diagnosed HIV (by definition) and, on the whole, these men are far less likely to avoid same sex affection in public (see 6.3.0 above).

- Sexual dissatisfaction was highest among single men. Among partnered men those in a HIV sero-discordant relationship were least satisfied with their sex lives.

6.3.7 Numbers of sexual partners & other sexual needs

Overall men with one male sexual partner in the last year were least likely to be dissatisfied with their sex lives.

% of sample in need	% by numbers of partners groups				
	One (n = 2241)	2, 3 or 4 (n = 2112)	5 to 12 (n = 2271)	13 to 29 (n = 1069)	30+ (n = 1412)
% not happy with their sex life	22.2	41.5	39.4	36.1	34.4
Why are you not happy with your sex life?					
I want a regular relationship with someone	6.9	23.5	24.6	22.5	20.4
I'm not as sexually confident as I want to be	5.3	12.9	10.7	8.0	6.8
I'd like more sexual partners	4.3	10.7	10.9	8.1	5.5
I'd like more sex with the man / men I have sex with	7.2	9.6	9.0	7.8	6.8
I'm not having any sex	5.3	7.1	4.8	1.5	0.8
I worry too much about HIV / 'safer sex'	1.8	5.6	4.0	4.1	4.4
I have problems getting or keeping a hard-on (erection)	1.4	3.8	4.4	4.1	5.1
I have problems in my relationship	2.9	4.3	3.3	3.1	3.9
I worry about having too many sexual partners	0.8	2.6	3.5	4.5	7.6
My sex drive is too low	2.9	4.4	3.6	3.6	1.9
My health problems interfere with sex	1.8	3.3	3.2	2.8	2.5
My partner's health problems interfere with sex	1.1	0.9	1.0	1.0	1.3
Avoided same sex affection in public	60.0	53.0	50.0	49.8	44.9

Relative promiscuity was associated, perhaps unsurprisingly, with worrying about having too many sexual partners and with problems getting or keeping an erection. However, it was men who had two, three or four partners who experienced most unhappiness overall, including lack of sexual confidence, wanting more sexual partners wanting more sex with their partner and worrying about HIV and 'safer sex'. They were also more likely to feel their sex drive was too low.

Interestingly, avoiding same-sex affection in public was significantly associated with men's numbers of sexual partners. Those with one partner only in the last year were most likely to have done so, and the proportion declined with increasing partner numbers. The same association was observed in each of the testing history groups separately.

- Dissatisfaction with sex life was greatest amongst those with 2,3 or 4 male partners and lowest amongst those with one male partner only.

- Avoidance of public affection decreased with increasing numbers of sexual partners.

6.4 IMPLICATIONS FOR PLANNING

The HIV epidemic among gay men has not gone away and diverting *HIV prevention* resources into meeting broader sexual needs will not increase our collective ability to address it. We think there is a danger that in widening out its concern to all aspects of men's sexual well being, HIV prevention will continue to benefit men whose HIV prevention needs have already been met, at the expense of those whose basic prevention needs have not been met. However, this does not mean resources (other than HIV prevention allocations) intended to increase the sexual health of the general population should not benefit gay men, that HIV prevention should not sit within a context of broader sexual pleasure or that we should not attempt to improve the sex lives of gay men outside the realm of health.

The findings presented in this final chapter suggest extensive unmet sexual need among gay men, other than HIV prevention needs. A third were unhappy with their sex life, most commonly related to the lack of a relationship or sexual partners. Lacking sexual confidence was also common.

Sexual dissatisfaction decreased as men moved into their 20s and thereafter increased with age. Clearly, ageing and its impact on sexual interest and performance is a major issue for many gay men. Older men are not a priority for HIV prevention but may be for the promotion of broader sexual well being. Similarly, while men with higher levels of education are not a priority for HIV prevention, they expressed more dissatisfaction with their sex lives overall.

To conclude, any programme intended to increase sexual well being among gay men should include increasing the prevalence of satisfying sex lives as a target for the population, as well as reducing the incidence of STIs, including HIV. Further, such a programme will be addressing more unmet need if it prioritises increasing the prevalence of satisfying sex lives as well as reducing the incidence of STIs. Perhaps most importantly, a programme that is committed to addressing the obstacles to sexual well being for gay men should prioritise reducing homophobia as a key objective. It is clear that HIV prevention interventions are just one (perhaps small) part of what a comprehensive sexual health programme for gay men could look like and that health is but one part of overall sexual well being.

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