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# Net benefits

*Gay men's use of the internet  
and other settings where  
HIV preventions occurs*

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Peter Weatherburn  
Ford Hickson  
David Reid

**Briefing Paper**

# Preface

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This Briefing Paper is part of an on-going series that forms one strand of the research and development programme supporting CHAPS, the national HIV prevention programme for gay men and other homosexually active men. It is intended to explore what we know about the internet and its emerging relationship to the sexual lifestyles of gay men and other homosexually active men. The topic was chosen by CHAPS partners as an area of emerging interest to their organisations and others engaged in HIV prevention and sexual health promotion.

Where new data is reported in this paper it arises from our *Gay Men's Sex Surveys* from 1999, 2001 or 2002. The methods, sample descriptions and other results of the first two of these surveys are already published (Weatherburn *et al.*, 2000; Reid *et al.*, 2002). Our main report of the 2002 *Gay Men's Sex Survey* will be published in August 2003. Our thanks go to 100 or so agencies that are acknowledged in the main reports for their collaboration with one or more of these *Gay Men's Sex Surveys*.

The intended audience for this paper includes HIV prevention and sexual health promotion practitioners, policy makers, health service commissioners and researchers, especially those concerned with sex between men.

Thanks to the following readers for their feedback on earlier drafts of this briefing paper: Will Nutland and Richard Scholey (Terrence Higgins Trust London), Catherine Dodds, Laurie Henderson, Peter Keogh and Michael Stephens (all of Sigma Research).

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# 1 Introduction

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The last few years have seen the emergence of the internet as a place where people can encounter others that they subsequently meet and have sex with. With regard to sex, the internet has had a huge influence on the everyday life of many people. Pornography was (predictably) one of the first applications of the internet and continues to be its biggest industry. Anyone can easily find sexually explicit images and text on the World Wide Web, irrespective of their sexual orientation or specific sexual interests. The internet also allows for the discreet purchase of goods and services that one might not want to buy in person, or might not know where to shop for. This includes products and services as diverse as sex toys, lubricants, condoms and videos, sex workers and both generic sildenafil citrate and Viagra™ proper. It also allows users to watch pornographic videos online and access voyeur cameras which allow the user to observe others having sex in real-time. In addition to this wealth of products and services the internet facilitates individual learning about any topic imaginable (and many others that are not). In particular, the World Wide Web brings access to a vast and ever growing amount of information, and it does so faster and more easily than most other means of delivery.

The internet also allows personal interaction via chatrooms, where people interact from their keyboard in real-time. This both allows on-line 'scenes' to develop for sexual stimulation and facilitates the establishment of face-to-face encounters. Hospers *et al.* (2002), found that "a large majority" of (gay male) respondents recruited in chatrooms "reported actual encounters as well as sex with men who were initially met though chatting". Chatting via the internet has the advantages of relative immediacy and the possibility of sexual compatibility matching. Meetings can also be facilitated by other internet applications. Bulletin boards and websites can carry an email address through which contact could be made with prospective sex partners. Many gay commercial websites also carry personal contact advertisements which are searchable.

As with the emergence in the UK of sex-on-premises venues (known as 'backrooms') these developments have generated a variety of 'news' stories about gay men and the internet. These global news items are often precipitated by research or STI outbreaks and are invariably quite hysterical. We take as one example the moral panic precipitated by a paper from the Medical & Health Research Association of New York City (Chiasson, Hirshfield *et al.*, 2003) presented at the 10th Conference on Retroviruses in Boston. The research concerned an online survey of 2,934 men using a gay commercial website. The key finding was that among the 84% of respondents that had met sexual partners online, a higher proportion reported unprotected anal intercourse than among the 16% that did not report meeting partners online (64% compared to 58% reported 'unprotected anal sex'). The researchers' own conclusion was:

**"..The internet may play a role in HIV transmission. Similar to other high risk venues of the 1970s and 1980s (e.g. bath houses and back rooms), the internet may be a setting in which to meet new sex partners and potentially transmit HIV."**

What is of especial interest is that the American and global press lapped up the press release of the study and almost identical stories ran all over the world. In March 2003, an internet ([www.google.com](http://www.google.com)) search on 'Hirshfield internet sex' brought up 383 versions of the same basic press article, from as far afield as England, India, Poland, South Africa and very many of the major newspapers in the USA. All report the same simple findings and all stoke the moral panic about reckless, feckless and dangerous homosexuals. This panic followed the same predictable pattern as previously heavily press-released news concerning sex, gay men and the internet, including the original internet and gay sex hysteria generated by research that traced 12 linked cases of syphilis to chatroom use by men in and around San Francisco (Klausner *et al.*, 2000). Research papers such as these have allowed – perhaps even encouraged – the global media to characterise net use among

gay men as what Hurley (2003) describes as a 'disease risk factor', even though there remains no substantial research evidence that meeting new partners via the internet is associated with an increased risk for HIV exposure or transmission (or any risk of any other sexually transmitted infection).

We have chosen one article to make the following points because in microcosm it displays all the neurosis of the field of HIV prevention and its wider social and political context. The article appeared in the Los Angeles Times on July 26th 2002. It is by Charles Ornstein, a staff writer, who constructs internet sex as dangerous, because it is all too easy.

**"The accessibility and anonymity that makes the web so popular also make it increasingly dangerous to sex-seeking users, multiplying "the probability of high- risk people meeting high risk people" (attributed to Colorado epidemiologist John Potterat)....**

**"Dr. Gary Cohan, a Beverly Hills physician whose practice treats 2,500 HIV-positive patients, said that as many as 30% meet sex partners online. "That number is rising," he said "as people find it's an efficient, easy, 24-hour way that they can meet people without having to brush their teeth or comb their hair" ...**

**"Health officials are woefully ill-equipped to respond. Closing it off or passing out condoms isn't an option. Moreover, the web can be an inviting venue for men who don't typically go to bars or bathhouses and perhaps wouldn't otherwise engage in high-risk sex"**

The internet undoubtedly facilitates (homo)sexual contact. In media (and research) debate there seems to be no awareness of the pleasures and opportunities this brings but huge concern about sexual health risks. Ornstein, among others, claims that meeting sexual partners on the internet "is a public health nightmare ... it's like playing Russian roulette." The problem facing "health officials" as constructed in the media, is that they must control men's sexual behaviour and they cannot control it without control over its setting. In this debate it seems opportunities for sex between men, any sex between men, are a problem.

In whose interests is it to represent the internet as a danger when, within most sexual health promotion frameworks, including *Makingit Count* (Hickson *et al.*, 2000), sex between men is recognised as a source of great emotional, physical and social well-being? If we think that new HIV infections would be stopped if only we had control over gay men's sexual behaviour then the internet is a nightmare: as is the cottage, the cruising ground, the backroom etc. But, the internet is only a nightmare if any (uncontrolled) sex between men is constructed as a nightmare.

Those health promoters (and public health officials) who have a major concern regarding the internet and sexually transmitted infections need to articulate what the precise problem is. Do they believe that increased opportunity for sexual interaction is problematic per se? If not, do they believe that there is some characteristic of the internet that makes it fundamentally more problematic than meeting a man in any other setting?

At present, we have no evidence that the internet is anything other than just another – albeit new – setting to seek and find sex. It helps some men who would otherwise have little sex to have some. And it helps others who already have plenty of sex, to have even more. We have no evidence, to date, that there is anything particularly unique about it.

In this paper we examine the extent to which gay men and other homosexually active men use the internet. We also examine where they meet new partners, and the relationship between where they meet partners and engagement in HIV exposure, with special attention to the internet. In the final section we address the possible implications of the emergence of the internet for sexual health programme planning.

# 2 Using the internet for HIV prevention and sexual health promotion

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The chapter begins to consider the potential and actual uses of the internet for sexual health promotion and HIV prevention. It is intended to help health promoters with relatively little experience of internet interventions to consider what might be feasible and appropriate. It is based in part on a National HIV Prevention Information Service briefing (Anderson, 1998) that gives additional detail on English Law and policing and control of the internet.

## 2.1 FEASIBILITY

Providing sexual health promotion interventions via the internet is self-evidently feasible. American researchers estimate that, globally, there are up to 100,000 websites that provide health information (Grandinetti, 2000) and that health information-seeking is one of the most common and influential functions of the internet (Cline & Haynes, 2001). A simple internet search ([www.google.com](http://www.google.com)) on 'HIV oral sex' finds 7,910 web-pages in the UK alone and 283,000 globally. Including 'gay' in the search string ('HIV oral sex gay') reduces these numbers to 2,430 and 60,000 but it is still a vast array of on-line information that faces a casual internet user.

As a setting for HIV prevention or sexual health promotion interventions the internet is diverse and multi-faceted. Indeed, very many of the range of sexual health promotion interventions that are feasible, are also feasible via the internet, and many have been attempted. While some of the interventions are far better established than others, the following begins to outline what is already available.

### 2.1.1 World Wide Web

In the modern world, the World Wide Web (the web) is crucial for information. It is the place that increasing numbers of people look when they need information. In response, many organisations engaged in HIV prevention have a website that provides both generic information about sexual health and specific local information for gay men and other homosexually active men.

It is perhaps most helpful to see the web as a publishing format where any written HIV prevention or sexual health promotion material can be placed. As a consequence many websites have similarly high production values as leaflets and other printed materials. Unlike chatrooms, email or bulletin boards (usenet), websites are not usually interactive – though they can be – and many are professionally produced. Unlike any other publishing format the web makes it very easy to continuously update any information placed on a website.

**Editorial** is the mainstay of many websites and is a generic phrase for written content in any form. Almost all websites contain some text, and most health promotion websites are relatively text heavy.

**Adverts** can be used as an integral part of a website or can take the form of pop-ups or banners attached to particular web pages. Adverts might promote other websites or interventions or events that occur in other settings (this is best described as service promotion).

**Leaflets** which are printed, produced and distributed on the gay-scene are often also available to download from websites (usually in Portable Display Format – PDF – for display on any computer).



Websites can also contain **booking forms** for face-to-face interventions such as counselling or group-work and **order forms** for postal delivery of items such as printed leaflets or (free) condoms and lubricant. They can also contain full **contact details** for an organisation and its staff.

While chatrooms are usually identified as the key meeting places for subsequent sexual contact, the major gay commercial websites also facilitate sexual contact via personal 'contact' advertisements. The web acts as an efficient way to place and peruse personal or contact ads, since it has the benefit of being searchable.

### **2.1.2 Web-chat (chatrooms)**

Web-chat is a mode of online communication whereby two or more people can interact – via their keyboards – in real-time. Typically the user accesses a chatroom with a defined topic, interest or nominal geographic boundary (such as MSM phone sex, MSM bondage or MSM Swindon for example). Chatrooms are public since all the simultaneous users can see each others messages but any two users can have a more private interaction by retiring to a private room or using instant messaging instead. Chatrooms are usually connected to specific websites.

As if anyone was in doubt, research has established that gay men do not just chat in chatrooms, but make arrangements to meet in person. As Hospers *et al.* (2002) put it "a large majority" of their chatroom-recruited respondents "reported actual encounters" and these meetings were sexual as well as social.

Tailored advice can be delivered via one-off encounters in chatrooms. Such interactions do not require an appointment and can vary in duration and intensity. Most commonly a health educator enters (sexualised) chatrooms and declares their background and solicits questions or queries. These can be put and addressed one-to-one (in a side-room) or via the group interaction in the main chatroom. The defining characteristic is the setting – the internet – and one of the main benefits is the relative anonymity this brings.

### **2.1.3 Email**

Electronic mail or email is a means of delivering written information from computer to computer using specific dedicated personal email addresses. Email can contain any form of written information including adverts for – or links to – specific websites. Lists of email addresses can be used in similar ways to standard mailing lists – to distribute newsletters, leaflets and other written information. They are direct, fast and cheap. Mailing lists can also be used as communication fora for people with common interests. Subscribers to them can receive, via email, the writings of all other subscribers to the list and may be able to post replies or suggest new topics of debate. Most mailing lists are self-regulating but some are moderated – that is, someone takes responsibility for checking every contribution to make sure it is relevant to the topic of the list. Since mailing lists have to be joined – which can be a complex process – and all correspondence is delivered to private email addresses they are relatively private and hence can cover most topics.

### **2.1.4 Bulletin boards / newsgroups**

Usenet is the generic name for both bulletin boards and newsgroups. They are public communication spaces to which anyone can contribute though some are membership based. They exist for the exchange of views and debate in writing and are usually accessed via Usenet software. Generally speaking, a user poses a question or suggests a topic and responses from others form a 'thread' of discourse that can be viewed by others. Bulletin boards / newsgroups are usually connected to specific websites.

## 2.2 COST

Generally speaking, internet interventions are relatively cheap, in that they require less resources than comparable interventions. Written interventions are cheaper on the internet as print and distribution costs are not incurred; interactive or 'talking' interventions are cheaper because less infrastructure (premises etc.) is required; distribution interventions are cheaper as they require less staff time etc. Until we have more experience of internet-based interventions it is hard to calculate their precise cost, especially as much of it is marginal. That is, a leaflet written, designed and print produced can be added in downloadable format to a website at marginal – or no – cost. Whether this is worthwhile depends on where it is placed and how it is promoted. However, it is undeniably cheap since few websites are initiated or maintained solely as a place to distribute finished leaflets.

## 2.3 ACCESS

As we will demonstrate the proportion of gay men and other homosexually active men who have access to the internet has risen substantially over the last few years. At least two thirds of all gay men use the internet in any given month and the majority of these access it much more frequently. As with any new technology, access is constrained by factors such as age and education (see chapter 3) but the same is true of very many gay (commercial) settings. In terms of priority groups for HIV prevention, the profile of men using the internet is both good and bad news: good because we can expect to meet men younger than the general gay population; bad news because among all age groups encountered, internet interventions (apart from those in chatrooms) will disproportionately benefit men with higher education. The profile of chatroom users is specific and different, being also, disproportionately used by behaviourally bisexual men, a finding that mirrors research from Sweden (Tikkanen *et al.*, 2000; Ross *et al.*, 2000)

In terms of access to health promotion material the internet has two major advantages over very many other settings where health promotion occurs. First, it is accessed on the users' own terms – in their own home (or workplace or place of education or in a public space like a library or internet café) – and when they choose. With some care, information can be accessed and used in private and with complete anonymity. This may be especially important for men who have not disclosed their homosexual activity or interest. Second, the internet is substantially more pluralistic than most other settings where health promotion occurs. Irrespective of their wealth, age, sexual tendencies, ethnicity, HIV status or almost any other personal characteristic or preference – the internet provides a place where belonging may be sought and found. It also provides access to everything from the most arcane medical journal to individual personal accounts (web-logs) of everyday (gay) life. Indeed, the degree of variation and the volume of information that ensures the pluralism of the internet, is one of its major drawbacks – in many respects it is too vast. While search-engines allow users to seek very specific information, the huge volume available is both a benefit and a challenge – as many internet users will testify.

## 2.4 ACCEPTABILITY

We have little specific information on the acceptability of internet interventions to gay men and other homosexually active men. In the USA, homosexually active men are more likely to endorse HIV prevention interventions on the internet than are non-homosexually active men (Bull, McFarlane & King, 2001). This included health promoters being in chatrooms, HIV prevention emails and websites.

We assume the acceptability of the internet is increased by its privacy as a mode of communication. As a rule confidentiality is assured and personal identity can always be masked. Not only does such privacy and confidentiality provide a valuable opportunity to seek answers to specific personal questions but it probably promotes honesty about sexual health issues.

## 2.5 NEED

No one *needs* the internet, though some people may be in substantial need of the interventions they can encounter via it. Clearly interventions whose setting is the internet are hugely variable and the extent to which they are needed will vary according to the specification of the intervention and the target groups which have access to it.

In the *Gay Men's Sex Survey 2000* (Hickson, Reid *et al.*, 2001) men who were not happy with their sex life were asked why they were not happy. The left hand side of the following table below gives the most common reasons (and the proportion of all respondents for whom each reason was applicable). The right hand side illustrates some ways in which the internet could be used to address these problems.

Why are you not happy with your sex life?	How could the internet help?
I want a regular relationship with someone (19%)	<ul style="list-style-type: none"> <li>• Chatting in chatrooms</li> <li>• Find out about local social groups</li> <li>• Access advice about finding and maintaining relationships</li> <li>• Access websites for men seeking same sex relationships</li> <li>• Access personal or contact ads</li> </ul>
I'm not as sexually confident as I want to be (9%)	<ul style="list-style-type: none"> <li>• Access general advice via websites</li> <li>• Access specific advice via bulletin boards</li> <li>• Find out about local sexual health services</li> <li>• Allows pre-negotiation of sexual interest and desire prior to any face-to-face meeting.</li> </ul>
I'd like more sexual partners (8%)	<ul style="list-style-type: none"> <li>• Access sex-workers</li> <li>• Access sexual chatrooms</li> <li>• Access personal or contact ads</li> <li>• Find out about settings for meeting potential partners</li> </ul>
I'd like more sex with the man / men I have sex with (8%)	<ul style="list-style-type: none"> <li>• Read 'spruce up your sex life' websites</li> </ul>
I'm not having any sex (5%)	<ul style="list-style-type: none"> <li>• Access pornography</li> <li>• Access sex-workers</li> <li>• Access sexual chatrooms</li> <li>• Access personal or contact ads</li> <li>• Find out about settings for meeting potential partners</li> </ul>
I worry too much about HIV / 'safer sex' (4%)	<ul style="list-style-type: none"> <li>• Read sexual health promotion websites</li> <li>• Chat with a health promoter online</li> <li>• Find out about local HIV prevention services</li> </ul>
I have problems getting or keeping a hard-on (erection) (4%)	<ul style="list-style-type: none"> <li>• Find out about local clinical services</li> <li>• Read sexual health websites</li> <li>• Purchase pharmaceutical interventions (such as Viagra™) or 'herbal' remedies or sex aids (cock-rings etc.)</li> </ul>
I have problems in my relationship (3%)	<ul style="list-style-type: none"> <li>• Read about gay relationship problems</li> <li>• Find out about local couple counselling</li> <li>• Access advice about maintaining relationships</li> </ul>
I worry about having too many sexual partners (3%)	<ul style="list-style-type: none"> <li>• Access general advice via websites</li> <li>• Find out about local sexual health promotion services</li> <li>• Read about sexual compulsivity</li> </ul>
My sex drive is too low (3%)	<ul style="list-style-type: none"> <li>• Find out about local clinical services</li> <li>• Read about the impact of diet etc. on websites</li> </ul>

## **2.6 EFFECTIVENESS AND EFFICIENCY**

Of course, the evaluation of any internet intervention will depend on its precise configuration: what it actually consists of and how it is executed. However, generally speaking, client-led and one-off interventions are very hard to evaluate since the needs addressed are hugely variable and there is no on-going contact. Moreover, the specification of aims for internet interventions is patchy and the criteria for success vary substantially. Some would argue that, if primary HIV prevention is the aim of an internet intervention, success should be measured in terms of a reduction in sexual HIV exposure. However, since any single intervention typically concentrates on one specific deficit, neither HIV incidence nor sexual HIV exposure are realistic outcome measures.

In the first instance, evaluation of internet interventions should probably concentrate on establishing the profile of its users along basic demographic lines (such as ethnicity, age and area of residence). This allows providers to establish whether users are biased toward demographic groups most likely to be at risk of HIV exposure. Thereafter, more complex research techniques will be necessary to evaluate the outcomes associated with internet interventions. If such evaluation is deemed appropriate and desirable it will require specific resourcing.

# 3 Prevalence and variations in use of the internet

## 3.1 PREVALENCE OF OVERALL INTERNET USE

In our 1997 *Gay Men's Sex Survey* (GMSS) we asked men at London and Brighton Prides (n=2,502) *Do you have regular access to the internet?* A third (34.2%) said yes (Hickson, Reid *et al.*, 1998).

In the 1999 and 2001 surveys we asked *When was the last time you used the internet?* Between 1999 and 2001 the proportion reporting using the internet rose from: 48% to 66% in the last month and from 61% to 76% in the last year. This is data from our booklet samples recruited on the gay scene (for a full description of the methods and samples from the annual *Gay Men's Sex Survey* see Weatherburn *et al.*, 2000; and Reid *et al.*, 2002). We are not reporting the prevalence of overall internet use among men recruited via the internet as this over-estimates its importance.

Use of the internet among gay men and other homosexually active men has increased dramatically in recent years, as it has with all other populations. However, internet access and use is not evenly distributed across the general population, nor is it among gay men. In the 2001 survey (booklet sample), use of the internet (for any reason) in the last year was positively and independently associated with a number of demographic and lifestyle variables, which we examine below.

## 3.2 VARIATIONS IN OVERALL INTERNET USE

Men living in London used the internet more recently than men elsewhere in the country. Over half the men living in London had used the internet in the last 48 hours. Only 10% of men resident in London had never used the internet compared with 24% of those living in the North of England.

When was the last time you used the internet? (Booklet recruited men)	NHS Directorate of residence				
	London (N=436)	South England (N=595)	Mid & Eastern England (N=673)	North England (N=731)	All England (N=2435)
Today or Yesterday	54.8	45	42.3	40.6	44.7
This week	15.8	15.1	15.9	13.8	15.1
This month	8.3	9.7	10.4	7.5	9
Over a month ago	7.6	8.9	8.9	10.3	9.1
Over a year ago	3.4	2.2	3.1	4.1	3.2
Never	10.1	19	19.3	23.7	18.9

Internet use was also associated with age. Overall, younger men were both more likely to have ever used the internet, and to have used it more recently. As the table below demonstrates, about half of men under 40 used the internet today or yesterday and two thirds had used it in the last week. In comparison, half of men over 50 had not used the internet in the last month.

When was the last time you used the internet? (Booklet recruited men)	Age group					All Ages (N= 2406)
	to 19 (N= 172)	20s (N= 664)	30s (N= 747)	40s (N= 482)	50+ (N= 341)	
Today or Yesterday	50.6	48.5	47.8	41.9	32.8	44.9
This week	16.9	17.0	15.5	15.6	9.1	15.1
This month	12.8	11.9	8.3	6.6	6.5	9.0
Over a month ago	11.6	10.8	8.3	8.5	6.7	9.1
Over a year ago	1.7	2.7	4.4	2.3	3.2	3.2
Never	6.4	9.0	15.7	25.1	41.6	18.7

As might be expected, internet use was also associated with formal education. Men with university degrees were both more likely to have ever used the internet, and to have used it more recently. As the table below demonstrates, more than half of men with a degree had used the internet today or yesterday and more than three quarters had used it this week.

In comparison, among men who had left school at 16 (the low education group) a third had never used the internet and only half had used it this month.

When was the last time you used the internet? (Booklet recruited men)	Education group			Total (N= 2401)
	Low (N= 724)	Medium (N= 691)	High (N= 986)	
Today or Yesterday	32.7	41.1	56.9	45.1
This week	11	16.6	17.2	15.2
This month	9	10.7	7.7	9
Over a month ago	12.7	9.6	6.1	9.1
Over a year ago	4.4	4.2	1.8	3.3
Never	30.1	17.8	10.2	18.4

Internet use was associated with the gender of men's sexual partners (ie. having sex with women as well as men). Those who reported only male sexual partners were most likely to have used the internet at all especially compared with those who had no sex with men in the last year. They were also more likely to have used the internet more recently.

When was the last time you used the internet? (Booklet recruited men)	Gender of sexual partners			Total (N= 2414)
	No sex with men (N= 91)	men only (N= 2164)	both men & women (N= 159)	
Today or Yesterday	28.6	45.8	40.9	44.9
This week	16.5	15	15.1	15.1
This month	11	8.9	8.8	8.9
Over a month ago	8.8	9.1	9.4	9.1
Over a year ago	2.2	3.2	4.4	3.2
Never	33	18	21.4	18.8

Recency of internet use did not vary by ethnicity or HIV testing history. That is, use of the internet was broadly similar in any comparison across ethnicity or HIV testing history variables.

### 3.3 INTERNET: WHO USES WHAT?

The internet is not a single setting. There are many internet environments and the demographic profile of men using them varies. The simple question of when men last used the internet was supplemented in GMSS 2001 with a question about how they used it: *What do you regularly use on the internet?* (answers offered were *email, World Wide Web, chatrooms, bulletin boards, other (say what)*).

The following analysis includes all men living in England responding through either the booklet or web who reported using the internet in the last week.

Among men who used the internet in the **last week**:

- 89% regularly used **email** (that is, 64% of the entire booklet sample);
- 83% regularly used the **World Wide Web** (that is, 57% of the entire booklet sample);
- 71% regularly used **chatrooms** (that is, 34% of the entire booklet sample);
- 12% regularly used **bulletin boards** (that is, 8% of the entire booklet sample).

In the following sections we examine how use of these various internet environments varied across demographic groups.

#### 3.3.1 Directorate of residence & variations in internet use

Men resident in London were most likely to have ever used the internet. Among all men who used the internet in the last week, London residents were also most likely to report regular use of email (93% compared to 87-90% in other areas of England) and the World Wide Web (86% compared to 80-83% in other areas). Men resident in the North of England were least likely to use the internet at all and – among men that had used it in the last week – were least likely to report regularly using email or the web.

% of men using internet last week who regularly use ...	NHS Directorate of residence				
	London (N=1434)	South England (N=1308)	Mid & Eastern England (N=1268)	North England (N=1358)	All England (N=5368)
% Email	92.8	87.7	89.3	86.3	89.1
% World Wide Web	86	81	82.4	80.6	82.5
% Chatrooms	66.8	70.3	73.4	72.5	70.7

Among all men who had used the internet in the last week, those resident in London were least likely to report regularly using chatrooms (only two thirds did so compared to three quarters of regular internet users in other areas of England). We tentatively suggest that this may be a consequence of the higher density and greater diversity of other gay scene venues in London, and the wider opportunities for other sources of sexual and social contact these bring.

Among men who had used the internet in the last week, regular use of bulletin boards did not vary by NHS directorate of residence.

#### 3.3.2 Age & variations in internet use

Compared to other age groups, men under 20 years of age were most likely to have ever used the internet and least likely to have never used it. However, among all men who used the internet in the last week, men under 20 were least likely to report regular use of email (85% compared to 88-91% in other age groups) and the World Wide Web (77% compared to 80-84% in other age groups).

These two differences in email and web use by age, directly contrast with trends in overall internet use by age.

% of men using internet last week who regularly use ...	Age group					All Ages (N= 5341)
	to 19 (N= 634)	20s (N= 1936)	30s (N= 1609)	40s (N= 806)	50+ (N= 356)	
Email	84.7	90.7	89.6	88	89	89.1
World Wide Web	76.5	83.7	84.4	81.6	80.3	82.5
Chatrooms	80.3	72.8	70.5	65.8	54.5	70.7

Among men who had used the internet in the last week, use of chatrooms was especially common among men under 20, and far less common among men over 50. This difference in chatroom use by age, is in addition to overall internet use being highest among the under 20s. Hence, in the population overall, younger men are much more likely to use chatrooms.

Among men who had used the internet in the last week, regular use of bulletin boards did not vary by age group.

### 3.3.3 Formal education & variations in internet use

Compared to other education groups, men with a university degree (or equivalent, the *high* group) were most likely to have ever used the internet, and least likely to have never used it. Moreover, among all men who used the internet in the last week, men with higher levels of education were most likely to report regular use of email (92% compared to 84-89% in other education groups) and the World Wide Web (86% compared to 75-83% in other age groups). Men in the *low* education group (who left school at 16) were least likely to use the internet at all and – among men that had used it in the last week – were least likely to report regularly using email or the web. These two differences over-lay in the total population with the result that men in the lowest education group are substantially less likely to use email or the web.

% of men using internet last week who regularly use ....	Education group			Total (N= 5342)
	Low (N= 1323)	Medium (N= 1675)	High (N= 2344)	
Email	84	88.8	92.3	89.1
World Wide Web	75.7	82.5	86.4	82.5
Chatrooms	76.1	73.5	65.6	70.7

However, among all men who had used the internet in the last week, chatroom use was more common among men with lower levels of formal education. This difference comes on top of an education difference in internet use where men with higher education are most likely to use the internet at all. Less well educated men are least likely to use the internet at all but most likely to regularly use chatrooms if they did: higher educated men are most likely to use internet at all but least likely to regularly use chat if they did. These two differences over-lay in the total population to result in men in the middle education group being most likely to use chatrooms overall.

Among men who had used the internet in the last week, regular use of bulletin boards did not vary by education group.



### 3.3.4 Gender of partners & variations in internet use

Overall internet use was associated with the gender of men's sexual partners. Those who reported only male sexual partners were most likely to have used the internet at all, especially compared with those who had no sex with men in the last year. They were also likely to have used the internet more recently.

% of men using internet last week who regularly use ...	Gender of sexual partners			Total (N= 5339)
	No sex with men (N= 290)	men only (N= 4453)	both men & women (N= 596)	
Email	87.2	90.1	82.1	89.1
World Wide Web	84.5	83.1	77.7	82.5
Chatrooms	63.4	69.8	80.2	70.6
Bulletin boards	17.2	12.1	12.8	12.4

Among men who used the internet in the last week, those who only had sex with men (in the last year) were most likely to regularly use email, and those who had sex with men and women were least likely to regularly use email. Men who had sex with men and women (behaviourally bisexual) were also least likely to use the web, compared to men who had sex with men only, or had no sex with men in the last year (but intended to in the future).

However, among men who had used the internet in the last week, behaviourally bisexual men were most likely to report regularly using chatrooms. Among men who used the internet in the last week, regularly using bulletin boards was most common among men who had no sex with men in the past year.

### 3.3.5 Ethnicity & variations in internet use

There was no relationship between ethnicity and overall internet use. Among men who had used the internet in the last week, there was no relationship between ethnicity and regular use of email, the web or bulletin boards. That is, regular use of email, the web and bulletin boards was equally common among men of all ethnicities.

However, among men who had used the internet in the last week, regular chatroom use was less common among Black men and those reporting other or mixed ethnicity. It was significantly more common among men of white and Asian ethnicities.

% of men using internet last week who regularly use ...	Ethnic group				Total (N= 5359)
	Mixed & other (N= 158)	Asian (N= 121)	Black (N= 78)	White (N= 5002)	
Chatrooms	60.1	70.2	60.3	71.2	70.7

### 3.3.6 HIV testing history & variations in internet use

There was no relationship between HIV testing history and overall internet use. Among men who had used the internet in the last week, there was no relationship between HIV testing history and regular use of email, the web or bulletin boards. That is, regular use of email, the web and bulletin boards was equally common among men of all HIV testing histories.

However, among men who had used the internet in the last week, regular chatroom use was less common among men who had ever tested for HIV (especially those that had tested positive) and significantly more common among men who had never tested for HIV. This is the only difference observed in internet use of any type that is related to HIV testing history. That men who use chat

were less likely to have ever tested for HIV was associated with findings concerning the gender of their partners (they were more likely to be behaviourally bisexual) and findings regarding (non)disclosure of homosexual activity (see chapter 4). Overall this suggests that among internet users, the profile of chatroom users is relatively unique.

% of men using internet last week who regularly use ...	HIV testing history			Total (N= 5329)
	Never tested (N= 2719)	Last test negative (N= 2349)	Tested positive (N= 261)	
Chatrooms	75.9	65.7	62.5	70.7

### 3.4 SUMMARY

Among gay men and other homosexually active men, internet use is increasingly common. In 2001, 45% had used the internet today or yesterday and only 19% had never used it. Use of the internet was especially common among men who were London-resident; under 40 (and especially under 20); well educated and exclusively homosexually active.

Regular use of email, the web and chatrooms was also very common. The user profiles of email and the World Wide Web share most of the same biases as the profile of internet users overall.

Regular email use was most common among men:

- living in London;
- over 20 years of age;
- with a degree; and
- who did not have sex with women as well as men.

Regular web use was most common among men:

- living in London;
- in their 20s and 30s;
- with a degree; and
- who did not have sex with women as well as men.

Web chat, however, has a user profile which is relatively unique. Our data bears out assumptions that a reasonable proportion of chat users are homosexually active but not necessarily gay identified. Chat users are disproportionately not London-resident; are young (especially under 20); less well educated, behaviourally bisexual and more likely to be white or Asian and less likely to be Black. They were also disproportionately less likely to have ever tested for HIV.

Regular chatroom use was more common among men:

- living outside London;
- under 20 years of age;
- without a degree;
- who had sex with women as well as men;
- who were White or Asian; and
- who had never tested for HIV.

# 4 The internet and other settings to meet new male sexual partners

## 4.1 CHANGES OVER TIME IN (SEXUALISED) SETTINGS USED

Having seen how common internet use is among gay men and other homosexually active men we must bear in mind that not all men looking for sex use the internet and not all men using the internet are looking for sex. Moreover, when we consider the internet as a source of sexual partners, it is helpful to do so in the context of the other places where gay and bisexual men meet for sex.

Given what we know about gay men's sexual lifestyles there are a number of plausible impacts the emergence of the internet may be having on the ways in which men meet new sexual partners. For example, some men may have started using the internet to find sexual partners and stopped using other settings.

The following table shows the proportion of men using a variety of (sexualised) settings in the last month, in 1999 and 2001. The settings are ordered by the ratio of odds of using them from GMSS 1999 to 2001.

Booklet-recruited men, living in England, who had sex with a man in the last year.	% using setting in the last month by year		
	1999 (N=2,169)	2001 (N=2,142)	odds ratio of using
internet	48.1	66.2	2.113
backroom/sex club	13.5	13.3	0.983
gay sauna	23.7	22.1	0.913
gay pub	85	82.7	0.844
gay club	68.8	65.5	0.861
cottage	22.7	16.5	0.673
cruising ground	38.9	27.9	0.608

On the first line we can see the proportion of men using the internet going up. Men were 2.1 times more likely to have used the internet at all in 2001 compared to 1999. As use of the internet increases, the proportion of men using all the other settings decreases. The largest decrease was in use of cruising grounds and cottages, suggesting the internet may be taking its share of the sexual market mainly from cottages and cruising grounds, where little except sex is on offer.

The internet does not seem to have impacted on the popularity of sex-on-site venues (backrooms and saunas) and only marginally affected the popularity of pubs and clubs, where men also go to drink, socialise and dance. Of course, the impact of the internet on other sexualised settings may be more substantial than this data suggests, since, men may be going to the same range of venues but (far) less often. For example, a man that visited bars, cruising grounds or cottages once a week in 1999 but only went once a month in 2001 would not appear to have changed his behaviour in these figures.

## 4.2 PROPORTIONS USING VARIOUS SETTINGS TO MEET NEW PARTNERS

In 2002, the *Gay Men's Sex Survey* asked *Where have you met new sexual partners in the last 12 months?* and offered a list of 12 potential settings. Overall, 81% of men indicated they had met at least one new sexual partner in the last year. The following table shows the proportion of men with any new sexual partners in the last year who had met a sexual partner at each of the settings, by survey recruitment method. Where there is a statistically significant difference across recruitment methods the bold figures show the highest usage of a setting, and an underline shows the lowest.

% met a sexual partner there in the last year (men with a new sexual partner)	By recruitment method			Mean of 3 methods
	web (N=5,016)	booklet (N=2,622)	pride (N=3,472)	
bar/ pub/ club	<u>51.1</u>	64.7	<b>70.1</b>	62
internet	<b>75.3</b>	36	40.1	50.5
sauna	<u>29.5</u>	<b>37.2</b>	34.4	33.7
cruising ground	27.3	<b>32.5</b>	<u>24.3</u>	28
backroom	<u>16.6</u>	21.5	<b>23.9</b>	20.7
private party	<u>16.8</u>	19.3	19.6	18.6
cottage	17.1	<b>21.7</b>	<u>13</u>	17.3
work	10.3	11.1	10.3	10.6
social group	<u>7.4</u>	13	12.6	11
gym	<u>6.5</u>	7.3	<b>8.5</b>	7.4
ads	<u>3.7</u>	<b>7.9</b>	6.1	5.9
sex cinema	2.9	<b>3.7</b>	<u>2.4</u>	3

Overall, the internet was the second most popular setting for meeting sexual partners, after pubs and clubs. Among men recruited on the internet it was the most common place to meet new partners. However, 36% of our booklet sample and 40% of our Prides sample had also met a sexual partner through the internet in the last year. This is similar to other gay community samples. Of men recruited at Atlanta Pride, 34% had met a partner through the internet (Benotsch, Kalichman & Cage, 2002) and 50% of Ross *et al.*'s (2000) mailing list sample had used gay chatrooms. The internet is clearly now a globally popular place for men to meet other men for sex.

In our samples, gay pubs/ bars and clubs and the internet are the two most popular settings for meeting partners and both are used by many of the same men. Of the men who had met a new sexual partner in the last year:

- 31% met partners both on the internet and in gay pubs/ bars and clubs ;
- 29% met partners in gay pubs/ bars and clubs but not on the internet;
- 24% met partners on the internet but not in gay pubs/ bars and clubs; and
- 16% met partners on neither the internet nor in gay pubs/ bars and clubs.

The majority of men (70.2%) met new sexual partners in more than one setting. Exclusivity of setting use was uncommon but the most common settings for exclusive use were the most popular settings: 11.3% only met new partners at pubs / bars and clubs, while 10.9% met partners only through the internet. The next most common exclusive setting was the sauna, with 2.1% of men meeting partners there but nowhere else.

The proportion using each setting to meet new partners varied significantly according to how they were recruited to the survey (for every setting except one, at work). The booklet sample, recruited by health promoters in the course of their work, were more likely (than the web and Prides samples) to have met sexual partners at saunas, cruising grounds, cottages, sex cinemas and through personal ads. The Pride sample, were more likely (than web and booklet respondents) to have met partners in bar and clubs, backrooms and at the gym. The web sample were more likely (than booklet and pride samples) to have met sexual partners on the internet, but nowhere else.

### 4.3 RELATIONSHIPS BETWEEN THE SETTINGS: SEGMENTING MEN BY WHERE THEY MEET NEW MALE PARTNERS

This section briefly examines the relationships between the settings where new sexual partners are met for individual men in the whole sample (N=11,110). The table below shows the significant odds ratios for meeting a new sexual partner at any one setting having met a partner at any other setting. An odds ratio of less than one shows a negative association between two settings – use of one is associated with non-use of the other – the closer the figure is to zero the stronger the negative association. An odds ratio above one demonstrates a positive association – use of one setting is associated with use of the other – the higher the number the stronger the positive association.

	social group	ads	internet	gym	work	bar/club	party	sex cinema	sauna	cottage	backroom
cruising	0.797	—	1.247	—	—	0.896	—	1.732	2.468	14.175	4.73
backroom	—	1.504	1.284	1.285	0.749	1.945	1.967	3.217	5.369	1.781	
cottage	—	1.67	—	—	1.44	0.866	—	2.555	1.492		
sauna	0.809	—	—	2.538	0.641	0.902	—	3.825			
sex cinema	—	1.506	—	1.546	2.096	—	1.481				
party	2.081	1.297	1.32	2.07	2.86	3.269					
bar/club	—	—	0.663	1.452	1.971						
work	1.458	1.368	—	2.353							
gym	1.388	1.553	—								
internet	0.631	1.367									
ads	1.736										

The strongest association between settings used was between cottaging and cruising grounds. Men who had met a sexual partner at either a cottage or a cruising ground were 14 times more likely to have met a partner at the other setting, compared to men who had not met a partner at either setting (see also Keogh, Hickson & Weatherburn, 2000).

The strongest associations between pairs of settings used were:

- cruising ground & cottage (x 14)
- cruising ground & backroom (x 5)
- sauna & backroom (x 5)
- sauna & sex cinema (x 4)
- sex cinema & backroom (x 3)
- sex cinema & cottage (x 3)
- sex cinema & work (x 2)
- cruising ground & sauna (x 2)

- sauna & gym (x 3)
- bar/club & private party (x 3)
- private party & work (x 3)
- work & gym (x 2)
- gym & private party (x 2)
- private party & social group (x 2)

There were also some strong negative associations, where meeting at one setting meant men were less likely to have met at another. Taking the first of these as an example, men who had met a new partner via the internet were half as likely to have also met a man in a gay bar, pub or club – compared to men that had not met a partner on the internet.

The three negative associations were:

- internet against bar/ club (x 1/2)
- internet against social group (x 1/2)
- sauna against work (x 1/2)

A factor analysis extracted four components that accounted for 48% of the variance in where men had met their new sexual partners. These can be interpreted as 'styles' of finding sexual partners. Our interpretation of the four styles was:

**Public sex environments and public sex venues:** cruising grounds, backrooms, cottages, saunas and sex cinemas form a cluster where anonymous sex occurs on-site. Use of any one of these settings increases the probability of using the others.

**Everyday interaction (including the commercial gay scene):** meeting sexual partners in bars/pubs and clubs, the gym, private parties and work forms a cluster. Use of any one of these increases the probability of use of the others.

**Media (not face-to-face, not on commercial gay scene):** using the internet was most strongly associated with using personal (contact) ads in magazines and newspapers. This pair could be considered a third style of meeting sexual partners.

**Social groups:** the final (far less common style) was meeting sexual partners in social groups. This was not strongly associated with meeting partners at any other setting, except private parties.

These findings suggest that a comprehensive programme of HIV prevention designed to cover the majority of the population of gay men and other homosexually active men should comprise interventions occurring in all four of these types of settings.

#### 4.4 SETTING USE AND DISCLOSURE OF HOMOSEXUAL ACTIVITY

In 2002 respondents were asked *What proportion of people know you have sex with men?* They were given a five point scale (*all or almost all; more than half; about half; less than half; few or none*) and asked to respond separately for friends, close family and workmates. The basic findings are outlined in the table below.

Homosexually active men living in England	% out to friends (N=12,905)	% out to family (N=12,886)	% out to workmates (N=12,180)
all or almost all	65.9	52.9	47.2
more than half	10.6	6.9	9.1
about half	6.3	5.4	6.5
less than half	5.9	6	8.5
few or none	11.3	28.8	28.5

Overall, respondents were more likely to have disclosed (or be 'out') to friends than to family, and more likely to be out to family than to workmates. Of homosexually active men living in England, 35.7% indicated 'all or almost all' for all three groups and 9.8% indicated 'few or none' for all three groups.

Men with diagnosed HIV infection had higher rates of disclosure of homosexual activity than men who had not tested positive. Among men who had not tested positive, those who reported having been involved in sero-discordant unprotected anal intercourse (sdUAI) were more out than those who said they had not.

Among those who said they had not been involved in sdUAI or were unsure if they had: men with many sexual partners were more out than men with few sexual partners; and men who had anal intercourse (AI) were more out than men who did not have AI. Moreover, among men who had AI, those who had any unprotected anal intercourse (UAI) were more out than those who always used a condom. **Clearly then, the more likely men were to be out about their homosexual activity the more likely they were to be involved in sexual HIV exposure.**

The following three tables show the proportion of men meeting new sexual partners in each setting by how 'out' they were. Where there is a statistically significant difference in disclosure across a setting bold figures show the highest usage of a setting, and an underline shows the lowest. The middle three disclosure groups were collapsed to one group ('out to some').

Whether or not men were out to their friends was not associated with cottaging, using personal ads or sex cinemas. However, all other settings were associated with outness to friends. The majority of settings were more likely to be used by men who were out than by men who were not out. The clear exception was the internet. **Men who were not out to their friends were more likely to have met a sexual partner on the internet than those who were out to their friends.**

% who met a sexual partner there in the last year (men with a new sexual partner)	Disclosure (Outness) to friends		
	all or almost all (N=6,844)	some (N=2,430)	few or none (N=1,250)
bar/pub/club	67.7	57.2	25.5
internet	53.9	56.1	66.8
sauna	33.9	32.3	29.3
cruising ground	29.3	24.3	25.4
backroom	22.8	18.1	10.5
private party	21.4	15.2	6.6
cottage	17.4	15.2	18.3
work	12.1	9.2	3.4
social group	10.8	11.1	4.7
gym	7.8	6.3	5
personal or contact ads	5.4	5.5	4.7
sex cinema	3	2.6	3.1

Fewer men were out to their families than were out to their friends. But the associations with settings for meeting new sexual partners were very similar. Social groups appear to be an interstitial setting, most used by men who are out to some but not others. **Again, the internet was the only setting used to meet new partners by more men that had not disclosed to close family than men that had disclosed to close family.**

% met a sexual partner there in the last year (men with a new sexual partner)	Disclosure (Outness) to close family		
	all or almost all (N=5,356)	some (N=1,934)	few or none (N=3,196)
bar/pub/club	65.6	65.1	49.5
internet	53.5	54	61.4
sauna	35.7	30.4	29.7
cruising ground	30.4	25.3	24.6
backroom	23.7	19.8	14.8
private party	21.2	20.3	13.3
cottage	17.4	15.8	16.7
work	11.9	11	7.7
social group	10.1	12.7	8.7
gym	8	7.4	5.9
personal or contact ads	5.5	5.5	4.7
sex cinema	3.1	2.5	2.8



Finally, the same overall pattern was observed in disclosure to work colleagues. **Again, the internet was the only setting used to meet new partners by more men that had not disclosed to work colleagues than men that had disclosed to work colleagues.**

% met a sexual partner there in the last year (men with a new sexual partner)	Disclosure (Outness) to work colleagues		
	all or almost all (N=4,598)	some (N=2,406)	few or none (N=2,952)
bar/pub/club	69.2	64.7	45.3
internet	52.2	56.7	62.8
sauna	34.4	34.9	29.4
cruising ground	29.7	28.1	24.7
backroom	23.2	22.6	14.7
private party	22	20	12.3
cottage	18.6	14.3	16.4
work	14.8	10.7	5
social group	10.6	10.3	8.9
gym	8.2	8.4	5.1
personal or contact ads	5.1	5.4	5.2
sex cinema	3.2	3.2	2.1

#### 4.5 SETTING USE AND RISK OF HIV EXPOSURE

Here we examine the relationship between where men meet their new sexual partners and their likelihood of involvement in sexual HIV exposure. In GMSS 2002, all men were asked *How likely do you think it is that, in the last 12 months, you've fucked without a condom with a man with a different HIV status to yourself?* They were given a five point scale of probability on which to answer (*definitely have; probably have; may have / may not have; probably have not; definitely have not*). For the purposes of this analysis the scale has been collapsed to three points. This is a self-reported measure of involvement in sero-discordant unprotected anal intercourse (sdUAI).

The following table shows the proportion of men giving each answer to the question on likely involvement in sdUAI grouped by their HIV testing history and whether or not they had new sexual partners in the last year.

HIV testing history	tested positive		tested negative		never tested	
	new partner (N=863)	no new partner (N=142)	new partner (N=5,440)	no new partner (N=1,229)	new partner (N=4,342)	no new partner (N=967)
definitely or probably have	37.5	16.2	10.7	5	5.6	3.7
may have, may not have	12.5	1.4	14.3	2.3	12.2	3.4
definitely or probably have not	49.9	82.4	75	92.8	82.2	92.9

First, note that the men who had tested HIV positive were seven times more likely to report sdUAI than men who had not tested positive. Of men with a new sexual partner in the last year, 38% of diagnosed positive men indicated they definitely or probably had sdUAI compared to 11% of tested negative and 6% of untested men. This finding is consistent with previous GMSS findings (Hickson *et al.*, 1999; Weatherburn *et al.*, 2000).

Second, those men who had at least one new sexual partner in the last year were more likely to report any sdUAI than those who had no new partner:

- Diagnosed positive men who reported a new partner in the last year were **four times** more likely to report sdUAI than diagnosed positive men with no new partners.
- Tested negative men who reported a new partner in the last year were **twice** as likely to report sdUAI than tested negative men with no new partners.
- Never tested men who reported a new partner in the last year were **twice** as likely to report sdUAI than untested men with no new partners.

Among those men who had a new sexual partner, reporting any sdUAI was associated with some settings where new partners were met, but not others. The table below shows the odds ratio of having any sdUAI in the last year for those men who met a sexual partner in each setting compared with those who did not meet a partner in that setting. The analysis controls for age, volume of sexual partners and being in a sero-discordant relationship, since all these variables have an independent relationship to sdUAI. Again, since we are examining sdUAI the three testing history groups are reported separately (starred differences are significant odds ratios – see 4.3 for a note on reading them). We do not know who the self-reported sdUAI occurred with – nor where they were first met or if they were a new partner.

Odds Ratio of having ANY sdUAI in last year for those meeting a partner in each setting compared to those not meeting a partner in that setting (of men with a new sexual partner)	HIV testing history		
	tested positive (N=814)	tested negative (N=5157)	never tested (N=4154)
bar/pub/club	1.31 (0.92-1.86)	1.18 (0.96-1.45)	0.93 (0.68-1.26)
internet	<b>*1.77 (1.27-2.45)</b>	0.94 (0.78-1.13)	0.82 (0.62-1.10)
sauna	0.95 (0.67-1.34)	1.07 (0.87-1.33)	1.19 (0.84-1.68)
cruising ground	0.85 (0.59-1.24)	1.23 (0.98-1.55)	1.33 (0.92-1.94)
backroom	<b>*2.15 (1.49-3.09)</b>	<b>*1.69 (1.35-2.12)</b>	<b>*2.11 (1.46-3.04)</b>
private party	1.17 (0.79-1.73)	1.16 (0.93-1.45)	1.23 (0.85-1.79)
cottage	1.36 (0.90-2.04)	1.20 (0.92-1.55)	1.37 (0.92-2.03)
work	1.00 (0.52-1.92)	0.96 (0.71-1.29)	1.03 (0.67-1.58)
social group	<b>*1.88 (1.05-3.33)</b>	1.07 (0.81-1.43)	1.20 (0.78-1.86)
gym	1.31 (0.77-2.23)	<b>*1.44 (1.07-1.93)</b>	1.59 (0.99-2.56)
personal or contact ads	0.87 (0.42-1.80)	1.05 (0.71-1.55)	<b>*2.06 (1.26-3.36)</b>
sex cinema	0.60 (0.28-1.27)	1.10 (0.68-1.78)	1.57 (0.85-2.89)

Among all men, the setting most associated with sdUAI was the backroom. Men who had met a new partner in a backroom in the last year were twice as likely to indicate they had sdUAI than were those who had not met any new partners in a backroom. This is the only setting with a consistent positive relationship to sdUAI across the all three testing history groups (see Keogh & Weatherburn, 2000).

Among diagnosed positive men, the only other settings associated with sdUAI were social groups and the internet. Diagnosed positive men who had met a new partner via either of these two settings in the last year were twice as likely to indicate they had sdUAI than positive men who had not. Among men who had tested negative one other setting for meeting new sexual partners was associated with self-reported likelihood of sdUAI: the gym. Similarly among men that had never tested one other setting for meeting new sexual partners was associated with self-reported

likelihood of sdUAI: personal or contact ads. Ready explanations for these significant associations are not straightforward, and substantially more research is necessary to comprehend the relationship between where men meet new sexual partners, where they have sex with them and the likelihood of sexual HIV exposure and transmission.

Using the internet to meet new sexual partners is associated with self-reported sdUAI for diagnosed positive men, but not for either tested negative or untested men. However, our data demonstrates that any search for a universal 'risk-promoting setting' should start with backrooms.

## 4.6 SUMMARY

- Use of the internet by gay men doubled between 1999 and 2001.
- Use of other sexualised gay settings fell between 1999 and 2001 especially use of cottages and cruising grounds.
- In 2001 the most popular settings for meeting new male sexual partners were:
  - ▶ gay pubs/ bars and clubs (62% of men with a new partner in the last year met one here);
  - ▶ the internet (51% of men with a new partner in the last year met one here);
  - ▶ saunas (34% of men with a new partner in the last year met one here);
  - ▶ cruising grounds (28% of men with a new partner in the last year met one here).
- At least four 'styles' of finding sexual partners can be detected in our data.

**Public sex environments and public sex venues:** cruising grounds, backrooms, cottages, saunas and sex cinemas form a cluster where anonymous sex occurs on-site.

**Everyday interaction (including the commercial gay scene):** meeting sexual partners in bars/pubs and clubs, the gym, private parties and work forms a cluster.

**Media (not face-to-face, not on commercial gay scene):** using the internet was most strongly associated with using personal (contact) ads in magazines and newspapers.

**Social groups:** was not strongly associated with meeting partners at any other setting.

- Disclosure of homosexual activity has a strong relationship with risk of sexual HIV exposure. Generally, men who have disclosed their homosexual activity to a higher proportion of people are more likely to be involved in anal intercourse and unprotected anal intercourse and sero-discordant unprotected anal intercourse.
- Disclosure of homosexual activity to friends, close family and work colleagues has the same broad relationship to where men meet their new male sexual partners.
- Personal ads and cottaging were used by similar numbers of men irrespective of disclosure of homosexuality to friends, close family and work colleagues.
- Men who are out to relatively few people were more likely to meet sexual partners on the internet than are men out to more people.
- All other settings for meeting new sexual partners were more popular among men with higher rates of disclosure compared to men with lower rates.

- Among all men, the setting most associated with sdUAI was the backroom. Men who had met a new partner in a backroom in the last year were twice as likely to indicate they had sdUAI than were those who had not met a partner in a backroom. This is the only setting with a consistent positive relationship to sdUAI across the all three testing history groups.
- Among men with diagnosed HIV, the only other settings associated with sdUAI were social groups and the internet.
- Among men who had tested negative the only other setting associated with self-reported likelihood of sdUAI was the gym.
- Among men who had never tested for HIV just one other setting for meeting new sexual partners was associated with self-reported likelihood of sdUAI: personal or contact ads.

# 5 Discussion

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The internet is a new setting for an existing population. The vast majority of gay men and other homosexually active men using the internet to meet male sexual partners were probably homosexually active before they had access to the internet. However, the internet is changing the way many men live. Men interested in having (more) sex with men now have a tool of communication that is within their control, discreet, cheap and very varied. It would be surprising if this new and additional setting for meeting men for sex did not allow more men to have the sex they want. One explanation for the observed increase in homosexual activity observed in the UK between 1990 and 2000 (Johnson *et al.*, 2001) is undoubtedly the increasing availability of the internet over that decade. That the increase disproportionately occurred among men resident outside London also fits this explanation, since this is the population most likely to use chat rooms.

Researchers tend to encourage us to reify populations of setting users into types of people. For example, Hospers *et al.* (2002) suggest "chatters on the internet may be a new target group for HIV prevention". Surveys compare men who meet sex partners on the internet with men who do not (McFarlane *et al.*, 2002), or men recruited on the internet with those recruited through some other means (Ross *et al.*, 2000), and make conclusions about the 'type of men' encountered. While this approach has the benefit of ease and description, it overlooks the fact that anyone can use the internet (in a way that not anyone can be under 25, or Black, for example). Use of the internet is not a demographic but a behaviour and users are not types of people, even though some types of people use it more than others.

This distinction becomes particularly important when interpreting findings that take a sample of men and compare those who have met sexual partners on the internet and those who have not. Since most of the men meeting partners on the internet will also be meeting partners elsewhere, it is important to place the internet alongside these other settings if its relevance is to be fairly judged. Findings such as "men meeting sexual partners over the internet reported having sex with more male partners ... compared with those not meeting partners in this manner" (Benotsch, Kalichman & Cage, 2002) are truisms. It is true for every setting in which men meet sexual partners, because men meeting sexual partners have sex with more men compared to those not meeting sexual partners. Further, since the probability of unprotected anal intercourse (UAI) increases with increasing partner numbers, we should expect that men meeting partners through any route are more likely to have UAI than men not meeting partners through that route (which Benotsch *et al.* duly find). In terms of priority settings for HIV prevention, any comparison with the internet must be with another setting where new partners are sought or interventions can be encountered.

In our data, any search for a universally 'risky' setting should start with backrooms (see Keogh & Weatherburn, 2000). However, using the internet to meet new sexual partners is associated with self-reported sdUAI for diagnosed HIV positive men, though it is not for either tested negative or untested men. Ready explanations for this association are not straightforward, and substantially more research is necessary to comprehend the relationship between where men meet new sexual partners, where they have sex with them and the likelihood of sexual HIV exposure and transmission.

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