Sexually transmissible infections in MSM

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Although gay men in Sydney are generally well-informed about HIV and their own serostatus, their knowledge of other sexually transmissible infections (STIs)—including their own infection and vaccination history—appears to be much lower, according to an ongoing study of HIV-negative gay men. These findings suggest a need for more education around STIs to complement recently-introduced guidelines for STI testing among gay men in New South Wales.

Background
Health in Men (HIM) is a longitudinal (five-year) cohort study of HIV-negative gay men in Sydney. Participants are interviewed annually and tested for HIV and other STIs. The study follows the same men over time and will recruit up to 500 new participants per year.

By December 2002, 903 HIV-negative men had been interviewed, all of whom were simultaneously tested for HIV. Of these men, 867 also consented to be tested for hepatitis A, hepatitis B and syphilis. Of the 432 men tested for STIs in 2001, 390 were re-tested in 2002–03. In the third year of the study optional chlamydia and gonorrhoea screening was also added and by October 2003, 665 men had been tested for these STIs.

Serology and self-report data
Most men (89.9%) reporting having been tested for STIs at some time in the past, with 63.9% saying they had been tested during the previous year. The most common place to receive these tests was through a general practitioner or private clinic (67.8%), with a further 19.9% tested at a sexual health clinic.

When tested for STIs only 28 men (3.1%) showed evidence of infection (past or current) with syphilis, of whom just 21 indicated being aware of this. A further 18 men said they had had syphilis but there was no serological evidence of this. Of the five men that reported having had syphilis in the previous year, only one showed evidence of infection. Eighty-eight men said they had never been tested for syphilis (of whom two tested positive) and another seven men simply did not know if they had been tested.

Of the 15 men (6.6%) who tested positive for chlamydia, five reported having had this infection during the previous year and a further 34 (16.0%) who tested negative also indicated they had had chlamydia in the past year. Twenty-two men (10.1%) tested positive for gonorrhoea (mainly oral), with eight of these indicating they had had this infection during the previous year. A further 32 men (16.3%) tested negative but indicated having had gonorrhoea in the past year.

Regarding the hepatitis, 238 men (27.5%) tested negative for hepatitis B. Of these, 44 believed they had been vaccinated and 13 believed they had previously been infected. Of the 460 (53.1%) men showing serological evidence of vaccination against hepatitis B, 34 were unaware of having been vaccinated, while of the 169 (18.6%) who had been previously infected, 35 were unaware of this. In relation to hepatitis A, 279 men (32.2%) tested negative, indicating that two-thirds had either been vaccinated or previously infected. As with hepatitis B there was inconsistency between the men’s serology data and what they reported during their interviews. About 10% were unsure if they had been vaccinated against or infected by each form of hepatitis and about one in eight men were unable to distinguish between the different forms of hepatitis. Even among those who could distinguish between the various forms of hepatitis, there was considerable lack of consistency between the serological evidence and their responses.

Those who had not been vaccinated against hepatitis A and B at baseline were also asked why that was the case. Many of those who remained susceptible to infection (according to their test results) believed they had already been vaccinated. Indeed this was the most common reason for non-vaccination against hepatitis B (38%).

Of the 100 men testing negative to hepatitis A at baseline, 25 (25%) were either newly infected or vaccinated at follow-up, and of the 79 men testing negative to hepatitis B at baseline, 24 (30.4%) were newly vaccinated and there were no new infections. Evidence of recent infection for syphilis at follow-up was found in three men (1%).

Issues raised
Many men reported having had an STI in the previous year but there was a lack of consistency between their test results and their own beliefs about syphilis and hepatitis infection history or hepatitis vaccination. This was accompanied by high rates of infection for gonorrhoea and chlamydia. These findings suggest that, whereas most gay men may be well-informed about their HIV serostatus, they appear to be much less knowledgeable about other STIs.

The guidelines produced by the Sexually Transmitted Infections in Gay Men Action Group (STIGMA) in 2002 recommend annual screening for STIs in gay men. In the HIM Study about a third of these men had not been tested for at least twelve months prior to entering the study. The lack of clear understanding about STIs among the men in the cohort suggests that annual screening also needs to be accompanied by some extensive education regarding the range, symptoms and modes of transmission of STIs in general.

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This Canadian study evaluates an intervention to contain an outbreak of hepatitis A among young and sexually active gay men in Montréal. A campaign launched in July 1996 promoted the availability of free vaccinations for hepatitis A for gay men, through prior advertisements, flyers and posters, community organisation mail-outs and promotions at gay venues and events. A total of 15,000 doses were made available at medical clinics, including two special vaccination clinics held during Gay Pride Week and Halloween. Clients were encouraged to have simultaneous hepatitis B vaccinations (already free for gay men in Canada). A concurrent evaluation was conducted until November 1997 when all doses were distributed. This evaluation included a blood sample from 353 men, of which one-quarter was found to already have anti-HAV antibodies, suggesting that a pre-vaccination test would be more cost efficient. Between 20% and 41% of susceptible gay men in Montréal were estimated to have been vaccinated as a result of this intervention, however the authors resist making direct connections between this intervention and a subsequent decrease in new hepatitis A and B notifications.

SRB 2/002

The authors present the findings of 23 in-depth interviews with gay men diagnosed with syphilis during an outbreak in Manchester between May 1999 and August 2000. This study found that half were most likely to have contracted syphilis through unprotected oral sex, and seven were co-infected with HIV. Despite their diagnosis, most continued to have very little awareness of the modes of transmission and symptoms of syphilis. Some suggested that alcohol and drug use affected their safe sex behaviour, with a particular focus on the use of GHB both in seeking and during sex. Also, since only 10% of their sexual contacts from the previous 12 months could be named, Cook et al conclude that contact tracing would be of little use in controlling this and other outbreaks of syphilis in populations of gay men.

SRB 2/003

An outbreak of hepatitis A in Ohio between 1998 and 1999 was seen to affect a disproportionately high number of men who have sex with men (MSM). Cotter et al. interviewed 47 of these men and compared their responses to a questionnaire about risk factors, social and sexual activities, and willingness to be vaccinated, to those of a control group recruited from gay venues and clinics popular with MSM. The authors found that most men could not identify a definite risk factor leading to infection, which is typical of many community-wide hepatitis A outbreaks. There was very little indication that these cases could be attributed to high-risk sex practices, and most men were not aware of the availability of hepatitis A vaccine, despite regularly attending medical clinics to receive HIV and STI testing. However, 93% of the control group stated that they were willing to be vaccinated against hepatitis A, suggesting that hepatitis prevention could be easily integrated into existing medical services for MSM in this area.

SRB 2/004


Testing for STIs is typically restricted to clinical settings, and so in an attempt to assess the prevalence of asymptomatic gonorrhoea and chlamydia in MSM, the authors conducted urine screening programs at sex-on-premises and entertainment venues in inner-city Brisbane. The program was piloted over five nights in 1997 at two sex-on-premises venues and one recreational venue, during which 148 ‘first-catch’ urine specimens were collected, representing about 75% of the number of men approached. A second program was then conducted over three nights in 1999, in the two sex-on-premises venues and an additional gay health service, collecting throat swabs as well as urine specimens. Although only 50% of the men approached were willing to participate, all patrons were nonetheless supportive of the initiative. The first program found no asymptomatic infections in any of the 148 specimens, but in the second program three of the 90 urine specimens collected tested positive for urethral chlamydia and one for oral chlamydia. In 2000, this program was shifted to entertainment venues, where three nightclub venues and one community venue were targeted twice in a three-month period, supported by a widespread promotional campaign. To improve participation, volunteers dressed as ‘drag nurses’ promoting the campaign slogan “sexual health testing is easy and club owners offered drink vouchers to participants providing urine samples and throat swabs. Around 40% of those approached took part and of the 184 urine specimens, eight tested positive for chlamydia and one for gonorrhoea, whereas there were no positive results from the 161 throat swabs. In all three programs, participants were ensured confidentiality and told their results would be available by phone (with free treatment) after a fortnight. However, this proved to be mostly ineffective, with only 19% of participants calling to receive their results in the third program.

SRB 2/005

This interesting study attempts to evaluate any associations between the four notifiable STIs in each US state—gonorrhoea, syphilis, chlamydia and AIDS (new HIV notification rates were not available in all states)—and the more slippery variables of social capital, poverty and income inequality. Incidence of the four STIs in 1999 were measured against Putnam’s public use dataset on the index of social capital for each US state, as well as federal statistics on the percentage of each state’s population living in poverty (1997–98) and the ratio between the top and bottom earning fifths of those populations (1996–98). The strongest findings were that social capital was a strong predictor for gonorrhoea and syphilis, that all three variables were associated with chlamydia, and that social capital and income inequality were significantly correlated with AIDS case rates. (Reference: Putnam, R.D. Comprehensive social capital index. Accessed at www.bowlingalone.com)
referrals, and invited to a one-day workshop on sexual risk behaviour. The intervention was evaluated with questionnaires and focus groups, behavioural outcomes were measured with questionnaires about sexual risk behaviour, while clinical end points were determined by matching participants to databases of new infections diagnosed at clinics within the greater London region. Although men in the intervention group were more likely to self-report a decrease in unprotected anal intercourse after the intervention, they were also more likely than the control group to have contracted a new STI. In response to this paper, Noor and Zimmermann argue that these negative results do not signify that all behavioural interventions are ineffective, since larger studies in other countries have proven to effect considerable change in the sexual risk behaviour of participants. Similarly, Bonell and Strange point to many effective behavioural interventions in the field of HIV prevention, and hypothesise that a disappointing result from a pharmacological intervention would be unlikely to inspire such negative conclusions about the efficacy of pharmacology. In their own defence, Emire et al. assert that since the objective of public health interventions is to reduce morbidity, it is important to not underestimate the failure of such cost- time-intensive interventions.

SRB 2/007

The authors outline the main risk factors for syphilis in Sydney MSM. A total of 34 men newly diagnosed with primary, secondary or early latent syphilis completed a self-administered questionnaire. Around one-third of participants were asymptomatic and diagnosed through clinical screening, but of those that did have symptoms, around 60% claimed to have been tested immediately whereas one-quarter delayed testing to see what would happen. Of those with symptoms, 41% reported having a rash, and around one-third a sore, lesion or ulcer. Half of the participants (53%) believed that they had contracted syphilis through oro-genital sex, compared to 47% through anal sex without a condom and 24% through oro-anal sex. Overall half of these men (59%) reported that they were also HIV-positive. Compared to other studies of the sexual and drug-taking behaviour of Sydney MSM, these participants reported considerably higher numbers of sex partners—63% reported more than ten partners in the previous six months, compared to 37% in the Health in Men (HIM) and Positive Health cohort studies. They were also more likely to meet partners at sex-on-premises venues—73% compared to 37% in the HIM study. These participants were more likely to report using drugs in the previous six months, particularly poppers/amyl, marijuana, Viagra and ecstasy, and they were twice as likely as men in the Sydney Gay Community Periodic Survey to use crystal meth/ice (37% vs. 16%).

SRB 2/008

In the context of the increasing number of men now meeting sex partners via the internet, this paper evaluates an innovative approach to contact tracing following a 1999 syphilis outbreak among San Francisco gay men who had met their partners via the internet. The San Francisco Department of Public Health (SDFPF) approached the challenge of notifying anonymous partners in a strictly private internet chat room as an opportunity to conduct a wider community awareness campaign about syphilis symptoms and modes of transmission. A local marketing company spent two weeks electronically contacting as many chat room users as possible to inform them of the syphilis cluster and encourage medical evaluation for those who may have met partners in the chat room. Emails were also sent directly to those users ‘named’ as previous partners to notify them of their possible exposure to syphilis and these men were considered officially notified if they replied to these emails or presented for testing at the SDFPF City Clinic. Of the 35 respondents in an online survey of chat room users, 71% felt that the campaign was useful and appropriate. The authors suggest that this intervention contributed to the 18% increase in the number of gay men attending the Clinic the following month and also protected the chat room users’ privacy.

SRB 2/009

As a preliminary investigation of the feasibility of conducting regular HIV prevention programs at sex-on-premises venues (SOPVs), Lister et al. recruited male outreach nurses to approach men attending six SOPVs in Melbourne, requesting their participation in an anonymous screening program. Testing was conducted using self-collected rectal swabs and urine specimens and nurse-collected throat swabs. Participants were also asked to complete a short questionnaire and were given information on how to collect their results anonymously via a toll-free phone number. A total of 485 men were recruited to this study between October 2001 and July 2002, and at the time of this presentation 337 or 69.5% had attempted to obtain their test results, 91% doing so via the phone number provided. Around 10.3% of participants tested positive for an STI, 2.9% for gonorrhoea, 6.2% for chlamydia, and 1.2% for both. And of the 50 cases that tested positive for one of more of these STIs, only 20% had experienced site-specific symptoms in the week before testing. Thus, the authors conclude that the high rate of asymptomatic STIs demonstrates the need for ongoing screening programs at venues such as SOPVs.

SRB 2/010

Sexually active but asymptomatic MSM presenting at a Melbourne gay health service were offered tests for gonorrhoea and chlamydia in order to determine the rate of asymptomatic and curable STIs among gay men. Of the 117 men recruited by the date of this presentation, 12% tested positive for one or both of these infections. These 14 cases included infection in the following sites: four with anal chlamydia, four with oral gonorrhoea, three with urethral chlamydia, one with oral chlamydia, one with anal gonorrhoea and one with both anal gonorrhoea and chlamydia. Since STIs are understood to facilitate HIV transmission, the authors conclude that this very high rate of asymptomatic STI infection indicates a need for more regular testing of MSM.

SRB 2/011

A syphilis outbreak among MSM in the city of Brighton and Hove in the United Kingdom necessitated a series of interventions to determine the possible use of these ongoing transmissions. Between 1999 and 2001, 28 new cases of early syphilis were diagnosed in homosexual or bisexual men. Eight of these men had been previously diagnosed as HIV-positive, and nine had a concurrent STI. Of the men’s sexual contacts (median = three) in the previous six months, 86% were described as ‘casual’ and 83% as untraceable, either because they were anonymous or had moved abroad. Most of these men did not report high-risk activity and 11 claimed oral sex as the only possibility of transmission, while only five reported unprotected anal intercourse in the previous six months. Interventions to address this ongoing outbreak included: informing local general practitioners; a telephone help line; additional staff at gay men’s health clinics; outreach with local community organisations; a health promotion campaign in local media and at local events; informational website; radio broadcasts; and prevention work with local gay venues.

SRB 2/012


To address the lack of research on gay men’s attitudes to hepatitis vaccination, US researchers Rhodes and Hergenrather conducted three studies in Birmingham, Alabama, using quite different theoretical and methodological approaches. The first study was published in 2001 and examined attitudes to hepatitis B vaccination using focus groups and questionnaires, reporting that the 62 participants demonstrated very little understanding of HBV symptoms, modes of transmission or the potential for vaccination, and did not believe they were likely to be at risk of infection. In addition, these men reported low levels of regular health care and did not consider federal vaccination campaigns to be trustworthy or of importance to them. The second and third studies were published in 2003 and employed a much wider survey of attitudes to hepatitis A and B vaccination, concerned with testing a theoretically-integrated framework of three key models of behaviour change: the transtheoretical stage of change model (TMC); health belief model (HBM); and social cognitive theory (SCT). Of the 358 questionnaires collected from MSM at two local gay bars, the second study reported that 27.8% had completed the two-dose HAV vaccination series, and 6.3% were preparing to be vaccinated. Participants were more likely to be vaccinated if they were less concerned about practical barriers, had better levels of communication with their medical providers, were more convinced about the benefits of vaccination, and considered themselves to be at high risk of contracting hepatitis A. The third study reported similar results, adding that MSM were more likely to feel ready to complete the three-dose HBV vaccination series if they felt a higher degree of medical and personal self-efficacy, and again, perceived greater benefits and lower practical barriers to the vaccination process.

The ‘Healthy Penis’ campaign is part of a wider community plan to combat increasing rates of syphilis among gay and bisexual men in San Francisco, where a 1000% increase in early syphilis cases were reported between 1999 and 2002. This social marketing campaign includes print advertisements, bus shelter posters, outreach cards and stress grip reproductions of the animated characters, ‘Healthy Penis’ and ‘Phil the Sore’, who also tour in life-size costumes around the streets of San Francisco and to events such as the White Party. The campaign was evaluated by surveying gay and bisexual men over a six-month period (2002–2003) at bars, sex clubs, a central STI clinic and on the street. The authors found a marked increase during this period in the number of men at the municipal STI clinic who had seen the ‘Healthy Penis’ campaign and in the proportion that found it highly influential. And of the men surveyed in bars, clubs and on the street, those who had seen the campaign were more likely to have correct knowledge about syphilis, to have been recently tested and to have heard about recent increases in syphilis in San Francisco.


Wheater et al. employed a detrended correspondence analysis of gay men both with and without HIV and/or syphilis. The sample comprised 23 gay men recruited when presenting with syphilis at GUM clinics in the greater Manchester region and a control group of 62 men recruited from gay venues and community organisations. This paper reports that the majority of the men with syphilis (78%; 18/23) reported a higher number of partners in the previous 12 months. They were also more likely to use drugs during sex and to attend ‘anonymous’ sex venues. However, these behavioural characteristics were also true of 16% of those in the control group that had neither HIV nor syphilis and 62% of the HIV-positive men without syphilis.