CSIRO PUBLISHING
www.publish.csiro.au/journals/sh *Sexual Health*, 2004, **1**, 69–71

Editorial

Rising HIV infections in Victoria, the need for a new approach to preventative interventions

Rebecca Guy[A,B] *and Margaret Hellard*[A]

[A]The Macfarlane Burnet Institute for Medical Research and Public Health, Melbourne, Vic. 3004, Australia.
[B]Author for correspondence; email: Rebecca.Guy@burnet.edu.au

Human immunodeficiency virus (HIV) is a devastating disease. In addition to the personal tragedy it brings, every case of HIV costs Australia hundreds of thousands of dollars.[1] In Victoria, annual notifications of new HIV diagnoses have increased by 67% from 1999 to 2002 (140 to 234) and the majority (66%) were from males reporting homosexual or bisexual contact.[2,3] In addition, *The Melbourne Gay Community Periodic Survey* showed that between 1998 and 2002 there was a significant upturn in the percentage of gay and homosexually active men having unprotected anal intercourse (UAI) with casual partners ($P < 0.001$).[4] These findings highlight the need for an urgent preventative intervention targeted at gay and homosexually active men. In order to aid in the provision of knowledge regarding HIV interventions we report here the current strategies in place in Victoria for minimising HIV transmission and briefly review the evidence-based literature on this topic.

Current education strategies

In Victoria, education and health promotion relating to the prevention of new HIV infections is conducted by a number of agencies; the Victorian AIDS Council (VAC) being one of the largest. The VAC utilises a number of preventative intervention methods to reduce the risk of HIV transmission in gay and homosexually active men, these include: (a) small-group peer education; (b) regular training of peer facilitators; (c) a limited number of education campaigns; (d) outreach programmes at a number of sex on premises venues (SOPVs), beats, bars, clubs and parties; (e) online outreach programmes through chat rooms; (f) providing resources and education on HIV and sexual health issues to a number of culturally and linguistically diverse groups; (g) small-scale media contributions, particularly to gay media (press and radio) on issues related to sexual health, sexual transmitted infections (STIs) and HIV; and (h) VAC conduct a weekly radio programme called '*Positive Life'* that covers issues related to HIV/AIDS.

The Melbourne Sexual Health Centre also conducts an outreach programme at a few SOPVs which consist mainly of testing for STIs and the provision of health promotion information to those who request it. Additionally individual pre- and post-test counselling occurs through general practitioner and sexual health clinics.

Current research

A number of projects have been recently conducted to gain a better understanding of sexual behaviour in gay and homosexually active men. These include: (a) a case-control study of transmission risks (quantitative and qualitative); (b) a pilot record linkage study to identify the extent of the inter-relationship between homosexually active men with gonorrhoea and homosexually active men with HIV;[5] and (c) The *'Vines'* study, which is a quantitative study of the social, sexual and information networks of homosexually active men in Melbourne designed to provide a map of these networks. Additionally, the *Melbourne Gay Community Periodic Survey* is conducted annually to obtain quantitative information about risk behaviour. These studies should provide useful information to inform intervention programs.

Review of evidence based literature on what works

Media campaigns

Large media campaigns have been used in the past to promote safe sex messages in Australia. In the mid 1980s, the Australian HIV epidemic reached its peak and notifications were predominantly from men reporting homosexual or bisexual contact.[6] A series of media campaigns were implemented in the late 1980s including the *'Grim Reaper'*, the *'Russian Roulette'* and the *'Beds and Feet'* advertisements. However, the first and probably the most well-known campaign was the *'Grim Reaper'* advertisement, which was televised across Australia over a 2 week period in April 1987. The advertisement portrayed the fatal, frightening nature of AIDS and conceptualised the threat of HIV infection spreading to the heterosexual community.[7] The campaign's main objective was to increase

10.1071/SH03003 1448-5028/04/020069

awareness and concern about the threat posed by HIV/AIDS among a wide range of people.[7]

It appears the campaign was successful at meeting its primary objective. A representative survey of people living in Melbourne and Sydney post-campaign showed that 95% agreed the campaign had increased public awareness of HIV/AIDS.[7] Also a Morgan Gallup Poll conducted in September 1987 reported more than half thought AIDS was the most urgent health problem in Australia.[7] The campaign was also reported to have raised people's knowledge of HIV/AIDS,[8] however we believe the evidence to support is inconclusive. First, surveys of the general community in the months following the campaign showed that 81% of respondents believed the campaign increased people's knowledge about AIDS,[7] however these data are based on opinion rather than a measure of true knowledge.[7] Second, a random survey of attitudes and knowledge about AIDS in Sydney after the campaign (June to September 1988 and September to October 1989) showed a good level of knowledge about HIV/AIDS.[8] However, there was no similar survey performed pre-campaign to assess whether knowledge had actually increased. In addition, it is difficult to attribute any increase in knowledge to one particular advertisement as the *'Russian Roulette'* campaign was televised at the end of 1987 and the *'Beds and Feet'* advertisement was aired in the summer of 1988. Interestingly, during the *'Grim Reaper'* campaign the Albion St (AIDS) Centre reported that although calls to the AIDS hotline increased there was no increase in the proportion requesting information about symptoms and/or transmission.[9]

It is difficult to say if the campaign was successful at reducing HIV infections and changing behaviour among gay and homosexually active men as no formal evaluation of the impact on this high risk group was performed. A prospective behavioural study among gay and homosexually active men in Victoria showed that from 1986 to 1988 there was a decrease in UAI with partners outside of primary relationships (active UAI: 11.6 to 5.6%, receptive UAI: 12.4 to 5.2%).[10] Additionally, in Australia, HIV notifications from men reporting homosexual or bisexual contact declined from 2213 in 1987 to 1116 in 1990.[6] However these findings could also be attributed to widespread gay community mobilisation in relation to prevention and HIV/AIDS awareness as well as the ongoing community education campaigns of which the Grim Reaper advertisement was a single component.

The campaign was shown to have caused a large increase in low risk persons (especially women) making enquiries to the AIDS hotline and seeking HIV testing.[8,9,11–13] It is also argued that the campaign caused unnecessary anxiety in low risk populations.[8,9] However, we believe the evidence which supports this statement is inconclusive. It is based on a 4% increase (26 to 30%) in 'general anxiety' among persons who telephoned the AIDS hotline pre- and post-campaign, an increase which is not statistically significant.[9] Staff at the Albion St (AIDS) Centre also reported in their subjective experience that during the campaign some HIV infected patients felt their social ostracism had increased due to an increased fear of HIV/AIDS in the general community.[9] In light of these findings, it has been argued that future media campaigns should be targeted at high-risk groups rather than the general community.[8]

Behavioural interventions

A Cochrane review of interventions designed to modify sexual risk behaviour for preventing HIV infection in men who have sex with men showed that a summary measure of interventions effects was favourable, with a 23% reduction (95% CI 9–38%) in the proportion of men engaging in unprotected sex.[14] The review was comprised of 12 interventions (two individual level, seven small group, and three community-level interventions). Efficacy was more favourable among community-level interventions, those that served populations aged in their twenties, and those that promoted interpersonal skills.[14]

Community-level HIV prevention interventions are believed to be more successful due to the involvement of credible members of the target population in the delivery of the risk-reduction messages.[15] Individual and small group interventions did not prove as successful, possibly due to two factors — they are selective as to who they reach and are unlikely to reach the vast majority of people who are at risk for acquiring HIV, and because they do not address changes in peer group social norms they are unlikely to result in sustained changes in individual risk-taking behaviour.[15] If aimed at all individuals at risk they would be prohibitively expensive and time-consuming.

The interventions designed by Kelly and Kegeles are key examples of successful community-level strategies.[16,17] Kelly's 1997 study was based solely at gay bars, where popular men were engaged to advocate the benefits of behavioural change, and HIV education materials were made available.[16] Population-level risk behaviour decreased significantly in this study, with a reduction in the mean frequency of UAI during the previous 2 months (baseline 1.68 occasions; follow-up 0.59: $P = 0.04$).[16] The approach taken by Kegeles involved three main components; peer outreach, peer-led small groups and a small publicity campaign.[17] The intervention programme was named the *'Mpowerment Project'* and was largely designed by a core of 12 to 15 gay men. Following the intervention the proportion of men who engaged in UAI decreased significantly from 38.3 to 30.9% ($P < 0.05$).[17]

How might we improve what we do in Victoria?

To combat effectively the continual increases in HIV among gay and homosexually active men in Victoria we believe the following options should be considered;

(a) Use of an evidence-based approach;
(b) Consider employing a peer-led community-level intervention;
(c) When designing the intervention we need to ensure there is significant input from credible members of the target population and the subgroups within these populations, such as gay and homosexually active men in their twenties, thirties and forties and from varied ethnic backgrounds. Utilise these members to diffuse the risk-reduction messages through interpersonal skills, for example though social networks, events, and targeted venues;
(d) Improve collaboration between government, community-based workers and researchers to inform the design of the intervention strategy; and
(e) Evaluate the programmes to ascertain their impact on behaviour and disease outcome — HIV and other STIs.

The mainstays of current intervention strategies in Victoria are individual/small group counselling, outreach programmes, and small-scale media strategies. These are important programmes but the continued rise in HIV notifications in the past 3 years suggests there may be changing issues related to transmission and further interventions are necessary. We believe an innovative evidence-based intervention programme is required, such as a peer-led community strategy. Due to the inconclusive evidence surrounding the impact of large scale media campaigns such as the *'Grim Reaper'* on gay and homosexually active men and the general community we have not recommended such a method. However, if in the future a more targeted media campaign were to be implemented among gay and homosexually active men, we believe evaluation of the impact of such a campaign would be extremely important to add to the body of evidence surrounding interventions. An intervention would not be cheap and would probably require financial support but is important if Victoria is to control the continued spread of HIV.

References

1 Hurley SF, Kaldor JM, Carlin JB, Gardiner S, Evans DB, Chondros P, *et al*. The usage and costs of health services for HIV infection in Australia. *AIDS* 1995; 9: 777–85.

2 Disease Control and Research Branch. Rural and Regional Health and Aged Care Services. Surveillance report — sexually transmissible infections. *Vic Infect Dis Bull March* 2003; 6: 15–6.

3 Disease Control and Research Branch . Rural and Regional Health and Aged Care Services. Sexually Transmissible Infections. In: 'O'Grady K-A, Counahan M, Birbilis E, Tallis G, editors. Surveillance of notifiable infectious diseases in Victoria 2001. Melbourne: Victorian Department of Human Services; 2002. pp. 34–37.

4 Hull P, Van De Ven P, Prestage G, Rawstorne P, Kippax S, Horn G, *et al*. Gay community periodic survey, Melbourne 2002. Melbourne: National Centre in HIV Social Research; 2002.

5 Keenan C, Hellard M, Crofts N. Rising HIV notifications in Victoria, 2001. *Vic Infect Dis Bull June* 2002; 5: 17–20.

6 National Centre in HIV Epidemiology and Clinical Research. Australia HIV Surveillance Report. 1995; 11.

7 Tulloch J, Lupton L. Television, AIDS and risk. St Leonards, NSW: Allen and Unwin; 1997. pp. 39–42: 133–48.

8 Bray F, Chapman S. Community knowledge, attitudes and media recall about AIDS, Sydney 1988 and 1989. *Aust J Public Health* 1991; 15: 107–13.

9 Morlet A, Guinan J, Diefenthaler I, Gold J. The impact of the 'grim reaper' national AIDS educational campaign on the Albion Street (AIDS) Centre and the AIDS Hotline. *Med J Aust* 1988; 148: 282–6.

10 Department of Psychology. A prospective study of factors influencing HIV infection in homosexual and bisexual men. Melbourne: The University of Melbourne; 1992.

11 Holman CD, Bucens MR, Sesnan TM. AIDS and the Grim Reaper campaign. *Med J Aust* 1987; 147: 306.

12 Harcourt C, Edwards J, Philpot R. On the 'Grim Reaper' campaign. *Med J Aust* 1988; 149: 162, 164.

13 Dwyer DE, Howard R, Downie J, Cunningham AL. The 'Grim Reaper' campaign. *Med J Aust* 1988; 149: 49–50.

14 Johnson WD, Hedges LV, Diaz RM. Interventions to modify sexual risk behaviors for preventing HIV infection in men who have sex with men. *Cochrane Database Syst Rev* 2003: CD001230.

15 Kelly JA. Community-level interventions are needed to prevent new HIV infections. *Am J Public Health* 1999; 89: 299–301.

16 Kelly JA, Murphy DA, Sikkema KJ, McAuliffe TL, Roffman RA, Solomon LJ, *et al*. Randomised, controlled, community-level HIV-prevention intervention for sexual-risk behaviour among homosexual men in US cities. Community HIV Prevention Research Collaborative. *Lancet* 1997; 350: 1500–5. doi: 10.1016/S0140-6736(97)07439-4

17 Kegeles SM, Hays RB, Pollack LM, Coates TJ. Mobilizing young gay and bisexual men for HIV prevention: a two-community study. *AIDS* 1999; 13: 1753–62. doi: 10.1097/00002030-199909100-00020

Received 17 September 2003, accepted 22 March 2004