



TALKS

(peer-reviewed
oral presentations)

Researchers regularly submit “abstracts” or summaries of their findings to academic conferences. These abstracts are reviewed and anonymously critiqued by a team of researchers who rate them on the quality of the research and the value of the findings. Abstracts might be accepted for oral presentation at a conference, or they might be accepted as a poster presentation, or they might be rejected.

If an abstract is accepted for oral publication, the researchers prepare their findings for a slide-show presentation, which usually lasts for 10 or 15 minutes, with five minutes for questions and answers from the audience.

The following abstracts were all presented orally at conferences over the past five years. They have been condensed and summarised in plain language. The full text of each presentation is available on our web site or a copy can be mailed to you by request.

The Epidemic of HIV among Young Gay Men

Vanguard findings cited by Dutch researcher at the 1996 International AIDS Conference

“The figures are high – very high – especially if you consider that these young gay men have become sexually active in an era when massive effort was exerted to increase awareness of HIV risk behaviours and to promote safer sex.”

by John de Wit
University of Utrecht
The Netherlands



This is a partial transcript of an oral presentation presented in the First Plenary Session of the XI International Conference on AIDS in July 1996 in Vancouver. It is reprinted here with the permission of the author.

Dr. John de Wit is a social psychologist and an associate professor at the department of Social Psychology at the University of Utrecht in The Netherlands. The main focus of his thesis was the epidemiology of HIV infection among gay men, in particular behaviour change processes and determinants of sexual behaviour. He also works as a program director of HIV social research at the Amsterdam Municipal Health Service.

“The AIDS Crisis is Not Over”

When I started to work in the field of HIV/AIDS among homosexual men by the end of the 1980s, I recall that as a period of moderate hope and optimism: hope that there would soon be a medical remedy against the virus and its devastating consequences; optimism with respect to the restraining of the spread of the epidemic, because of massive behaviour change.

In the early 1990s, however, a number of papers were published indicating that a decade into the epidemic, a number of homosexual men, understandably, had difficulties in maintaining their safer sexual behaviours. Following the initial reports of men in San Francisco, similar reports were published by other groups in the US as well as elsewhere and these papers illustrated what also became the theme of a presentation in relation to World AIDS Day in 1990: “The AIDS Crisis is Not Over,” and as I will show in my presentation today, this outcry is still valid.

I would like to start my presentation, as I said, by outlining the seriousness of the HIV epidemic among young gay men. I will present several sources of information, all adding up to the same conclusion: young gay men are at increased risk for HIV infection. And specifically I will discuss two types of evidence: I will present findings regarding the epidemiology of HIV in young gay men; and I will show data with respect to the prevalence of sexual risk behaviour.

Good morning, ladies and gentlemen. It is an honour to be here and have the opportunity to address what I regard as a major problem in HIV prevention: that is the epidemic of HIV in young gay men.

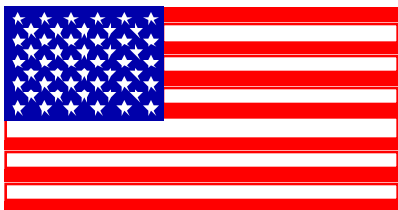
What I want to do in my presentation is present to you evidence from a number of studies demonstrating that young gay men are at high risk for HIV infection. This will constitute the first part of my presentation, outlining the epidemic of HIV among young gay men. I will also discuss whether young gay men today are at higher risk than are older gay men and whether young gay men now are at higher risk than young gay men early in the epidemic.

In the second part of my presentation, I will focus on ways of addressing the prevention of HIV infection among young gay men and in doing so I will briefly discuss determinants of sexual risk behaviour.

San Francisco Young Men's Health Study

Already in 1990 it was noted that younger age was a predictor for high-risk sex and that young men in particular were likely to have difficulties in maintaining safer sexual behaviours. The extent of the health threat caused by the epidemic of HIV among young gay men, however, was not fully acknowledged until the publication of a paper reporting on the San Francisco Young Men's Health Study. In 1992/1993 this study recruited over **400** young men between 18 and 29 years of age and in this probability sample an HIV prevalence of nearly **18%** was found and it was also observed that **27%** of the men participating in this study had engaged in unprotected anal sex in the year prior to participation.

Within the study sample, HIV prevalence was found to vary by age and ethnicity. HIV prevalence was **5%** in 18–23 year olds. It increased to **11%** in 24–26 year olds and it was **29%** in 27–29 year olds. Prevalence was highest for African-Americans (**35%**) followed by Asians (**27%**) and Hispanics (**25%**). Among whites the HIV prevalence was lowest at **16%**. And the estimated annual incidence of HIV among young gay men in this cohort was **2.6%**, which is two to three times as high as among homosexual men older than 30 years.



Young Men's Survey: Urban Counties

In a more recent study, HIV prevalence was assessed in more than **2100** young homosexual men between 15 and 22 years of age. Participants in this study were recruited from six urban counties throughout the US and median prevalence of HIV across sites was found to be **7%**, that is **147** men were HIV-infected. Again, prevalence of HIV varied by age and ethnicity. Of 15-19 year olds, **5%** were infected, compared to **9%** of 20-22 year olds. Prevalence was **4%** among whites, **7%** among Hispanics and **11%** among African-Americans. These results are fairly similar to those obtained from the younger age group in San Francisco.



Boston young gay men's study

In a study of about **500** young gay men in Boston, a lower prevalence of **2.4%** was found. The average age of men in this cohort was 23 years and the majority of this convenience sample consisted of white college students, who are likely to be at lower risk. Nevertheless, **26%** of the men participating in this study engaged in unprotected anal intercourse. At follow-up six months later, this percentage was **30%**.

The Vanguard Project

Studies assessing the risk for HIV infection were also conducted outside the United States. In May 1995, a new cohort targeting young gay and bisexual men was launched right here in Vancouver. The Vanguard Project has an estimated HIV prevalence, based on **265** tests, of **1.3%**. But it should be noted that only young men who had not previously tested HIV-positive were recruited into this study and given this inclusion criterion, this percentage of **1.3%** can be considered rather high. Also, substantial levels of risk-taking behaviour were found, especially within primary relations. Overall, **24%** of the men who had casual partners had

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The Epidemic of HIV among Young Gay Men

(continued)

unprotected anal sex. Of the men in primary relations, **47%** reported unprotected anal sex.

And from our own studies at the Centre for AIDS Research and Prevention at the University of Utrecht, we noted in young gay men, these primary relations typically are of relatively short duration. We found a median duration of eight months. This behaviour then, can hold considerable risk for HIV infection, especially since many young men are not aware of their serostatus.

Amsterdam Young Men's Study

Another study outside the US, also a cohort study, was initiated also in 1995 in Amsterdam, The Netherlands. To date approximately **400** men have been recruited into this young gay men's cohort. The prevalence of HIV in this sample was **6%** and the level of risk-taking behaviour again was high. Almost **40%** of the participants in the young gay men's cohort engaged in unprotected anal sex in the six months before recruitment into this study.

I think that from the epidemiological and behavioural data I presented, it can be concluded that young gay men indeed are at high risk for HIV infection. This is especially true for young gay men with ethnic minority backgrounds. Further, studies from Boston, Vancouver and

60 Amsterdam, show that young gay

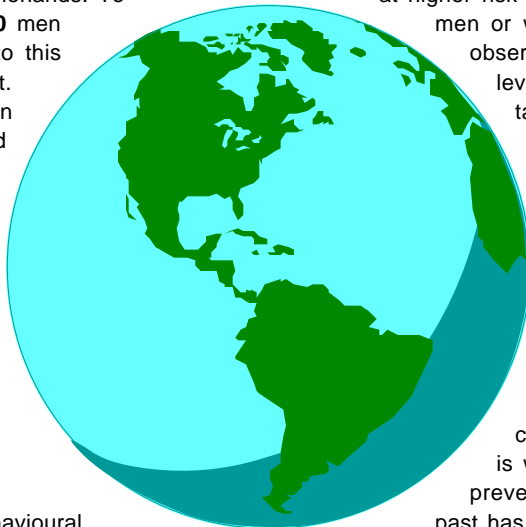
men outside areas with high AIDS-prevalence estimates are also at high risk for HIV infection.

Comparing young gay men to older gay men

Thus far, I presented behavioural and epidemiological evidence documenting that young gay men are at high risk for HIV infection. Substantial numbers of gay men who came of age after the advent of the HIV epidemic are infected and numerous young gay men presumably will become infected in the near future.

An important issue in targeting public health efforts to counter the HIV epidemic is whether young gay men are at higher risk than older gay men or whether the observed high levels of risk-taking are more generally related to difficulties in maintaining safer sex, irrespective of age.

Another question that comes to mind is whether HIV prevention in the past has been effective and to answer this question, the risk for HIV infection of young men today can be compared with the level of risk for young gay men earlier in the epidemic, some 10 to 15 years ago.



But to start with the first issue: A behavioural study directly comparing the sexual risk behaviour of younger and older gay men was reported for the San Francisco Bay Area. Using data from the 1989 Communication Technologies Survey, the comparison was made between men under the age of 30 years and men aged 30 years or over. Sexual risk differed significantly by age, with the youngest age group having been at highest behavioural risk for HIV infection. In the year prior to the study, **44%** of the men under 30 engaged in unprotected anal sex; this compares with only **18%** of the men aged 30 years or over.

Comparing young gay men today with young gay men in the '80s

Data enabling the assessment of the effectiveness of HIV prevention in past years were reported from several sites. For San Francisco, men aged 24-29 years, participating in the 1992/93 Young Men's Health Study, were compared with men of equal age at entry into the San Francisco Men's Health Study, in 1984. Among men who engaged in receptive anal sex, the percentage who did not consistently use condoms was found to have decreased from **88%** in 1984 to **43%** in 1992. Similarly, a comparison of men younger than 30 years participating in the Amsterdam Young Men's Study in 1992 with men under 30 years at entry into the Amsterdam Cohort Study in 1984, showed a marked decrease in unprotected anal sex (from **98%** to **26%**).

“However, there is also some good news...comparison of young gay men today with young gay men earlier in the epidemic shows that the level of risk for the younger age group has indeed decreased over the years.”

Summary of results:

From the Communication Technologies Survey in the San Francisco Bay Area, we can conclude that young men are not only at high risk but indeed are at higher risk for HIV infection than are older gay men. This conclusion is supported by data regarding the annual HIV incidence of infections in San Francisco. As you may recall, the number of new infections in young gay men in San Francisco was found to be two to three times as high as among older gay men.

However, there is also some good news. As I've shown, comparison of young gay men today with young gay men earlier in the epidemic shows that the level of risk for the younger age group has indeed decreased over the years.

I have briefly reviewed some behavioural as well as epidemiological findings documenting the risk for HIV infection among young gay men. All the findings I presented persuasively point in the same direction: the younger generation of homosexual men is at high risk for HIV infection.

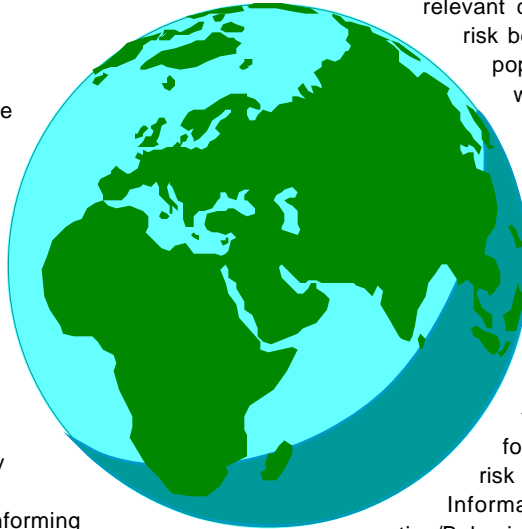
Effective interventions

I think the data regarding the prevalence of HIV infection and sexual risk behaviour among gay men are worrisome. The figures are high – very high – especially if you consider that these young gay men have become sexually active in an era when massive effort was exerted to increase awareness of HIV risk behaviours and to

promote safer sex. Why then do young gay men engage in unprotected anal sex and why don't they use condoms consistently? In other words, what are determinants of sexual risk-taking and how can this risk-taking behaviour be modified?

Let me try and provide some answers to these very important issues in the second part of my presentation. Contrary to widespread belief, individuals do not act directly on any information they hold or receive. Nevertheless, informing individuals about the potential negative outcomes of risk behaviour and indicating preventive strategies, is a necessary prerequisite for inducing behaviour change. It is not sufficient, however.

With respect to sexual risk behaviour among homosexual men, then, studies indeed show that levels of information among homosexual men generally are high. Differences in risk-taking behaviour are found to be related to other factors such as differences in men's attitudes, social norms and – most importantly – differences in perceived behavioural control reflecting differences in relevant skills.



Information/Motivation/Behavioural Skills Model

In order for health education activities in the field of HIV/AIDS to be effective, interventions need to address relevant determinants of sexual risk behaviour in a given population, knowledge of which preferably should be based on research using accepted theories regarding behaviour and behavioural determinants. With respect to HIV risk behaviour, an example of a theoretical model that has been put forward to explain sexual risk behaviour, is the Information/Motivation/Behavioural Skills Model, by Fisher and Fisher.

In short, this model holds that safer sex is conditional on having adequate information, being motivated to enact protective sexual behaviours (that is, having positive attitudes and social norms) and it is also conditional on having sufficient skills to engage in the desired behaviour (for instance, condom use) or not to enact risky behaviour (for instance, unprotected anal intercourse). All three components – information, motivation and behavioural skills – should be included in effective HIV prevention interventions. ■

YOUNG GAY AND BISEXUAL MEN AT RISK

Risk behaviours and HIV prevalence among a cohort of young men who have sex with men in Vancouver

"This presentation at the Vancouver International AIDS Conference was one of the first reports of our findings and it was one of the largest audiences I've ever addressed."

Presenting author:
Steve Martindale



Co-authors:

Steffanie Strathdee, Bob Hogg, Kevin Craib,
William "Mack" Pitchford, Julio Montaner,
Michael V. O'Shaughnessy
and Martin Schechter.

Presented at the XI International Conference
on AIDS in Vancouver in July 1996.

What we looked at:

We analysed the baseline questionnaires and HIV test results of **377** Vanguard participants recruited in the first year of the study. We looked at sexual behaviour, non-consensual sex, paid sex, substance use and HIV prevalence.

We then looked for associations between non-consensual sex and sex trade activity.

What we found:

Risk Behaviour: Nearly half (**46%**) of the 287 men with **regular** partners and just over a quarter (**26%**) of the 318 men with **casual** partners have had some form of unprotected anal sex in the past year.

If we look at these numbers as percentages of the total number of participants, the figures are even more concerning. Over a third (**36%**) have had unprotected **insertive** anal sex in the past year with either a regular or casual partner; and **40%** have had unprotected **receptive** anal sex in the past year.

In total, over half of the participants (**52%**) have had some form of unprotected anal sex in the past year.

Non-Consensual Sex: Fully one third of participants report having experienced some form of non-

consensual sex in their lives. Of these, **42%** were under age 12 at the time; **one third** were between 12 and 17; and **half** were over 18. (Note that these categories are not mutually exclusive.)

Paid Sex: Just over **20%** of participants reported selling sex to another male at some point in their lives, **57%** of whom have done so in the previous year (or **12%** of the total).

A significant association was observed between sexual abuse and subsequent sex trade activity. Those who report ever having been paid for sex were significantly more likely to have experienced non-consensual sex and vice-versa.

HIV Prevalence: Only four out of 377 participants or just over **1%**, tested HIV-positive at baseline, with an additional **1%** receiving indeterminate test results.

What we concluded:

Many young gay and bisexual men in Vancouver are engaging in unprotected anal intercourse, especially with their regular male partners.

The relationship between sexual abuse, psychological distress, substance use and sexual behaviours requires further study. HIV prevention programs aimed at young gay and bisexual men should be expanded to consider these relationships in an effort to reduce vulnerability in this high-risk population.

RISK-TAKERS ARE MORE LIKELY TO HAVE BEEN SEXUALLY ABUSED

Sexual abuse is an independent predictor of sexual risk-taking among young HIV-negative gay men: Results from a prospective study at baseline

"These findings are consistent with the results of the Point Project, which found that injection drug users who had been sexually abused were three times more likely to share needles."

Presenting author:
Steffanie Strathdee



Co-authors:

Bob Hogg, Steve Martindale, Peter Cornelisse, Kevin Craib, Arn Schilder, Julio Montaner, Michael V. O'Shaughnessy and Martin Schechter.

Presented at the XI International Conference on AIDS in Vancouver in July 1996.

What we did:

We looked at **287** baseline questionnaires to identify determinants of sexual risk-taking among HIV-negative Vanguard participants. First we divided the cohort into 90 "risk-takers" and **197** "non-risk-takers."

We defined risk-takers as participants who had at least one episode of unprotected anal sex with a **casual** male partner in the previous year. Those who reported having sex with regular partners they knew at the time to be HIV-positive were also classified as risk-takers.

Non-risk-takers were defined as participants who either had only **regular** male sex partners over the last year, those who reported **always** using condoms during anal sex with **casual** male sex partners and those who didn't have anal sex in the previous year.

What we found:

We found risk-takers to be significantly **more** likely than non-risk-takers:

- to have dropped out of high school;
- to have a high depression score;
- to have consumed cocaine, cigarettes, poppers and greater quantities of alcohol in the previous year;
- to have been paid for sex in the

previous year; and

- to have experienced non-consensual sex at any age, particularly over the age of 12.

Non-consensual sex proved to be an "independent predictor" of sexual risk-taking: even after controlling for other factors, risk-takers were still **twice** as likely as non-risk-takers to have experienced non-consensual sex over the age of 12.

What we concluded:

Young gay and bisexual men who were forced or coerced into having sex as a youth or adult were more than **twice** as likely to have been at high risk for HIV in the previous year.

We can't conclude that sexual abuse leads directly to risk behaviour, however, since sexual abuse could be a "marker of vulnerability" rather than a predisposing factor.

Nonetheless, these findings indicate that young gay and bisexual men who have experienced sexual abuse are at high risk of HIV infection. Sexual abuse counselling should therefore be integrated into HIV prevention efforts. ■

VIOLENCE: A COMMON EXPERIENCE

Evidence of psychologic distress in a cohort of young gay/bisexual men

"Our findings strongly suggest that we need to foster supportive environments for gay and bisexual youth. In doing so we may indirectly improve the sexual health of the community."

Presenting author:
Steve Martindale



Co-authors:

Steffanie Strathdee, Bob Hogg,
Peter Cornelisse, Mary Lou Miller,
Bonnie Devlin, Julio Montaner, Michael V.
O'Shaughnessy and Martin Schechter.

Most recently presented at the 10th Annual BC AIDS Conference in Vancouver in October 1997. Originally presented at the 6th Annual Canadian Conference on HIV/AIDS Research in Ottawa in May 1997.

What we wanted to know:

From analysing baseline questionnaires, we had previously identified several social determinants – such as sexual abuse and low social support – as being associated with sexual risk-taking.

So when we created the follow-up questionnaire, we included more detailed questions on domestic violence, non-consensual sex, queer bashing, depression and other mood disorders, suicidal thoughts and suicide attempts.

What we did:

We analysed the first **318** Vanguard participants who completed the follow-up questionnaire, looking at various forms of violence and psychological distress. We also looked at whether any of these variables were associated with sexual risk-taking.

What we found:

We found that at some point in their lives:

- **17%** of participants had experienced domestic violence;
- **27%** had experienced non-consensual sex;
- **14%** had been queer-bashed;
- over half (**55%**) had seriously considered suicide, of whom one-third (or **18%** of the total sample) had made a suicide attempt; and
- over one-fifth (**22%**) had been diagnosed with a mood disorder or mental illness, most commonly depression.

Predictors of risk-taking:

Using the same definitions as in previous analyses, we divided the cohort into two groups: **27%** of them were risk-takers and **63%** non-risk-takers. Risk-takers were significantly **more** likely:

- to be non-white;
- to have low self-esteem;
- to have experienced domestic violence;
- to have been queer bashed; and
- to have attempted suicide.

Interrelated experiences:

Since some of these variables represent various forms of violence, we wondered if some of them might be interrelated.

We found that men who were sexually abused under the age of 18 were more likely to later experience domestic violence or queer-bashing. We also found a relationship between having experienced domestic violence or queer bashing and subsequent sexual risk-taking.

What we concluded:

Various forms of violence appear to be common experiences for young gay and bisexual men and some of these experiences are significantly associated with sexual risk-taking.

We also found a high prevalence of mood disorders, particularly depression, which could lead to heightened vulnerability to HIV infection.

HIV prevention efforts should take into account the fact that negative life experiences may affect attitudes and behaviours surrounding safer sex. ■

BISEXUAL MEN MORE AT RISK

Determinants of bisexuality among young men who have sex with men

“Bisexuality is fluid and exceedingly complex. Bisexual men can be described in terms of their attractions and behaviours but don't necessarily self-identify as bisexual. Not self-identifying is frowned upon within the gay community, while same-sex behaviour among heterosexuals is seen as marking an individual. This puts bisexual men in an unenviable position.”

Presenting author:
Arn Schilder



Co-authors:

Keith Chan, Steve Martindale, Mary Lou Miller,
Amy Weber, Michael Botnick, Kevin Craib,
Martin Schechter and Bob Hogg.

Presented at the 9th Annual Canadian
Conference on HIV/AIDS Research
in Montreal in April 2000.

What we wanted to know:

As a sizable minority of Vanguard participants are bisexual, we wondered how they differed from the gay men in the study and whether or not they had a specific risk profile.

What we did:

We analysed the available questionnaires and test results in December 1999.

To make our comparison between gay and bisexual men more fair, we excluded from this analysis any participant who sold sex or injected drugs in the previous year. This is because some participants consider themselves to be straight but have sex with men for money and this is especially true for those who are addicted to injection drugs.

We divided the remaining **605** participants into two groups: those who had sex only with men in the previous year and those who had sex with both men and women. **Twelve** percent of the participants in this analysis were bisexual. We then compared the two groups to see how the bisexuals differed from the gay men.

What we found:

We found that bisexual men were significantly more likely:

- to be younger;
- to have dropped out of high school;
- to live in unstable housing;
- to be unemployed;
- to have a high depression score;
- to have paid for sex; and
- to have **casual** male sex partners rather than **regular** ones.

After controlling for other factors, those that emerged as “independent predictors” of bisexuality included being younger and having dropped out of high school. Bisexual participants were also almost **twice** as likely as gay participants to have a high depression score and were almost **three** times as likely to have casual male sex partners.

Although bisexual participants were somewhat more likely than gay men to test positive for HIV either at baseline or during the course of the study, there wasn't enough difference to be considered statistically significant.

What we concluded:

Our data indicate that the social determinants of health are even worse for young bisexual men than for young gay men, which – along with a greater likelihood for casual sexual encounters – places them at elevated risk of HIV infection. ■

THE THREE Rs: RISK, RELAPSE AND H.I.V. RATES

HIV prevalence, incidence and risk behaviours
among a cohort of young gay/bisexual men

"Complacency towards HIV infection could reflect undue optimism surrounding recent advances in therapy, feelings of fatalism and inevitability or lack of direct experience of the AIDS epidemic among a younger generation of gay and bisexual men."

First author:
Steffanie Strathee

Other presenting authors:
Mary Lou Miller, Brian Woodfall, Steve Martindale



Presenting authors Steffanie, Steve and Mary Lou with Bonnie Devlin.

Other co-authors:
Bob Hogg, Peter Cornelisse, Bonnie Devlin, Darrel Cook, Michael Rekart, Julio Montaner, Michael V. O'Shaughnessy and Martin Schechter.

The full text of these presentation is available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR98MLM.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/Epi97.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/BCAIDS97Steff.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR97Steff.html>

What we wanted to know:

This presentation has been repeated over the years in order to provide updates on risk behaviour and HIV rates in the Vanguard Project and to investigate trends in condom use over time.

What we did:

When this analysis was most recently revised in May 1998, we analysed the questionnaires and test results of **684** participants, looking at sexual behaviours, substance use and HIV rates.

For the purposes of this analysis, HIV-negative participants who had always used condoms for anal sex in the year **prior** to completing the baseline questionnaire who then had unprotected anal sex in the year **between** baseline and follow-up were described as having "relapsed" into high-risk sex.

What we found:

Unprotected anal sex:

Of the participants with **regular** partners, almost half (**49%**) had had unprotected anal sex at least once in the previous year and one-quarter (**26%**) of the participants with **casual** partners had done so. Many participants reported having unprotected anal sex **without** ejaculation.

HIV rates:

HIV prevalence at baseline was **2%**. HIV incidence was **1.5%** per year.

Seroconverters:

The **10** participants who had seroconverted at the time of this analysis were more likely to be younger than the rest of the cohort. Of the **eight** seroconverters for whom follow-up data was available, **five** had been paid for sex, **four** had injected drugs (**two** of whom reported having shared needles) and **four** had had unprotected anal sex with a man they knew at the time was HIV-positive.

Predictors of risk-taking:

Using the same definitions as in previous analyses, we identified a number of predictors of sexual risk-taking, including having symptoms of depression and having been paid for sex. After controlling for other factors, those that emerged as “independent predictors” of sexual risk-taking were:

- having dropped out of high school;
- having experienced non-consensual sex over the age of 12;
- having low social support; and
- having used nitrite inhalants (poppers) in the previous year.

Relapse into high-risk sex:

We found that for participants with regular partners, **twice as many** increased their risk behaviour between baseline and follow-up compared to

those who changed their risk behaviour in the opposite direction (i.e. those who were at risk prior to baseline but who always used condoms in the year **after** baseline). This was also true for participants with **casual** partners but only for **insertive** anal sex; there was no significant change from one year to the next for **receptive** anal sex with casual partners.

What we concluded:

We continue to see high levels of unprotected anal sex among Vanguard participants and a corresponding rate of HIV infection, which – though lower than previously reported – remains unacceptably high.

HIV prevention programs aimed at young gay and bisexual men are urgently needed and should take into account:

- the risks associated with specific sexual practices (such as anal sex without ejaculation);
- psychosocial variables (such as education, social support and sexual abuse) and substance use (particularly poppers); and
- HIV-negative men in relationships with HIV-positive men (sometimes called “serodiscordant” couples).

Finally, there is evidence of a disturbing trend towards relapse to high-risk sex among men who were previously reporting consistent safe sex practices.

The problem is that when you're talking to young people who are facing a lifetime of safe sex, it's easy to fall off the wagon.

Is it easier now though, because these drugs [i.e. new AIDS drugs] are around and people think they can access them?

Well the early indications from our study of young gay men say yes, that there has been a relapse to unsafe sex and that young gay men in our study are twice as likely now to have unprotected sex compared to one year ago.



Jeffrey Kauffman interviewing Steffanie Strathdee on CBC's The National Magazine, Nov. 5, 1997. <http://cfeweb.hivnet.ubc.ca/vanguard/videos.html>

LE PLASTIQUE, C'EST FANTASTIQUE!

Temporal changes in seroincidence associated with increased use of condoms: Evidence from two independent prospective studies of gay and bisexual men

“While it may seem to be stating the obvious that condom use has reduced HIV rates in the gay community, oddly enough very few studies have actually tried to demonstrate this. It was also interesting to see how eager other researchers were to criticise us for doing so.”

Presenting author:
Steve Martindale



Co-authors:

Kevin Craib, Mary Lou Miller, Amy Weber,
Michael V. O'Shaughnessy, Martin Schechter
and Bob Hogg.

Presented at the 8th Annual Canadian
Conference on HIV/AIDS Research
in Victoria in May 1999.

The full text of this presentation is available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR99steve.html>

What we wanted to know:

We wanted to know how the sexual behaviours, condom use patterns and HIV rates of Vanguard participants compared with participants in the Vancouver Lymphadenopathy AIDS Study (VLAS), which is a similar study of gay men that ran from 1982 to 1998.

What we did:

We analysed the baseline questionnaires from **235** HIV-negative Vanguard participants completed in 1995/96 and the follow-up questionnaires from **263** HIV-negative VLAS participants completed in 1985.

We compared demographic characteristics, sexual practices and substance use patterns in the two studies by conducting a cross-sectional comparative analysis.

We also compared the rates of HIV seroconversion in the two studies.

What we found:

Demographics:

The Vanguard Project is a younger and more ethnoculturally diverse group of men than the VLAS was a decade ago. VLAS participants were much more likely to be white and to have attended university or college.



Substance use:

Vanguard participants were more likely to report using hard drugs, including cocaine, LSD (acid) and amphetamines (e.g. speed).

Sexual behaviour:

Vanguard participants had more regular and casual sexual partners in the previous year. They were also significantly more likely than VLAS participants to have anal sex.

Condom use:

We compared **114** Vanguard participants and **70** VLAS participants who had had receptive anal sex with **casual** partners – which is of course the highest-risk sexual behaviour – in the previous year. VLAS participants were **10 times** more likely to report **never** using condoms for receptive anal sex with casual partners (only **6%** of Vanguard participants never used condoms when doing so compared to **59%** of VLAS participants).

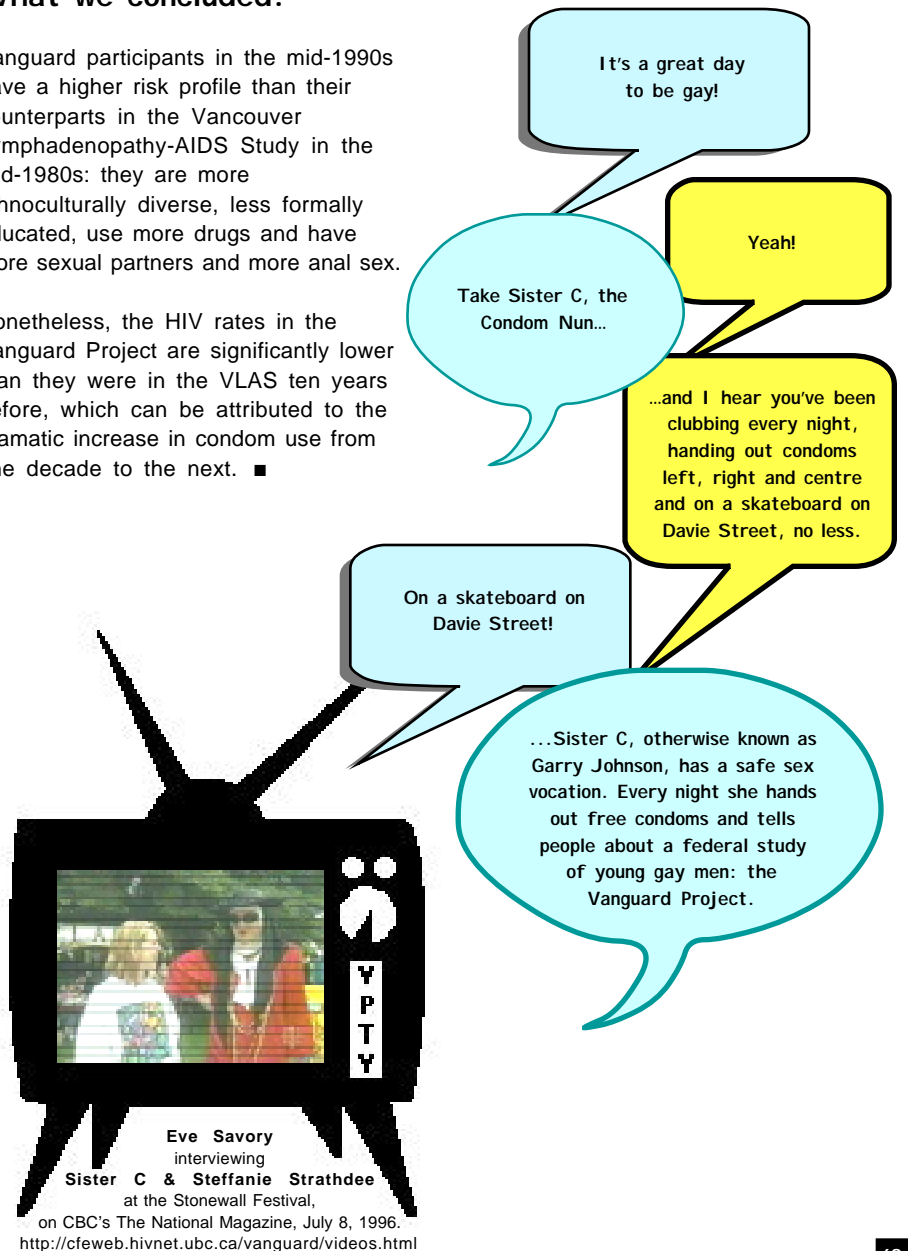
HIV rates:

The cumulative rate of HIV incidence after three years of follow-up was **3.6%** in the Vanguard Project compared to **7.9%** in the VLAS. (Note that this is not an **annual** rate.)

What we concluded:

Vanguard participants in the mid-1990s have a higher risk profile than their counterparts in the Vancouver Lymphadenopathy-AIDS Study in the mid-1980s: they are more ethnoculturally diverse, less formally educated, use more drugs and have more sexual partners and more anal sex.

Nonetheless, the HIV rates in the Vanguard Project are significantly lower than they were in the VLAS ten years before, which can be attributed to the dramatic increase in condom use from one decade to the next. ■



YOUNG GAY AND BISEXUAL MEN AT RISK FOR SELF-HARM

Social determinants of suicide attempts
among young men who have sex with men

“The social isolation and rejection faced by many young gay and bisexual men is clearly emotionally damaging and may lead to an increased risk of suicide.”

Presenting author:
Michael Botnick



Co-authors:

Katherine Heath, Steve Martindale,
Martin Schechter, Michael V. O'Shaughnessy
and Bob Hogg.

Most recently presented at the 4th Annual AIDS
Impact Conference on Bio-psychosocial Aspects
of HIV Infection in Ottawa in July 1999.

Originally presented at the 8th Annual Canadian
Conference on HIV/AIDS Research
in Victoria in May 1999.

A paper based on these data
is currently under review.

The full text of this presentation is available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR99mike.html>

What we wanted to know:

A number of other studies have suggested that young gay and bisexual men are between two and 10 times more likely to attempt suicide than their heterosexual peers.

We wanted to examine the social determinants of suicide attempts in young gay and bisexual men, which could possibly assist in identifying those at risk of self-harm.

This topic is particularly close to home for us as **seven** Vanguard participants have died since the study began, several of them by their own hands.

What we did:

We analysed the questionnaires of Vanguard participants who reported having considered or attempted suicide in the past, to see what demographic, psychosocial and behavioural characteristics they had in common and how they differed from participants who had never considered suicide.

What we found:

Of the **345** participants included in this analysis, **43.5%** reported that they had **considered** suicide in the past and **19.4%** reported that they had **attempted** suicide at least once.

We found no significant demographic differences – including age, ethnicity or country of birth – between those who had and had not considered or attempted suicide.

Those who had attempted suicide were significantly **more** likely:

- to have experienced non-consensual sex;
- to have dropped out of high school;
- to have a low annual income;
- to have been paid for sex;
- to have a higher depression score;
- to have been diagnosed with a mental illness or mood disorder (such as depression);
- to have low social support;
- to have low or moderate self-esteem;
- to have used poppers in the previous year; and
- to have problems related to alcohol consumption.

Curiously, while the majority of participants had engaged in anal sex, those who had attempted suicide were **less** likely to have had anal **insertive** sex in the previous year.

After controlling for other factors, those that emerged as “independent predictors” of having attempted suicide were:

- the use of poppers;
- low social support; and
- low or moderate self-esteem.

What we concluded:

Having considered or attempted suicide is a common experience for young gay and bisexual men. Well over one-third of Vanguard participants have considered suicide in the past and one in five has made a suicide attempt.

The social determinants of suicide attempts are similar to the social factors that also place young gay and bisexual men at risk for HIV infection: poverty, lack of formal education, sexual abuse, sex trade involvement, substance use, depression, low social support and poor self-esteem.

Our findings may be of value for social workers, school counsellors, therapists, street workers and others who work with youth and could help identify young men at elevated risk for self-harm. ■

According to a new study released today at the BC AIDS Conference, young gay men in this city are twice as likely to get HIV than previously thought. It's estimated that the infection rate is now 2.4%, twice as high as some recent U.S. studies.

I think it's naive to think that the information alone will change people's behaviour. To tell people that this behaviour leads to whatever, whether it's HIV or other issues – I mean, when we look at smoking, for example, and people know that smoking leads to lung cancer – it doesn't stop people from smoking. It stops some people, but knowing that smoking is bad for you doesn't change everyone's behaviour. So the knowledge in and of itself isn't enough. I think people need more than just knowledge, they also need support to implement sustained behaviour change in their lives.



Steve Martindale
on Global News,
at the BC AIDS Conference, Oct. 28, 1997.
<http://cfeweb.hivnet.ubc.ca/vanguard/videos.html>

SEX TRADE WORKERS MORE AT RISK

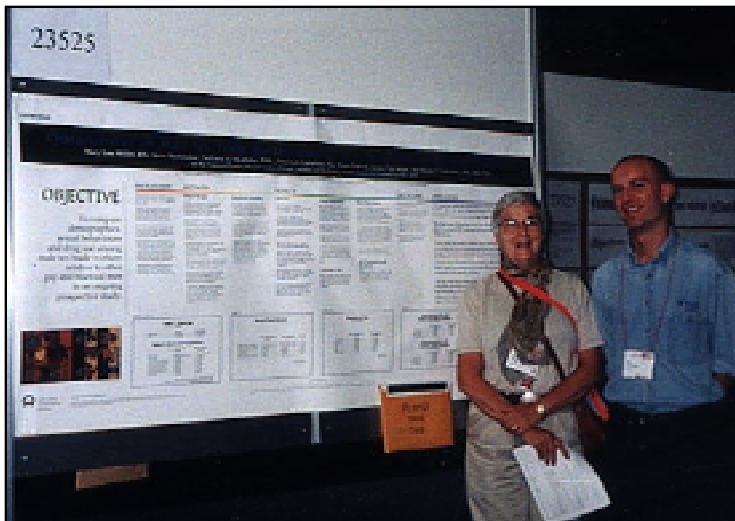
Characteristics of male sex trade workers enrolled in a prospective study of HIV incidence

"We defined 'paid sex' as: 'sex exchanged for money, drugs, goods, clothing, shelter or protection,' which may be a broader definition than what is commonly called prostitution."

Various credited to the presenters and some combination of the following co-authors:
Amy Weber, Keith Chan, Steve Martindale, Steffanie Strathdee, Peter Cornelisse, James Tigchelaar, Darrel Cook, Fiona Tetlock, Michael V. O'Shaughnessy, Martin Schechter, Julio Montaner and Bob Hogg.

Presenting authors:
**Mary Lou Miller
and Garry Johnson**

A paper by Amy Weber based on these data is currently under review with *The International Journal of Epidemiology*.



Mary Lou and Steve presenting this poster in Geneva.

The full texts of these presentations are available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/Impact99sextrade.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR99marylou.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/BCAIDS97MLM.html>

What we wanted to know:

Since a number of Vanguard participants are involved in the sex trade, we wanted to know if they were more at risk for HIV than other young gay and bisexual men and we wanted to see if they had a specific risk profile.

What we did:

We analysed the baseline questionnaires of **731** Vanguard participants, **110** of whom had been paid for sex in the previous year. We compared them on the basis of demographic characteristics, substance use patterns, sexual behaviours and HIV rates.

What we found:

One-quarter of participants had been paid for sex by another male at some point in their lives but only **13%** had done so in the previous year.

Participants who had been paid for sex in the previous year were significantly **more** likely:

- to be non-white;
- to be younger and less formally educated;
- to have unstable housing and a lower annual income;
- to have a high depression score;
- to have ever been incarcerated or institutionalised;
- to have started having sex at a younger age; and
- to have ever experienced non-consensual sex.

The differences in substance use between sex trade workers and the rest of the cohort were dramatic. Sex trade workers were much more likely to use poppers, cocaine, crack and heroin and to consume larger quantities of alcohol. They were also far more likely to inject drugs.

Sex trade workers also had a specific sexual risk profile. While they were significantly more likely to have unprotected anal sex with a **casual** partner, they were actually **more** likely to use condoms for **oral** sex with **regular** partners compared to the rest of the cohort.

One in five sex trade workers reported being paid **more** to have sex **without** condoms, which is a reminder that economic need can compromise safer sex behaviours.



"Sister C" (a.k.a. Garry Johnson)

Housing stability:

Compared to sex trade workers with stable housing, we found that those with **unstable housing** were significantly **more** likely:

- to be less formally educated;
- to have ever been incarcerated,
- to have sex with both men and women; and
- to use crack and injection drugs.

HIV rates:

Compared to the rest of the cohort, HIV prevalence at baseline was approximately **three** times higher and HIV incidence was approximately **five** times higher among sex trade workers.

HIV incidence was also over **twice** as high for sex trade workers with unstable housing as for those with stable housing.

What we concluded:

Male sex trade workers are vulnerable to HIV infection due to high rates of injection drug use and sexual risk behaviour. Unstable housing also appears to place sex trade workers at particular risk for HIV.

Our experience is that male sex trade workers may not be reached through conventional HIV prevention programs, as many do not self-identify as gay. Special efforts should be made to take into account their social, cultural, economic and sexual realities. ■

Most recently presented by **Garry Johnson** as a discussion poster at the 4th Annual AIDS Impact Conference on Bio-psychosocial Aspects of HIV Infection in Ottawa in July 1999.

Previously presented as an oral presentation by **Mary Lou Miller** at the 8th Annual Canadian Conference on HIV/AIDS Research in Victoria in May 1999 and at the 11th Annual BC AIDS Conference in Vancouver in November 1998; and as a poster presentation at the XI International Conference on AIDS in Geneva, Switzerland, in July 1998; and as an oral presentation at the 10th Annual BC AIDS Conference in Vancouver in October 1997.

Originally presented by **Mary Lou Miller** as an oral presentation at the 6th Annual Canadian Conference on HIV/AIDS Research in Ottawa in May 1997.

IS HEP C BEING SPREAD THROUGH SEX?

Evidence of sexual transmission of Hepatitis C Virus (HCV) in a cohort of homosexual men

"It may be hard to believe but it's estimated that there are seven times more people in the world with hep C than HIV. About 170 million people around the world are living with hep C, including over a quarter of a million Canadians."

Presenting author:
Kevin Craib



Although this presentation is based on data from the VLAS rather than the Vanguard Project, we decided to include it here as we are in the process of looking at hep C rates and risk factors among Vanguard participants but the Vanguard results aren't yet available.

Presented at the 9th Annual Canadian Conference on HIV/AIDS Research in Montreal in April 2000.

Presented again at the 18th Annual Conference of the Gay and Lesbian Medical Association in August 2000 in Vancouver.

Co-authors:

Mark Tyndall, Chris Sherlock, Bob Hogg, Michael V. O'Shaughnessy and Martin Schechter

Background:

We don't hear as much about hepatitis C as we hear about HIV but it can be just as dangerous, as it can cause liver disease, liver cancer and liver failure and can be fatal. Hep C was first identified in 1989, before which it was known as "non-A, non-B hepatitis."

Hep C is mainly spread by blood-to-blood contact. Many people with hep C got it from unscreened blood transfusions. Injection drug users who share needles are at extremely high risk and it's estimated that over **80%** of injection drug users in Vancouver are already hep C positive.

Unlike hep A and B, sexual transmission of hep C is thought to be uncommon but not unheard of.

What we wanted to know:

We wanted to find out how common hep C is among gay men in the Vancouver Lymphadenopathy-AIDS Study (the VLAS), which has been storing blood samples from gay men since 1982.

We wondered if gay and bisexual men were at risk for hep C through their sexual practices.

The full text of this presentation is available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR2000kevin1.html>

The VLAS

What we did:

We tested the most recent stored blood samples drawn between 1982 and 1998 for **662** VLAS participants (**91%** of the whole cohort).

We then compared the baseline questionnaires of participants who tested positive for hep C to those who tested negative. We looked at demographic characteristic, sexual practices and substance use to identify risk factors for hep C.

What we found:

Nearly **six** percent of the VLAS participants tested positive for hep C.

We found no significant demographic differences – including age, ethnicity, income and education – between participants who tested positive for hep C and those who tested negative.

Those with hep C were, however, significantly **more** likely:

- to be HIV-positive as well;
- to have had sex with more men, both in the previous year and in their lifetimes;
- to have had receptive anal sex in the previous year;
- to have engaged in rimming (i.e. licking someone's anus);
- to have engaged in insertive fisting (putting your fingers or hand up someone's anus);
- to have used cocaine, LSD, amphetamines and tobacco; and
- to have injected drugs, either in the previous year or ever.

After controlling for other factors, those that emerged as “independent predictors” of having hep C were:

- being HIV-positive;
- having had 20 or more male sexual partners in the previous year; and
- having injected drugs, either in the previous year or ever.

Nearly half (**49%**) of the participants with hep C didn't report injection drug use in their questionnaires. When we compared these to the rest of the non-injecting participants, we found that those with hep C were significantly **more** likely to have engaged in rimming or insertive fisting.

What we concluded:

Gay men with HIV are much more likely to also have hep C. Although at least half the participants with hep C in our sample were likely infected through injection drug use, we found an association between hep C and specific sexual practices – namely rimming and fisting. ■

It's important to point out that we really don't have a very good understanding about what HIV infection is doing right now, how quickly it's spreading [among young gay and bisexual men].



Martin Schechter
on BCTV News, March 15, 1995.
<http://cfeweb.hivnet.ubc.ca/vanguard/videos.html>

RAPID TESTING PROVES POPULAR

High demand for point-of-care rapid HIV screening among young gay and bisexual men

“We’d like to thank the hundreds of Vanguard participants who agreed to participate in the clinical trial for the rapid test and who responded to our repeated requests for feedback. Your cooperation made it possible for Vanguard participants to be the first people in BC with access to rapid HIV testing.”

Presenting authors:
Mary Lou Miller
and **Steve Martindale**

These data were most recently presented by **Mary Lou Miller** as a poster presentation at the XIII International Conference on AIDS in Durban, South Africa, in July 2000.

A similar oral presentation was previously presented by **Mary Lou** (by invitation) at a workshop hosted by BioChem ImmunoSystems Inc. in Vancouver in May 2000.

Originally presented by **Steve Martindale** as an oral presentation at the 4th Annual AIDS Impact Conference on Bio-psychosocial Aspects of HIV Infection in Ottawa in July 1999.

Presented again by **Mary Lou** and **Steve** at the 18th Annual Conference of the Gay and Lesbian Medical Association in August 2000 in Vancouver.



Steve and Mary Lou at the 1996 Stonewall Festival.

The full texts of these presentations are available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/DurbanRapid.html>
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/Impact99rapid.html>

Background:

Rapid HIV test kits which provide preliminary HIV antibody results in 15 minutes were approved for use in clinical settings in Canada in March 2000. Produced by Montreal-based BioChem ImmunoSystems, these rapid test kits have proven to be as accurate as the standard ELISA lab test.

In 1998/99, over **300** Vanguard participants took part in a two-phase clinical trial to test the accuracy of the rapid test kits and to compile recommendations for amending HIV counselling guidelines to accommodate rapid testing.

What we wanted to know:

Young gay and bisexual men are primary consumers of HIV testing services and the developing testing technologies are of particular interest to the gay community.

We wanted to know what the Vanguard participants thought of the introduction of rapid HIV testing; we wanted to document the experience of our participants in the clinical trial; and we wanted to determine if familiarity with the rapid testing process changes the opinions that young gay and bisexual men hold towards rapid HIV testing.



What we did:

Vanguard participants were asked their opinions on rapid HIV testing at **three intervals** between December 1997 and May 2000: before, during and after the clinical trial in which they were invited to participate. The first and third surveys were conducted by e-mail; the second survey was done in person by Mary Lou at the point of care.

What we found:

Despite initial concerns of the potential misuse of rapid HIV screening, **82%** of participants who responded to the first survey were supportive of the idea of rapid testing and over **90%** of those who responded to the third survey were supportive.

Two-thirds of participants who'd undergone rapid testing found it to be **less** stressful than standard testing and only **8%** found it to be more stressful (the rest were unsure).

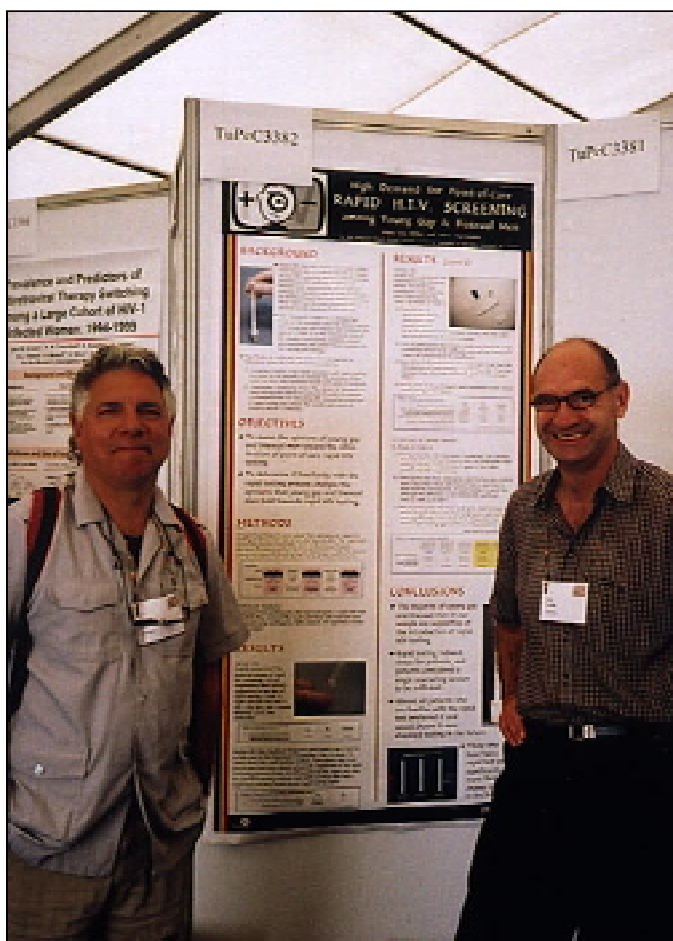
Almost all (**94%**) of those who'd had a rapid test found the single counselling session to be sufficient and not one participant found the counselling to be insufficient.

Participants who took part in the second phase of the clinical trial were almost universally supportive of the rapid screening process: **97%** preferred the rapid test over the standard testing method; and **100%** of those who had a rapid test said they would choose rapid testing again.

What we concluded:

The vast majority of young gay and bisexual men in our sample are supportive of the introduction of rapid HIV testing. Rapid testing reduces stress for patients and our participants consider a single counselling session to be sufficient.

Almost all participants who are familiar with the rapid test prefer it and would choose it over standard testing and those who have had a rapid test are significantly more likely than those who haven't to choose it again in the future. ■



Martin Schechter and Jack Forbes at Mary Lou's poster presentation in Durban, South Africa.

NEW HIV TEST COULD END TENSION OF TWO-WEEK WAIT

But a pending research paper raises concerns that rapid results reduce already inadequate counselling time

by Janet Smith

This article appeared in *The Georgia Straight* on March 9, 2000. It is reprinted with the permission of the author.

Artwork by Mark "Atomos" Pilon. Reprinted with permission.

If you've ever had to have an HIV test, you probably know it can make for the most agonising two weeks in a person's life. Maybe you had too many martinis and did something rash with someone you'd just met; maybe you're a health-care worker and accidentally stuck yourself with an infected needle. It doesn't matter why you need one. Every test takes the same amount of time. Someone at a clinic takes a sample of your blood and it's sent to a laboratory, where it goes through batches of so-called ELISA tests. If they repeatedly show positive, your blood undergoes a confirmatory test called a Western blot. About 14 days later, you visit your clinic to get the news.

But soon Health Canada is expected to approve two tests that can be completed in about 15 minutes without sending the samples to the lab. (It has already approved one such test for lab use in Nova Scotia.) Unlike the current procedures, so-called rapid HIV-screening tests can be done on samples taken from a simple finger prick. They're as accurate as the old ELISA tests, which means if your test is negative, you can immediately go home - bearing in mind you could still be in the three-to-six month window before the virus shows. But if your test is positive, it could be false and for now, positive results will still need to be confirmed at a lab with a Western blot.

You'd think that news of the rapid tests would receive a warm welcome and in some ways it is. But making the test for HIV quicker and easier is also causing a small storm of debate about who will have access to rapid-test kits and how they'll use them.

Steve Martindale, a local AIDS researcher whose Vanguard Project - a research cohort of gay and bisexual men - helped carry out local trials of the rapid-test kits, explains it this way: "If you had an instant cancer test or an instant test for juvenile diabetes, there probably wouldn't be a debate. But because of the stigma and potential for discrimination with HIV, the whole discussion is taking place in a different context."



Lawyer Richard Elliot, director of policy research for the Canadian HIV/AIDS Legal Network, has been immersed in that discussion as part of the research for his soon-to-be-published paper "Rapid HIV Screening at the Point of Care: Legal and Ethical Questions." One of his concerns is that patients receiving the rapid

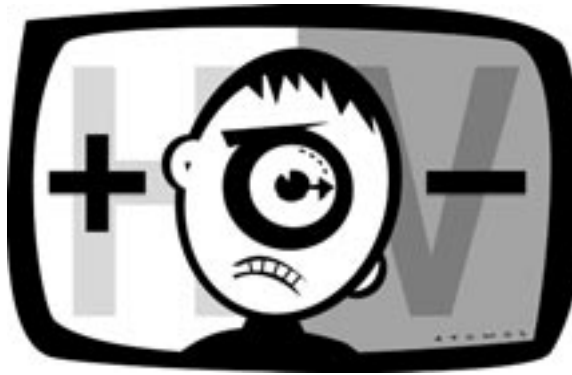
tests won't be given enough counselling about what the results mean. With the rapid results, Elliot says, counselling is even more important because patients will learn results, positive or negative, on the spot; under the current system, they're not told about false positives.

"You're compressing the process at a time when we already know that counselling is inadequate," he told the *Straight* from his office in Toronto. "Patients need to understand questions like, What does this test mean? What is a false positive?"

Another pressing issue is who will be allowed to administer the tests. Health Canada is expected to approve the rapid-test kits with labels that say For Professional Use Only. But Elliot said only health-care workers who have counselling experience and professional codes should have access to the kits. "What is a 'professional'? Does this mean a dentist or a massage therapist will be able to purchase this kit and give you an HIV test in their office?" he asked.

In his report, Elliot says, he stresses that health professionals should never be allowed to test clients before agreeing to treat them.

He also envisions several scenarios in which a patient's consent could be compromised with new rapid tests. Perhaps the most daunting debate surrounds that in which a pregnant woman who has received little or no prenatal care shows up at the hospital emergency room in labour. Studies have proven that giving antiretroviral drugs to an HIV infected woman before delivery can greatly reduce the child's chances of contracting the virus. With the new rapid tests, doctors could immediately gauge whether or not the woman had the virus. But does this give



them the right to make the test mandatory? Elliot says that while it would be unethical not to offer the woman a rapid test, factors such as side effects from the drugs and the chances of a false positive make the question a complicated one for the patient. He's recommending Health Canada study the issue more after the release of the rapid tests.

Of even greater concern to Elliot and others is the chance that rapid tests, which are almost as easy to administer as home pregnancy tests, will become available to the public. As yet, no one has applied to Health Canada to sell kits at the retail level but home use is not unthinkable.

In his 100-plus-page paper (available mid-April from the Canadian AIDS/HIV Clearinghouse [613-725-3434] and via www.aidslaw.ca), Elliot recommends Health Canada set up a committee of medical professionals and others to make sure rapid tests are given by the appropriate health-care workers and with the proper amount of counselling and consent.

Rapid tests are receiving some strong positive feedback. Researcher Darrel Cook, who helped run trials of the kits for the BC Centre for Disease Control, found the tests to be highly accurate. He says they'll be of great use to this city's street clinics, where it is sometimes difficult to get transient patients to return after two weeks for results.

For his part, Martindale did an informal survey of the **Vanguard Project** men who took part in the rapid test trials. Of the 66 who responded, 82 percent thought the tests were a good idea.

Still, a minority of the Vanguard people felt strangely attached to the two-week waiting period. As one anonymous participant wrote on a questionnaire: "Having to wait the two weeks for the result was a good thing, because it gave the person being tested a period to contemplate the possible results of their actions."

But far more common were responses like this: "As long as these kits are administered by trained professionals, I think they are a good idea. I am sure I am not the only one who, after waiting two weeks for a test result, has managed to convince himself that the test is positive." In the end, getting rid of that anguish will, for many, make the ethical struggles worthwhile. ■

MONTREAL AND VANCOUVER DATA COMBINED

Risk factors associated with HIV positive serostatus
among young gay and bisexual men in Canada

“Working for the BC Centre for Excellence while studying at McGill University in Montreal afforded me an opportunity to combine data, expertise and opinions from both the Vanguard Project and the Omega Cohort. It was a unique and challenging experience.”

Presenting author:
Amy Weber



Co-authors:

Clemont George, Robert Remis, Keith Chan, Bob Hogg, Joanne Otis, Steve Martindale, J. Vincelette, B. Mässe, Mary Lou Miller, Roger LeClerc, Kevin Craib, R. Lavoie, Bruno Turmel, R. Parent, Martin Schechter and Michel Alary.

Most recently presented as a poster at the XIII International Conference on AIDS in Durban, South Africa, in July 2000. Originally presented at the 9th Annual Canadian Conference on HIV/AIDS Research in Montreal in April 2000.

A presentation which included these data was presented by **Mary Lou Miller**, **Dr. Peter Granger** and Vanguard participant **Evan Adams** at the 18th Annual Conference of the Gay and Lesbian Medical Association in August 2000 in Vancouver.

Amy Weber has written a paper based on these data.

The full text of this presentation is available on the Vanguard web site at:
<http://cfeweb.hivnet.ubc.ca/Vanguard/PAPERS/CAHR2000amy.html>

What we wanted to know:

We wanted to look at specific risk factors for HIV in young gay and bisexual men but our sample size was too small to provide reliable data.

By collaborating with the Omega Cohort, a similar study of gay and bisexual men in Montreal, we were able to compare a large enough number of participants who tested positive for HIV, either at baseline or at follow-up, to produce reliable data.

What we did:

We analysed the questionnaires and test results for **770** Vanguard participants and **603** participants in the Omega Cohort. Since the Omega Cohort has no upper age limit, we restricted this analysis to participants in both studies who were under 30 at baseline.

First we compared participants who had tested HIV-positive at baseline with those who had tested negative and then we compared participants who had seroconverted (i.e. tested positive during the course of the study) with those who had not.

We looked at demographic characteristics, sexual behaviours and substance use to identify risk factors for HIV.



What we found:

Baseline positives:

Participants who tested positive at baseline were significantly **more** likely:

- to have had their first consensual sexual experience at a younger age.
- to have dropped out of high school;
- to be unemployed;
- to have unstable housing;
- to use hard drugs such as crack, cocaine and heroin;
- to have more male sexual partners in the previous year;
- to have had receptive anal sex in the previous year; and
- to have ever been paid for sex.

After controlling for other factors, those that emerged as independent risk factors for testing HIV-positive at baseline were: having dropped out of high school, having used cocaine in the previous year and having ever sold sex.

Seroconverters:

Participants who tested positive for HIV during the course of the study were significantly **more** likely:

- to have unstable housing;
- to have used cocaine in the previous year;
- to have had receptive anal sex in the previous year;
- to have ever been paid for sex.

After controlling for other factors, the only one that emerged as an “independent predictor” of seroconverting during the study was having ever sold sex.

We then looked at just the participants who had engaged in anal sex in the previous year. After controlling for other factors, those that emerged as independent predictors of seroconverting for men who had anal sex were:

- living in unstable housing; and
- having had unprotected receptive anal sex.



What we concluded:

The social determinants of health that contribute to gay and bisexual men’s elevated risk for HIV include low education, hard drug use and sex trade involvement.

As expected, unprotected receptive anal sex was found to be a key risk factor for HIV seroconversion. ■

The Omega Cohort

Collaboration is ongoing between the Vanguard Project and the Omega Cohort in Montreal.



The initial collaboration between the Vanguard and Omega research teams was coordinated by Omega research associate **Annie Dufour**, who compared the demographic characteristics and

sexual behaviours of participants in the two studies. Entitled "Comparison between young men who have affective and sexual relations with men participating in two cohort studies in Montreal and Vancouver," this poster was presented at the 7th Annual Canadian Conference on HIV/AIDS Research in Quebec City in May 1998. (This poster is available on our web site but was not included in this report.)

or bisexual or who have sex with other men. The minimum age of participants in the Omega Cohort is 16 but there is no upper age limit.

Like the Vanguard Project, the Omega Cohort recruits men through outreach and publicity and through medical clinics and physicians' offices.

Some of the differences between the two studies include the fact that Omega participants are tested for HIV and complete questionnaires every six months as opposed to once a year and a portion of the questionnaire is completed by an interviewer. Another important difference, of course, is that all of Omega's promotional materials, findings and questionnaires must be produced in both English and French.

The objectives of Omega are:

- to estimate HIV incidence and associated risk factors among gay and bisexual men in Montreal;
- to characterise changes in sexual behaviours over time;
- to identify psychosocial factors associated with sexual behaviours in a quantitative cross-sectional and longitudinal perspective; and
- to develop the conceptual framework for an eventual trial of a personalised preventive intervention.

More recently, Vanguard research associate **Amy Weber** coordinated an extensive collaborative effort between the two studies, examining risk factors for HIV prevalence and incidence among all participants in both cities. The result was an oral presentation entitled "Risk factors associated with HIV positive serostatus among young gay and bisexual men in Canada," which was presented at both the 9th Annual Canadian Conference on HIV/AIDS Research in Montreal in April 2000 and the XIII International Conference on AIDS in Durban, South Africa, in July 2000.

The collaboration between the Vanguard Project and the Omega Cohort has been successful and further collaborative projects are in the planning stages.

