ONTARIO GAY MEN'S HIV PREVENTION STRATEGY

Gay, Bi, MSM Situation Report

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CONTENTS

Executive Summary

Despite the wealth of HIV-related knowledge and prevention programs, recent statistics indicate that HIV is again on the rise among gay, bisexual and other men who have sex with men (gay/MSM). The following report on the current situation includes sections on: an overview of research on determinants of sexual risk taking, a review of current sexual risk behaviour research on gay/MSM from identified ethno-racial communities, an overview of various HIV prevention programs and campaigns, and an epidemiological update on HIV infection rates in Ontario.

The first chapter of this report offers a critical review of the current research on HIV risk among gay, bisexual, and other men who have sex with men. Adam identifies various factors, contexts and predispositions that have been linked to increased risk of HIV transmission including: sexual and domestic abuse, sensation seeking personalities and behaviours, personal disruption (e.g., loss of a job or partner), depression and social isolation, drug and alcohol use, condom trouble (both physiological and symbolic), particular settings and social interactions (e.g., settings which emphasize casual or quick sex; places that emphasize a 'buyer beware' mentality), certain circuits and currents which are supportive of unprotective sex (e.g., barebacking scene), and treatment optimism. Also noted in the research as a potential risk factor for HIV transmission is couple communication and interaction. Condom use tends to decrease with length of romantic relationships and men may find it harder to negotiate safety in long term relationships where partners assume monogamy. The introduction of condoms by one partner may signal distrust or infidelity to the other partner. Factors related to age, bisexuality, social class, and ethno-cultural backgrounds are also noted. Adam concludes that it is important to address how the social aspects of HIV relate to transmission risk. HIV risk cannot be addressed with just one type of preventive effort, as HIV risks are diverse, each segment of the population having its own unique risk-related issues.

The second chapter addresses the research, or rather lack of research, on ethno-racial gay/MSM. The term 'ethno-racial' is defined as individuals from both ethnic and racial gay/MSM communities, including: African, Caribbean, East Asian (Chinese, Vietnamese, Filipino, etc.), South Asian (Indian, Pakistani, Bangladeshi, etc.), and Latino (Venezuelan, Argentinean, Mexican, etc.). The review also includes Portuguese speaking populations, Italian, Slavic, and Francophone Canadians, and non-Christian religious traditions (Muslims, Hindus, Jews, etc.), but found the research on these communities to be sparse. This section addresses the social and individual factors that affect HIV transmission risk and offers recommendations for prevention efforts for each ethno-racial community. Ethno-racial communities face unique factors when negotiating HIV risk, such as: religious and cultural beliefs, racism, immigration status, discrimination, and peer norms. Hart, Blanco and Williams offer specific recommendations, stressing the importance of HIV prevention programs that better reflect ethno-racial and linguistic diversity, and the specific factors related to each community's cultural and social realities. The authors stress the need for programs to acknowledge not only factors that differ

among individuals but also the multiple sites of oppression and the resulting potential for social isolation faced by ethno-racial communities.

The third chapter reviews current HIV prevention programs and focuses the discussion on a variety of themes found in the programs including: the mechanics of condom use, the role of the internet, questioning assumptions about HIV risk, drug and alcohol use, safely introducing men to new scenes and cruising, relationships, access to and building community with other men, building self esteem through empowerment and social support, health promotion and counseling, programs for sex trade workers, campaigns directed at youth, and prevention for people living with HIV. Bortolin suggests that while there does exist a diverse range of prevention programs, each is integral to the prevention of HIV and must be tailored to specific group needs within the population of gay, bisexual, and other men who have sex with men.

The final chapter of this report provides an epidemiological analysis by Remis and Liu, revealing that from October 1985 to December 2005, 26,461 HIV-infected persons were newly diagnosed in Ontario of whom 64% were gay/MSM. While gay/MSM constituted a decreasing proportion of HIV diagnoses (~90% in the 1980s to ~50% in recent years), gay/MSM continue to be the population most affected by HIV infection in Ontario. It is estimated that 14,900 gay/MSM in Ontario were infected with HIV as of 2004, or 16.3% of Ontario gay/MSM. Of these 10,650 gay/MSM in Toronto were infected, constituting 71% of the Ontario total. HIV incidence among gay/MSM appears to have almost doubled since 1996, from 467 to 866 new infections in 2004; while HIV prevalence increased by 42% during the same period. The age group most affected by HIV/AIDS continues to be those 25-44 years old, though in recent years older men constitute an increasing proportion of new HIV diagnoses (11% compared to 5%). Ethno-racial communities comprise an increasing proportion of HIV diagnoses, reflected both in HIV data from Toronto and Ottawa and AIDS cases from Ontario as a whole. An estimated 69% of reported AIDS cases in Ontario since 1981 have been among gay/MSM. Though AIDS incidence among gay/MSM has decreased by over 80% from its peak in 1994, it now appears to have increased from 2002 to 2004. The authors conclude that despite dramatic improvements in survival related in large part to the advent of HAART in 1996, the epidemic of HIV infection among gay/MSM in Ontario is still not effectively controlled.

This report offers an overview of the current state of research into risk behaviour among the gay/MSM populations and provides recommendations for future prevention programs, stressing the importance of addressing ethno-racial and other kinds of diversities that make up men who have sex with men inside and outside gay communities. HIV infection rates, according to current epidemiology, are unstable and increasing and it is necessary to identify and acknowledge shifts and currents within gay and bisexual communities to better meet the challenges posed by HIV disease.

Research on HIV Risk Among Gay and Bisexual Men

By Barry D Adam

Research on HIV Risk Among Gay and Bisexual Men

Barry D Adam

There can be no singular, definitive summation of the findings that come from research on the many factors associated with risk of HIV transmission among gay and bisexual men. Research is an ongoing dialogue among researchers drawing on a range of different methods and making sense of findings through the lens of different disciplinary traditions. Researchers observe particular populations in different times and places, and though they may all be observing, at least for the purposes of this report, gay or other men who have sex with men (MSM) as a primary focus, these populations represent differing "slices" through the potential population of all gay/MSM, as true random sampling is virtually unachievable. In addition, gay, bisexual, and other men who have sex with men are scarcely a fixed or finite set of people whom we can know once and for all. There is a great deal of internal diversity among them. New men move into gay/MSM places and networks and others move out. Changing social conditions impact the social networks, beliefs, and ideas of gay and bisexual men, and sexual cultures have a moving, internal dynamic of their own. All of these actors in motion result in a portrait of risk which itself evolves over time.

Just how to go about sketching this portrait of risk is not a straightforward undertaking. Most research on HIV risk falls under the health sciences, and health sciences typically rely on a model of human conduct that might be called *biomedical individualism*. In this instance, the basic approach is to look for factors that occur prior to unprotected anal intercourse (UAI). A statistical calculation is then made to see if the factors and UAI tend to occur together, whether they have no relation, or just a chance relation with each other. If a statistically significant relation is found, the factor or factors are likely to be considered a good candidate as a cause of UAI. This model often operates in a manner analogous to disease models: one searches for a causal agent (a virus, bacterium, microbe, etc) that accounts for a disease outcome. In HIV research, it often involves a search for (implicitly or explicitly) pathological causal factors, taking out of their context, to "explain" UAI. The usual underlying assumption is that a rational man seeks to avoid threats to his health; exposing himself to a threat like HIV, then, must be due to some intervening variable that interferes with rationality. It is a model employed by much of the research reported here, and it has proven fruitful in sketching much of the portrait of HIV risk among gay and bisexual men insofar as it provides broad overviews and averages for the categories of people and behaviour investigated.

Critics of this model often refer to its limitations as the problem of *positivism*, referring to the name of the 19th century movement that promoted this vision of science as the privileged method of knowing about the world. The health sciences model ignores a sizeable number of alternative models concerning experience and action that are current in sexuality studies, lesbian/gay/queer studies, women's studies, cultural studies, postcolonial studies, and sociology. These alternative models work differently in portraying human conduct. They more

often place people in their social contexts to understand their actions rather than pulling out a few predetermining factors for scrutiny. They are particularly interested in how people themselves make sense of their own conduct, rather than imposing an external interpretation to explain it. They identify multiple and conflicting "rationalities" through which people navigate in order to throw light on behaviour that may appear "irrational" to outsiders. They are more sensitive to cultural currents and historical changes that shift the meaning and workings of apparent causal factors. And they better distinguish interacting and mutually reinforcing conditions that cannot be easily reduced to two or three causal variables that are supposed to occur prior to UAI.

From time to time, this section takes a critical approach to research findings, offers alternative interpretations to the more established conceptions repeated in the research literature, and wrestles with the methodological strictures that shape so much health science. Rather than starting from the premise of the rational man compromised by intervening variables, this section considers HIV risk more as a by-product of coping with an unwanted health threat while searching for human connection. It often treats the health studies research literature through the optic of considering how gay and bisexual men find pleasure and love while steering through sometimes conflicting sources of risk and opportunity. In other words, the alternative models are frequently brought into play when considering findings that tend to be presented as "facts" from the health sciences. (For a more sustained discussion of these issues, see Adam 2006a. These two paragraphs rehearse a very large debate in the social sciences. See, for example, Cicourel 1964; Adorno et al 1976. In sexuality studies, see Gagnon 1999; Plummer 2003. In HIV studies, see Wright 1998; Díaz and Ayala 1999; Flowers, Duncan and Frankis 2000; Parker 2001; Flowers and Duncan 2002.)

There are, then, a great many factors, contexts, and predispositions that have been identified as increasing the risk of HIV transmission among gay and bisexual men.

Sexual and domestic abuse

A small, but growing, set of studies finds that men who report having experienced sexual abuse as children report higher rates of UAI with casual partners when they become adults (Barrett, Bolan and Douglas 1998; Kalichman, Benotsch and Rompa 2001; Paul et al. 2001; Relf 2001; Klitzman et al. 2002). Perhaps not surprisingly then, men who are currently HIV-positive report having experienced childhood abuse at a higher rate than their HIV-negative counterparts (Paul et al. 2001; Greenwood et al. 2002; Kalichman et al. 2004). Childhood sex abuse also appears to be a predisposing condition to a number of additional factors associated with unsafe sex that are considered below, including drug use, higher numbers of sex partners, sex work, and sexual adventurism (Díaz and Ayala 1999; Kalichman, Benotsch and Rompa 2001; Paul et al. 2001; Klitzman et al. 2002; Kalichman et al. 2004).

Men who have experienced childhood sex abuse are more likely to be in a relationship characterized by violence when they become adults, and domestic abuse comes up more often in men practising UAI than among those who do not (Paul et al. 2001; Stall et al. 2003). Adam Heintz and Rita Melendez (2006:202) found "individuals who reported that they had been forced to have sex with their partner were 10.3 times more likely than those who had not to report not using protection because they feared their partner's response to safer sex." While domestic abuse has received a great deal of attention in the study of women's vulnerability to HIV transmission, relatively little consideration has been devoted to men in same-sex relations, but men may not be exempt from the same dynamic.

Many of these findings come out of surveys where respondents simply check off statements indicating whether they agree or disagree that family members were violent or sexually abusive while they were growing up. Just how this works in the everyday lives of boys is not always clear, but Rafael Díaz speculates that gentle or effeminate Latino boys may be especially vulnerable to abuse from (mostly male) family members who consider them to be insufficiently macho (Arreola and Díaz 2002). Research on bullying in schools points toward widespread abuse directed toward boys viewed as not measuring up to the demands of "proper" masculinity.

> In many countries it is now commonplace for researchers and media commentators to voice particular concern about two features of masculinity: young men's worsening record of academic attainment in comparison with girls and their propensity for violence....[V]arious studies have identified the forms of masculinity that gain most respect as involving hierarchies based on toughness, threat of (or actual) violence, casualness about schoolwork, 'compulsory heterosexuality' and a concomitant homophobia (Phoenix, Frosh and Pattman 2003:180)

The result, they argue, is a "culture of cruelty" in schools where boys must often defend themselves from the accusation that they are not masculine enough, and against the accusation of being *gay* in particular. While the boys bullied in schools are not always the boys who become gay men, the climate of homophobic intimidation impacts those who do. Research done on gay and lesbian youth reveals alarming levels of abuse, harassment, and violence directed toward them for being perceived to be gay (D'Augelli 1992; Human Rights Watch 2001).

Michel Dorais's (2002) interviews with gay and bisexual men in Québec, who had experienced sexual abuse in childhood, concludes that they frequently suffer "depression, confusion and uneasiness about sex, and even loss of control over their love lives, mak[ing] meaningful self-protection more difficult" (Dorais 2004:119) as they become adults.

Sensation seeking

People, who more often agree that they like such activities as bungee jumping, skiing fast, and fast driving, who indicate that they are easily bored, or that other people see them as risk takers, score higher on a scale that some psychologists sum up as *sensation seeking*. Studies of UAI in gay men may, as well, ask if they agree with such sexually specific statements as, "I like wild uninhibited sexual encounters," as part of their measure. Though not every study that checks this out reports a significant association, several find that high scorers on sensation seeking are more likely to report UAI (Dolezal et al. 1997; Chng and Géliga-Vargas 2000; Kalichman et al. 2002; Parsons and Halkitis 2002; Crawford et al. 2003; Bancroft et al. 2003; Bancroft, Carnes and Janssen 2005).

Sensation seeking is typically considered a personality trait. Less easy to discern are the social conditions that may enhance or inhibit this set of responses. Fully 43.3% of the respondents in the Toronto Pride 2005 survey (Adam et al. 2006b) agreed that "I like the emotional rush of pushing my limits," a statement which could be read as a form of sensation seeking. This set of men was significantly associated with going to bars (OR=1.94, $p<.001$) and dance clubs (OR=2.33, $p<.001$) and with men under 25 (OR=2.75, $p<.001$). It may be that the experience of the gay scene, especially for young men, enhances "sensation seeking." Again, from the perspective of the Pride survey, this age cohort also reports elevated rates of both protected and unprotected sex when compared with men over 25.

Personal disruption, depression, and social isolation

Broad-based surveys of risk factors frequently identify depression as more common among those having UAI (Gold, Skinner and Ross 1994:480; Hospers, Molenaar and Kok 1994; Semple, Patterson and Grant 2000b:426; Beck, McNally and Petrak 2002; Kalichman et al. 2005b). Of the few studies that focus specifically on depression, it appears that "long-term, low-grade" depression is associated with UAI, rather than acute depression (Rogers et al. 2003:273; Koblin et al. 2006).

Qualitative studies give some insight into how this everyday depression works (Odets 1995:230; Adam, Sears and Schellenberg 2000; Adam et al. 2005a; Schwartz and Bailey 2005:66; Wolitski and Bailey 2005:154). Episodes of UAI may follow major stressful events such as job loss, financial crisis, moving to another city, homophobic victimization, breakup with a partner, or death of a partner (Boulton et al. 1995; Vincke and Bolton 1995:197; Gilbart et al. 2000:54; Calzavara et al. 2001). Personal disruption and depression can affect the sense of being in control of one's life and capacity to care for oneself.

> Prevention messages call on an autobiographical narrative that life is worth living and that something done now makes sense because the future is a desirable place to be. However, depression and personal turmoil can pull away the underpinnings of this belief. If life does not seem worth living now and the future appears bleak as well, then self-preserving actions no longer make sense (Adam et al. 2005a:242).

Though depression is typically treated as a personal problem and mental health issue that may be best resolved through therapy, it may also be another face of social isolation. The many measures that show a statistical association between UAI and lack of social support only begin to hint at the social circumstances in which many gay and bisexual men find themselves. In western industrial societies, gay and lesbian worlds have arisen in often inhospitable socio-historical conditions: the Judeo-Christian traditions of European societies and the settler societies they engendered offered no place for homoerotic bonds, unlike many of the societies they subdued in Asia, Africa, Australia, and Latin America (Adam 2002). Homosexually interested men and women have had to build social enclaves of their own over the centuries. Only in recent decades have these enclaves become sufficiently well-developed to support extensive social networks, voluntary organizations, social services, and new forms of kinship (Adam 2004). Nevertheless, contemporary advanced industrial societies continue to value and expect competitive individualism among their citizens, and especially among men. Men who wish to form intimate connections with other men in these societies must go "against the grain" usually by finding their way to gay venues. There is a good deal of social theory devoted to the ways in which contemporary societies increasingly cast their members adrift from the traditional ties of family and community (Giddens 1992; Bauman 2000). Lesbian, gay, bisexual, and transgendered people, who cannot always count on the support of their families and communities of origin, are especially likely to be on the front lines of these trends. In a sense, then, social isolation is the "default" condition of homosexually interested men: they typically enter into a new world of gay venues–increasingly in virtual space–where they must forge connections with other men in a world of strangers. While a great many men find the gay world to be a realm of opportunities and solace in which they acquire partners and friends, many others continue to struggle with, or reconcile themselves to, the difficulties of transitioning from social isolation to social support (Prieur 1990:109; Flowers et al. 1998). It is scarcely surprising, then, that considerable numbers of gay and bisexual men register on measures of social isolation and depression in association with UAI (Hospers, Molenaar and Kok 1994; Gold 1995; Martin and Knox 1997; Dilley et al. 1998; Myers et al. 2003; Wolitski et al. 2004:S104; Fernández et al. 2005). Summing up the views of HIV-positive gay men they interviewed, Perry Halkitis and Leo Wilton (2005:24) state,

> The emotional burdens of being gay, being HIV-positive, and for some being single were, at times, overwhelming for many of the men. These burdens led to feelings of loneliness, depression, and guilt....Many indicated that sex was a means to eradicate these negative feelings, albeit only temporarily....Frequently, loneliness was the negative affect that many of the men sought to escape through sexual encounters.

Contemporary gay worlds arose over the centuries as men encountered each other in the public spaces created in industrial societies, such as parks, railway stations, streets, and baths. These spaces, supplemented by the internet in recent years, remain the point of entry for many men to homoerotic connection. They are spaces which are characterized, perhaps paradoxically, by the anonymous exchange relations of market-based society and yet at the same time are the starting point for sexual intimacy. The leap from anonymity and social isolation to intimacy and

social support is not quick or easy for many. Depression and social isolation have been found to be elevated, in particular, among men participating in quick-sex environments who express a desire in interviews for a sense of physical connectedness through human touch (Sowell, Lindsey and Spicer 1998:67; Parsons and Halkitis 2002; Kalichman et al. 2005b). A study of young gay men found as well that their

> attempts to conform to a free-love lifestyle often conflicted with their need for emotional attachment and support. Many younger men expressed difficulty in finding emotional intimacy within the gay community (Seal et al. 2000:9).

Many of these psychological indicators point toward different ways of being-in-the-world. Contemporary advanced industrial societies call on their citizens to be competitive, rational, free individuals and indeed much of health studies and HIV prevention programming participates in this vision of human subjectivity (Adam 2006a). This individualistic rhetoric rests more comfortably with the more privileged members of society, who more often have the luxury of feeling free to do and have what they want, but makes less sense for people lacking these opportunities and having more restricted life-chances (Adam 2005b). For people whose life experience includes significant violence, poverty, or social subordination, their sense of self may be shaped more by experiences of being controlled by others rather than being in control. For them, HIV may represent yet another looming danger that they feel largely unable to avoid. In these circumstances, fatalism appears as a correlate of UAI (Kelly 1990; Odets 1995:208-10; Graham et al. 1998:634; Prieur 1998:92; Díaz and Ayala 1999:288; Dilley et al. 2002:241; Muñoz-Laboy, Castellanos and Westacott 2005:38).

> To the extent that persons do not hold positive views for their future, and to the extent that life is currently lacking satisfaction, motivation to initiate and maintain risk reduction changes is likely to be weaker (Kalichman et al. 1997:545).

Personal turmoil, depression, social isolation, and fatalism are scarcely independent "risk factors" existing in separate spaces, rather they can have mutually reinforcing power and can interact, in turn, with drug and alcohol use, as well as other precipitating circumstances.

Drug and alcohol use

The relationship between drug and alcohol use with UAI is one of best developed areas of research. There is no lack of studies that find an association between rates of UAI and the use of "club drugs" (Kalichman et al. 1997:544; Barrett, Bolan and Douglas 1998; Ekstrand et al. 1999:1530; Choi et al. 1999:50; Vanable et al. 2000:139; Kalichman, Benotsch and Rompa 2001; Ekstrand et al. 2002; Klitzman et al. 2002; Bancroft et al. 2003:566; Colfax et al. 2004; O'Connell et al. 2004:19; Fernández et al. 2005:i84; Morin et al. 2005:230; Parsons et al. 2005c:33) and the use of alcohol with or without other drugs (Kelly et al. 1991:166; Fisher et al. 1998; Dufour et al. 2000:276; Purcell et al. 2001:192; Chesney et al. 2003; Koblin et al. 2003; Rogers et al. 2003:273; Hirshfield et al. 2004:1041; Vanable et al. 2004:529; Wolitski et al.

2004:S105; Koblin et al. 2006:735). Statistical correlations can be found, as well, between UAI and amyl nitrite (poppers) (Hogg et al. 1993:425; Kalichman, Kelly and Rompa 1997:373; Robins et al. 1997:247; Ekstrand et al. 1999:1530; Calzavara et al. 2001; Purcell et al. 2001:194; Rogers et al. 2003:273; Wolitski et al. 2004:S105). Drug use is implicated in higher rates of condom breakage (Stone et al. 1999:500) and with recent sero-conversion (Calzavara et al. 2001:61B; Remis et al. 2001:61B; Buchbinder et al. 2005:83).

The evidence is strong, then, for a relationship between substance use and unprotected sex, so would a "just say no" policy result in a major reduction in HIV transmission? A closer look at the research suggests a more complicated story. There are certainly studies that look for, but cannot find, a significant association between drug use and UAI (Thornton and Catalan 1993; Semple, Patterson and Grant 2000b; McCoul and Haslam 2001; Bolding, Elford and Sherr 2002). Interviews with recreational drug users show that their own perception of drug use is that it is not causal in and of itself. Gilbart (2000:54) and colleagues found, in their comparison of men who had recently sero-converted with those who had not, that "in only three cases was this [drug use] stated in isolation, the rest feel that emotional issues had resulted in the use of drugs/alcohol as a means of release/escapism." The fact that significant numbers of men seem capable of consuming a great deal of drugs while maintaining consistent safe sex practice suggests that it is not simply the physiological effects of drugs that determine UAI but that other factors must also be at play. Anthropological research shows that people typically become drunk in socially expected ways: in societies that expect quieting effects, people often become quiet while drinking; in societies that expect belligerence, drinkers behave accordingly (MacAndrew and Edgerton 1969). Where drinking or drug use offers an alibi for behaviour out of the ordinary ("boy was I drunk last night" was a classic excuse of men who do not want to admit their homosexual desires), then it may indeed result in the desired behaviour (Rhodes and Cusick 2002; Aguinaldo and Myers 2006). This realization has led some researchers to pursue co-factors in the drug use story (Gold and Skinner 1992; Paul et al. 2001; Aguinaldo et al. 2002). David McKirnan (2001:151) and associates found that those expecting to experience "sexual escape" with drug use were more likely to have unprotected sex than those who did not. In a major Toronto-based qualitative study of drug use, Ted Myers (2004:222, 225) and associates conclude that

> the effects of substances varied not only by the type of substances used or the expectations of the participants who use them, but also by the context in which the same substance is used....Risky sex does not result from the simple exposure to drugs or alcohol before or during sexual behaviours, but rather depends on mitigating factors such as the personal convictions of the individual, as well as the decision-making processes that occur well throughout the sexual act.

Club drugs or "party drugs" have a long established role in some sectors of the gay world. One need only look at the 1933 novel, *The Young and Evil*, to see how entrenched marijuana and cocaine use were in the Greenwich Village scene in the 1920s (Ford and Tyler 1988). Observers of today's circuit parties and the "party and play" scene refer to the "tribalism," "esprit de

corps," and sense of communion that attract a segment of the gay and bisexual population (Green 2001; Slavin 2004; Ghaziani and Cook 2005; Westhaver 2005). Considered in the context of findings around "social isolation" discussed above, club drugs have found a function that is not easily displaced as they facilitate a sense of connection so desired by participants.

In recent years, a good deal of attention has been focussed on crystal methamphetamine with both quantitative measures (Mansergh et al. 2002:656; Kalichman et al. 2004:10; Morin et al. 2005:230; Schilder et al. 2005:342; Spindler et al. 2006; Trussler, Marchand and Gilbert 2006) and qualitative interviews pointing to a nexus with unprotected sex (Semple, Patterson and Grant 2003:142; Gorman et al. 2004:9). Some of that risk may be due to taking a receptive sexual role in response to the erectile dysfunction that can occur with crystal meth use (Halkitis, Wilton and Galatowitsch 2005:710). Still, the causal role of methamphetamine may not be entirely evident. As Perry Halkitis (2005:713) and associates argue, "The question of causality becomes unclear as our data indicate that methamphetamine does not necessarily induce risk behaviors on its own, but may attract certain hypersexual men who are already predisposed to risk behaviors." Interviews with crystal meth users raise some by-now familiar themes. Steven Kurtz (2005:65) reports

> three main patterns to respondents' motivations to use crystal: escaping loneliness, dealing with feelings of sexual unattractiveness, and lowering sexual inhibitions. In a more general sense, these problems appeared to stem from deep-seated feelings of being unloved and unlovable.

Club drug users, and meth users in particular, appear to be at the core of a particular circuit or micro-culture in which barebacking is prevalent (Patterson and Semple 2003; Reback, Larkins and Shoptaw 2004; Larkins et al. 2005) (discussed further below).

Couple communication and interaction

Couple formation poses its own vulnerabilities to HIV transmission. Though monogamy (or abstinence) is often touted by powerful government and religious organizations as the solution to HIV transmission, it is precisely the promise of a "haven in a heartless world" associated with becoming a couple that leads partners to let down their guard and perhaps paradoxically increases vulnerability. As a casual partner becomes a regular partner, condom use frequently declines. Many couples make this transition "by the book" as recommended by AIDS service organizations: they test for HIV, retest, and if sero-concordant, drop condoms. Susan Kippax (1997:19-20) and colleagues, recognizing that much UAI need not be risky in fact, coined the term *negotiated safety* to refer to "a strategy where sexual partners in an HIV-seronegative concordant regular relationship agree to dispense with condoms for anal intercourse within their relationship while, at the same time, negotiating an agreement about sex outside the regular relationship." Nevertheless, perhaps as many new couples simply slip away from condom use over time without having taken the deliberate and methodical steps recommended by the

experts (Adam et al. 2005a). Subsequent research on negotiated safety shows that practice does not always attain the ideal of risk reduction (Vroome et al. 2000; Kippax et al. 2003; Guzman et al. 2005; Adam 2006c).

As long as condom use implicitly communicates distrust of a partner, dropping condoms can function as a tacit sign of trust and of the increasing seriousness of a relationship. Gay and bisexual men are scarcely unique in this and research confirms how widespread this practice is (Hospers, Molenaar and Kok 1994:302; McLean et al. 1994; Boulton et al. 1995:621; Carballo-Diéguez et al. 1997; Flowers et al. 1997:82; Díaz and Ayala 1999:287; Adam, Sears and Schellenberg 2000; Cusick and Rhodes 2000:480; Middelthon 2001:70; Davidovich, de Wit and Stroebe 2004; Morin et al. 2005). Even among sero-discordant couples (where one partner is HIV-negative and one, HIV-positive), these meanings can exert a strong influence (Remien, Carballo Diéguez and Wagner 1995:437; Odets 1995:212; Adam and Sears 1996; Dilley et al. 1998:322; Slavin, Richters and Kippax 2004:45; Theodore et al. 2004). As Tim Rhodes (1997:215) remarks

> In the context of relationships where one partner is HIV positive, unprotected sex can be considered to communicate feelings of 'love' and 'commitment' in even more powerful ways than would be the case if both partners were negative.

Studies of men who have recently sero-converted frequently find that "being in love" was the risk factor that led to unprotected sex (Silvestre et al. 1989:649; Bartos, McLeod and Nott 1993:51; Ames, Atchinson and Rose 1995; Bochow 1998:48; Gilbart et al. 2000). Monogamy can, of course, greatly reduce risk but it can also unwittingly enhance risk. As one Toronto study participant noted

> I think my partner assumes like, monogamy, which I also do. I know that the reason why, say, we're having unprotected sex is because he guarantees to me that ...we're in a monogamous relationship.... I hate to see all that trust that he put on me. It's like, but if I fool around with someone else, you know, I'm obviously not going to say anything (Adam et al. 2005a:244).

It is precisely this inhibition that can lead to raised HIV risk in a monogamous context.

Setting and social interaction

Risk can be a by-product of social setting as different venues have their own rules of engagement as men encounter prospective partners. Settings with a reputation for quick sex–such as baths, parks, sex clubs, sex parties, public washrooms, and some websites–tend to operate more by the rules of the marketplace, namely *caveat emptor* or buyer beware. Scottish men characterize the sexual culture as "primarily non-verbal, and with few social consequences....Sexual behaviour itself was understood to be unstructured and men reported

feeling very little obligation to their partners (for example, in terms of reciprocity)" (Flowers, Marriott and Hart 2000:81), a view confirmed by men in New York (Parsons and Halkitis 2002:821) and Amsterdam (Hospers, Molenaar and Kok 1994). While many men have no problem consistently practising safe sex in such environments, men with multiple partners and higher rates of UAI are often particularly attracted to them as well (Gold and Skinner 1992:1027; Sowell, Lindsey and Spicer 1998; Díaz et al. 1999b:493; Ekstrand et al. 1999:1530; Binson et al. 2001; Parsons and Vicioso 2005:197). It is in these same venues that Vancouver men more often report feeling "pressure for sex without condoms" (Trussler, Marchand and Gilbert 2006:44). Despite the ostensibly impersonal grounding of quick-sex environments, it is still important to keep in mind that men make use of them to come together with other men and transcend their isolation as individuals. The voices of participants in these scenes are not much represented in research, fiction, or other media, but in one of the few instances that can be found on the record, a respondent remarks that "clubs had a healing force. The ability to touch other men and be touched was a force that he felt kept him well" (Sowell, Lindsey and Spicer 1998:67).

Statistical analyses repeatedly find a positive association between internet use and UAI (Benotsch, Kalichman and Cage 2002:182; Hospers et al. 2002:543; Tikkanen and Ross 2003:122; Bolding et al. 2004:995; Kalichman et al. 2005b:247) but further investigation shows that it is not so much that the internet "causes" UAI but that sexually active men, including those with higher rates of UAI, seek partners through the internet. Comparison of the on-line and off-line behaviour of gay and bisexual men finds that rates of UAI are not significantly different between the two (Bolding et al. 2005:966; Hospers et al. 2005:1100; Horvath et al. 2006). Similarly, it is not easy to tell if the higher rates of UAI reported by David Whittier (Whittier, St Lawrence and Seeley 2005) and associates, among men on vacation at a gay resort are a function of the resort setting, of the type of men attracted to such a resort, or both.

Disclosure

In settings governed by non-verbal expectations, disclosure of sero-status is, not surprisingly, unusual (Reback, Larkins and Shoptaw 2004; Sheon and Crosby 2004:2111; Hart et al. 2005; Stirratt 2005). Would mutual disclosure of sero-status significantly slow the HIV epidemic? The courts in Canada want to rely heavily on this strategy insofar as the Cuerrier decision, issued by the Supreme Court, obliges HIV-positive people to disclose or else face criminal prosecution. Several HIV-prevention interventions directed toward HIV-positive people also take disclosure as a fundamental prerequisite of risk reduction.

Disclosure has very different implications for HIV-positive and HIV-negative people. Some people living with HIV report that

> rejection from partners following disclosure took many forms, including refusal to have sex, unwillingness to engage in particular sex practices, emotional distancing, abrupt or longer term relationship dissolution, and even (although rarely) acts of violence (Stirratt 2005:103).

Though this kind of reaction is relatively infrequent, and indifference and acceptance are more common, the threat of rejection raises the disclosure stakes considerably. A minority of HIV-positive men are willing to announce their sero-status upfront and every time, but for many others, it is a process of testing the waters or dropping hints. Some

> conveyed their serostatus to their partners by mentioning or exhibiting various embodiments of their serostatus: that they received disability payments, worked in HIV/AIDS services, lived in an HIV/AIDS residence, or had visible HIV/AIDS symptoms (Stirratt 2005:114).

Similar strategies are employed by men living with HIV in Toronto (Adam 2005b:340) and Ohio (Serovich et al. 2005). Those who disclose consistently

> reported significantly higher levels of self-efficacy to disclose, intentions to disclose, and perceived responsibility to protect others from infection; increased feelings of connection to other HIV-positive men; stronger beliefs about HIV/sexually transmitted disease transmission and viral consequences of unprotected sex; lower levels of hedonistic assumptions than either inconsistent or non-disclosers" (Parsons et al. 2005a:S91-92).

Disclosure is much more common with better-known partners; less with casual partners (Marks and Crepaz 2001; Hart et al. 2005:163; Larkins et al. 2005:527). Disclosure is not easy and there is considerable evidence that HIV-positive men are over-represented in quick-sex settings precisely because disclosure can be avoided (Parsons and Halkitis 2002:823; Larkins et al. 2005:526; Vicioso et al. 2005:17).

Disclosure as a prevention strategy, in the end, has several pitfalls: it presumes both prospective sex partners are certain of their sero-status, it tacitly transfers responsibility for safe sex to HIV-positive people, and raises the prospect of becoming enmeshed in legal processes (Collins et al. 2000; Simoni and Pantalone 2005). Disclosure is not necessarily associated with higher rates of protected sex (Marks and Crepaz 2001; Kalichman et al. 2002:681) if only because most gay and bisexual men continue to practise safe sex most of the time without needing verbal communication to do so. Indeed consistent safe sex practice usually does not need discussion and proceeds without it (Henriksson and Månsson 1995:170). Those who decide, encounter to encounter, whether to disclose or not, and who then disclose inconsistently have higher rates of UAI than those who consistently disclose or do not disclose (Hart et al. 2005). Demanding discussion of sero-status in advance of a decision about protection may insert an unnecessary and fallible step into safe sex practice.

Circuits and currents

Risk has a social and interactive dimension associated with distinct social niches, circuits, or micro-cultures. While men may share some psychological or demographic characteristics that

can be picked up in survey research, these characteristics may be less important than the fact that they move in similar circles, connect and communicate with each other, and over time develop common understandings and orientations toward sex and risk among other things. These circuits and currents are often not detected well by research that groups men who have sex with men into a single category and then looks for general trends or average behaviours. Yet they are important, as men in different micro-cultures carry different sets of assumptions into social and sexual interaction and act according to different sets of rules that make sense of sex and risk. To use phenomenological language, this is the difference between a group *in itself* and a group *for itself*, that is, the difference between a collection of unrelated individuals who might fall into a category created by an outside observer, and a collectivity of individuals who recognize a degree of commonality with each other, have some identification with each other, a degree of shared experience, and history (Sartre 1968). While a good deal of health studies employs the term *men who have sex with men* intentionally to negate the cultural dimension of gay people (Young and Meyer 2005), it is precisely the social dimension of men interacting with other over time that is fundamental to risk perception and management. In recent years, terms like *poz* have come to refer to HIV-positive men who do not "just happen" to be positive, but who have a sense of commonality and some shared understandings that come from living positive in western societies. Practising protected or unprotected sex depends a good deal on its acceptability among peers (Thornton and Catalan 1993; Barrett, Bolan and Douglas 1998:386; Chesney et al. 2003:935; Morin et al. 2003:357; Hart, Peterson and Community Intervention Trial for Youth Study Team 2004:1122) and peer groups over time may coalesce into micro-cultures and circuits.

The circuit that has attracted a good deal of recent research (and even more speculation) is the bareback circuit. Though *barebacking* can be used to refer to any kind of unprotected sex, it more often carries the implication of intentional and regular unprotected sex (Adam 2005b:338). Men identifying themselves with barebacking have some shared beliefs and assumptions that distinguish them from other gay and bisexual men around them. Employing a rhetoric of individualism, personal responsibility, consenting adults, and contractual interaction, they presume that men who do not take the initiative in safe sex "must be" rational calculators of risk who are very likely HIV-positive (Adam 2005b; Van Kesteren et al. 2005:156; Wolitski and Bailey 2005:152). Cathy Reback (2004:94) and associates typify the views of the men they interviewed as follows:

> Participants tacitly signed onto the social contract that states the primary responsibility to disclose HIV status is placed on the sexual partner. Many claimed to operate from the assumption that people are responsible for their own bodies, and that feelings of responsibility toward another are not obligatory. The participants referred to an "unspoken rule" that men in public sex environments who did not initiate a discussion on disclosure were either HIV-infected or did not care about their health.

Indeed many HIV-positive men read the willingness of their partners to engage in unprotected sex as itself evidence that partners are already HIV-positive (Semple, Patterson and Grant

2000a:352; Rhodes and Cusick 2002:222; Richters, Hendry and Kippax 2003:47; Gorbach et al. 2004:516; Smith et al. 2004:25; Adam 2005b:340; Larkins et al. 2005:526; O'Leary 2005a:125; Stirratt 2005:114). HIV-negative men, on the other hand, do not make this assumption, or assume the opposite–that partners willing to engage in unprotected sex "must be" negative (Körner et al. 2003:49; Van de Ven et al. 2005:18). These presumptions appear to be age-related, as well, in the Toronto Pride survey, with men under 25 significantly more likely to believe that willingness to have unprotected sex indicates negative serostatus and men over 35 believing it indicates sero-positivity (Adam et al. 2006b).

It is critical to note that while most (but not all) barebackers are HIV-positive, most HIV-positive men are not barebackers. Many practise safe sex and many more employ risk reduction techniques if a condom is not used. Still, the development of a bareback current among poz men may account for a cascade of recent evidence showing elevated and rising rates of UAI among HIV-positive men with casual partners of unknown or negative HIV status (Fisher et al. 1998; Grulich et al. 1998:2508; Chen et al. 2003:168; Dodds et al. 2002; Elford, Bolding and Sherr 2002; Mansergh et al. 2002:658; Rogers et al. 2003:273; Elford et al. 2004:453; Hospers et al. 2005:1100; Morin et al. 2005:230; Whittier, St Lawrence and Seeley 2005:100; Cox et al. 2006; Frankis and Flowers 2006:57; Peterson and Bakeman 2006; Dodds et al. 2006). The Ontario Men's Survey (Myers et al. 2004) found that 30 percent of HIV-positive men reported having UAI with a partner of unknown serostatus during the previous year, and 19.9 percent with a partner they assumed to be negative. A survey done at Toronto Pride 2005 shows that "nearly half (47.5%) of HIV+ participants and 14.1% of HIV-negative participants had either unprotected insertive or receptive anal intercourse with a partner of opposite or unknown HIV status" (Hart et al. 2006). New outbreaks of sexually transmitted diseases, such as syphilis and LGV, appear to be centred in the same population (Fenton and Imrie 2005; Achonu et al. 2006; Gully, Kropp and Wong 2006).

Men identifying with bareback language and labels may account for a significant amount of the unprotected sex happening today. In the Toronto Pride survey, half of the men who indicated that they had unprotected sex to the point of ejaculation in the previous six months also indicated that they participated in the "bareback scene" or cruised "bareback websites" (Adam et al. 2005c). They are also much more likely to have had unprotected insertive sex without coming compared to other gay men. Sydney-based researchers (Kippax et al. 1998) report on a "culture of sexual adventurism as markers of HIV seroconversion" characterized by significantly more UAI among those interested in fisting, sado-masochism, group sex, etc. The Toronto Pride survey found that participants in the bareback scene were much more likely to report participation in the fisting scene (OR=9.30, $p<.001$), party-and-play (OR=5.97, $p<.001$), SM (OR=3.91, $p<.001$), and private sex parties (OR=3.06, $p<.001$). It does not follow from these statistical associations that these practices are in themselves likely to transmit HIV. Often enough, poz men come to these scenes after sero-converting, not before (Smith et al. 2004:20). What they do suggest is a circuit or micro-culture with shared sexual values and practices where condom use has been largely dropped.

Condom trouble

Through the quarter century of the AIDS epidemic, condoms have remained the single technology with a proven track record for avoiding HIV transmission. Researchers have documented, throughout this period, a set of negative attitudes toward condoms that are more common among men who have UAI (Crawford et al. 2001:168). Again, it is important to remember that the majority of gay and bisexual men successfully use condoms most or all of the time, and many find them no hindrance to their sexual pleasure. Some feel a favourable association with condoms as they can signify sex that is about to happen; others like them for limiting over-stimulation or for their hygienic qualities (Janssen et al. 2001:46). But some find condoms to be more than an inconvenience and experience considerable difficulty in keeping an erection. Condom-avoidance rationales tend to fall into two major themes: (1) physiological: they are de-sensitizing (Hospers, Molenaar and Kok 1994:301; Zwart, Kerkhof and Sandfort 1998:96; Rader et al. 2001:157; Mansergh et al. 2002:656; Semple, Patterson and Grant 2000a:350; Janssen et al. 2001:46; Dilley et al. 2002:241; Adam et al. 2005a:240; Whittier, St Lawrence and Seeley 2005:99), and (2) symbolic: they signify a barrier to intimacy and to its sexual expression through insemination (Bartos, McLeod and Nott 1993:52; Zwart, Kerkhof and Sandfort 1998:97; Díaz and Ayala 1999:285; Middelthon 2001:68; Mansergh et al. 2002:656; Myers et al. 2002). Studies of sildenafil (Viagra) use among gay and bisexual men find a statistical association between its use and UAI (Sherr et al. 2000; Chu et al. 2003:191; Marks et al. 2005:272; Swearingen and Klauner 2005:574). The positivist interpretation of this relationship is simply that Viagra leads to UAI, but considered in light of the well-documented relationship between erectile difficulties and UAI, it is more likely that erectile difficulties lie behind both Viagra use and UAI.

Erectile difficulties tend to increase with age, and appear to be more common in men taking medications for HIV (Meyer-Bahlburg et al. 1991:19; Chu et al. 2003:192; Cachay, Mar-Tang and Mathews 2004; Bancroft, Carnes and Janssen 2005; Purcell et al. 2005:S62). In the Toronto Pride survey, agreement with the statement, "If I lose my erection with a condom on, I prefer to have sex without it," strongly distinguishes men practising UAI from those who do not. Men under 35 are significantly less likely to agree with the statement (OR=0.57, $p<.05$) than men over 35 (OR=1.47, $p<.05$). HIV-positive men are much more likely to agree (OR=2.11, $p<.001$) and this statement strongly distinguishes self-identified participants in the bareback scene from those who are not (OR=5.40, $p<.001$).

The connection between erectile difficulties and UAI is confirmed in several studies (Dilley et al. 1998; Myers et al. 2002; Bancroft et al. 2003:567; Rhodes and Cusick 2002:218; Richters, Hendry and Kippax 2003:44) and may lie behind intermittent or delayed condom use during the same sexual episode when insertion without a condom is tried out to enhance an erection, then followed with a condom for ejaculation (Calzavara et al. 2003; Adam et al. 2005a). In the most sustained investigation of erectile difficulties and unsafe sex that has been done to date, Jeff Cove and Jenny Petrak (2004:734) show a strong relationship between negative attitudes towards condoms and trouble maintaining an erection. Men with erectile dysfunction

> report being more excited by sex without condoms (x^2=12.7, *P*=0.005), a greater dislike of condoms (x^2=14.7, *P*=0.005), wanting to lose themselves in sex and not have to think about HIV (x^2=10.4, *P*>0.03), and wanting the active partner to decide whether condoms get used (x^2=13.4, *P*=0.09).

Rafael Díaz (1997a:230; 1997:15-16) notes that condom use can be complicated by performance anxiety, especially among Latino men assuming a top role.

> The main concern is that condoms, and their implicit connection to illness and death, would make them lose their erection. This is perceived as a great source of embarrassment by the insertive partner—yet another failure at masculinity. The loss of an erection is apparently equated with the collapse of the macho façade that reveals the true *loca pasiva* inside.

Treatment optimism

Perhaps the leading explanation for unprotected sex, reproduced repeatedly in public health and the mainstream press, is treatment optimism. The theory is generally understood to refer to an increasing complacency among gay and bisexual men since the introduction of more effective treatment for AIDS in the form of the protease inhibitors and subsequent classes of medication. AIDS has come to look less frightening now that HIV-positive people are leading longer healthier lives and returning to work, so gay men do not care so much about becoming infected with HIV, or so the argument goes. The popularity of this hypothesis has led to a great deal of research funding going into finding treatment optimism–so much in fact, that it risks taking on the dimensions of other public health scares like West Nile virus or avian influenza. The more money devoted to finding it, the more it is found; the more it is found, the more attention it gets. Unlike West Nile virus, treatment optimism is not a biological entity but rather a belief discovered through asking people if they agree with certain statements, and as gay men read papers and watch television (like everyone else) where treatment optimism is widely promoted as *the* explanation for unsafe sex, it raises the question of the degree to which treatment optimism may be increasingly induced into the population then picked up by researchers, who purvey it to the media, into yet another grand feedback loop. So powerful has this idea become among public health officials, that there have been ruminations at AIDS conferences about whether antiretroviral treatment (ART) "causes" complacency about HIV risk, and thus whether the introduction of ART may be harmful in stemming the epidemic in underserved countries (International HIV/AIDS Alliance 2003:45). There are, then, a number of studies that find a statistical association between UAI and agreement with statements taken to be indicative of treatment optimism among men with mixed sero-status (Kalichman et al. 1998a:548; Kelly et al. 1998; Ostrow et al. 2002; Crawford et al. 2003:518; Halkitis et al. 2004:455; Van de Ven et al. 2005:181) or HIV-positive status (Misovich, Fisher and Fisher 1999:245; Miller et al. 2000:F37; Vanable et al. 2000:141; Stolte et al. 2004b:1947; Hart et al. 2006). A meta-analysis of 25 studies on treatment-related beliefs found evidence of a

persistent statistical relationship between decreased concern and fear of HIV (compared to the pre-protease era) and UAI (Crepaz, Hart and Marks 2004). But like several other factors identified in the research literature, its interpretation may not be quite as straightforward as it appears at first glance.

First, it is worth noting that even before the protease inhibitors, researchers were finding some degree of what might be called technological optimism, where faith in science and hope for a cure combined with a wish to deny the full gravity of the AIDS epidemic, resulting in fewer precautions being taken against HIV risk (Perkins et al. 1993:147; Lowy and Ross 1994:475). Secondly, virtually all the studies that do report treatment optimism note, as well, that the numbers of gay and bisexual men who discount the seriousness of the threat of AIDS are very low, typically single-digit percentages (Kelly et al. 1998:F94; International Collaboration on HIV Optimism 2003:548). The numbers are too low to account for more than a fraction of the unprotected sex that is happening and may also explain several studies that have been unable to find any treatment optimism in samples of gay/bi/MSM (Elford et al. 1998; Desquilbet et al. 2002) or even a reverse relationship in the case of never-tested men (Williamson and Hart 2004:835). Third, demonstrating that treatment optimism *causes* UAI has never been easy, just as imputing causation into other findings of statistically significant association has not been easy. Most of the researchers who have found treatment optimism in their studies have been careful to note that while their findings may indicate that treatment optimism leads to UAI, they may also indicate that men practising UAI find it convenient to rationalize their behaviour in terms of treatment optimism after they have already shifted toward UAI (Misovich, Fisher and Fisher 1999:246; Vanable et al. 2000:143; Katz et al. 2002:392; International Collaboration on HIV Optimism 2003:549). In other words, treatment optimism could be as much an outcome as a determinant. More recently, longitudinal examinations of treatment optimism have attempted to get to the bottom of this problem (Elford 2006:27). One study done in Amsterdam argues that treatment optimism does indeed precede UAI based on the approximately 4 per cent of the sample who agreed that HIV is less of a threat since the introduction of ART (Stolte et al. 2004a:307), while the other done in Arizona shows the opposite: "Our longitudinal data further support the hypothesis that sexual risk behavior precedes treatment optimism, rather than the reverse" (Huebner, Rebchook and Kegeles 2004:1517). A recent Swiss study finds that between 1997 and 2004, both treatment optimism and "personal prevention vigilance" have declined together among MSM (Jeannin et al. 2006).

A fourth difficulty with the treatment optimism hypothesis is the rarity of these beliefs in the narratives of high risk men. When interviewed, they raise a great many issues related to their practice of unprotected sex (reviewed above), but treatment optimism hardly ever occurs in explanations of their own behaviour (Miller et al. 2002). In the qualitative follow-up to one of the largest studies of HIV-positive men in New York, Robert Remien and Thomas Borkowski (2005:211) report

> it has become clearer that simple and straightforward conclusions cannot be made about the association between attitudes and beliefs about effective treatments and their link to sexual risk behavior. Neither universal nor consistent patterns between treatment optimism and associated beliefs and risk

> behavior were found; rather, these patterns were contradictory and at times idiosyncratic....although some men spoke about how treatment optimism has contributed to increases in sexual risk behaviors, others spoke about ways in which it has contributed to increases in protective behaviors. Furthermore, associations vary according to whether the concern is about personal health (i.e., reinfection, the development of resistant virus, or the acquisition of coinfections) or the health of others (i.e., transmission of HIV to sex partners).

This would be a fair characterization of the views of Toronto men with high risk sexual practices as well (Adam et al. 2005a).

All of this has led to some reconsideration of the treatment optimism idea, asking just what is it? Is it carelessness now that the sense of urgency about AIDS has diminished in the press? Is it a view that AIDS is now so minor that infection does not matter any more? Or is it a belief that having a low or undetectable viral load means that HIV transmission is no longer a concern? The low viral load hypothesis displaces the AIDS optimism problem but does not really solve it. Once again, some researchers can find some men who discount the need for protected sex because of low viral load (Van de Ven et al. 2005:181; Eaton et al. 2006; Siconolfi and Halkitis 2006); others cannot find it (Diamond et al. 2005:218; Muñoz-Laboy, Castellanos and Westacott 2005:43). And those who do find it note that these beliefs may be "post hoc rationalizations, rather than premeditated cognitions driving the behavior" (Remien et al. 2005:173). Interestingly, even though some research can find a relationship between UAI and the *belief* that low viral load diminishes the need for protected sex, HIV-positive men who report having UAI are just as likely, or even more likely, to have high viral loads as low (Vanable, Ostrow and McKirnan 2003:267; Crepaz, Hart and Marks 2004:234; Kozal et al. 2004:2187; Stolte et al. 2004b).

In the end, treatment optimism may not be so much the driving force behind unprotected sex that it seems in public health and the media, but rather one of several indicators that index the poz and bareback currents that have been emerging in recent years. In other words, treatment optimism may not be so much a "cause" as an element of a larger ideology that has grown up as part of a worldview legitimating the abandonment of condoms by a subset of gay and bisexual men (Mansergh et al. 2002:656). A recent study of 454 men at Atlanta Pride, for example, reports "11 of the 12 men in our sample who were both HIV positive and reported believing HIV was less of a threat also reported unprotected anal intercourse with casual partners" (Peterson and Bakeman 2006:44). Similarly when Cox, Beauchemin, and Allard (2004:521) report that HIV-positive men who have unprotected sex in Montreal are more likely to claim that "(1) taking antiretroviral treatment reduces the risk of transmitting HIV; and (2) there is less safer sex practised by MSM because of HIV treatment advances," is this because they are motivated by treatment optimism, or is their diminished sense of gravity about HIV part of a larger migration toward the bareback worldview?

Age, bisexuality, social class, and ethno-cultural background

Much research attention has focussed on youth, especially in the United States, where rates of UAI appear to be higher than among older men (Robins et al. 1997:244,247; Hospers et al. 2005; Jarama et al. 2005; Morin et al. 2005; Koblin et al. 2006). In Canada and Australia, this pattern is not so clear. Epidemiological evidence does not support the view that young men are taking more risks than older sexually active men (Van de Ven et al. 1997:406; Myers et al. 2004). In the 2005 Toronto Pride Survey, men under 25 reported a slightly higher rate of both protected and unprotected anal sex compared to survey participants as a whole.

Young men often experience considerable opportunity–even exhilaration–in coming into a gay-friendly environment, but also uncertainty and disorientation in a social world that differs from the expectations of home and school.

> When asked directly about their HIV prevention needs, most YMSM [young men who have sex with men] did not mention HIV-specific programme content (e.g. knowledge, skills building). Rather, YMSM indicated a strong need for comprehensive sexuality programmes that addressed issues such as dating and relationships, intimacy and feelings of love. Respondents also stressed the importance of addressing psychosocial factors associated with HIV risk behaviour, such as low self-esteem and self-worth, a lack of self-care and self-love, depression and teen suicide. Other important topics included sexual communication, sexual arousal and passion, drug and alcohol use, sexual identity and sexual abuse and coercion (Seal et al. 2000:8-9).

Bisexual men have also been scrutinized as potential risk takers though findings do not offer clear-cut conclusions. Large surveys of bisexual men find that in many instances, they do not disclose their homosexual relations to female partners (Kalichman et al. 1998b). Though they typically do not practise protected sex with female partners, common to most heterosexuals, they appear to practise protected sex with male partners at rates similar to, or greater than, gay men (Doll and Beeker 1996; Weatherburn et al. 1998; Agronick et al. 2004:194). There is some evidence that among Latino and African American men, as well as working-class Australian men, all of whom are more likely to identify as bisexual rather than gay, that "high-risk insertive UAI" is more frequent than among their gay-identified counterparts (Kippax et al. 1995:135; Myers et al. 2003; Muñoz-Laboy, Castellanos and Westacott 2005:37).
Some research shows that less education is associated with less consistent condom use. Lower levels of education are more common among youth and working-class men and there is some evidence that less-educated, young and/or working-class men have riskier practices (Hogg et al. 1993; Thornton and Catalan 1993; Rodden, Crawford and Kippax 1994:75; Kippax et al. 1995:135; Hope and MacArthur 1998; Janssen et al. 2000:497; Kalichman, Benotsch and Rompa 2001; Buchbinder et al. 2005:83). Paul Appleby (2005:127) and associates found that men who are more future-oriented are less likely to have UAI than men who live for the here and now. This "consideration of future consequences," like fatalism, tends to be a class-linked trait, as

working-class people often experience less ability to control the circumstances around them and thus less confidence in long-term planning.

Sexual interaction can also be sensitive to social hierarchies that prescribe who is desirable and who is not. Men (and certainly women as well) who feel disadvantaged in some way–be it age, ethnicity, or attractiveness–may fear to offend a desirable partner and trade away safe sex lest it prove an obstacle to sexual interaction (Bartos, McLeod and Nott 1993:41,50; Hospers, Molenaar and Kok 1994; Ames, Atchinson and Rose 1995:66; Gold 1995; Zwart, Kerkhof and Sandfort 1998:283; Choi et al. 1999:48; Stokes and Peterson 1998:289; Seal et al. 2000:11; Poon and Ho 2002:64; Wilson and Yoshikawa 2004:77; Adam et al. 2005a:241). (See also the chapter by Trevor Hart, Rodney Blanco and Tyrone Williams)

Interventions

Only a fraction of HIV prevention programs have been subject to rigorous evaluative research. Interventions reviewed in the scholarly literature typically require comparison of two similar groups of people, one of which receives the intervention program and the other does not. Then each group is followed at three, six, or twelve month intervals to see if the group that received the intervention shows less risky behaviour than the group that did not, and to see if the intervention appears to have a lasting effect. (An overview of current prevention programs that are not reviewed in the research literature follows in the third chapter by Sandra Bortolin.)

General overviews of intervention evaluations are now beginning to appear in AIDS journals. A meta-analysis of 39 behavioural interventions focussing on gay/MSM confirms that skills-building programs and popular opinion leaders can be effective (Herbst et al. 2005). Wayne Johnson (2005:580) and colleagues' meta-analysis of interventions directed toward gay/MSM concludes, "The most favorable effects among small group interventions were those addressing perception of risk and losses ("unsafe sex exposes you") rather than gains ("safer sex protects you")." Jean Richardson (2004) and associates similarly report that the message, "your current behavior (unsafe sex) could harm you or others" was more effective than appeals to protecting oneself. Finally, Dolores Albarracín (2005:867) and colleagues, who reviewed 194 research reports, conclude that effectiveness is greater when the intervention is active–participants role-play problem situations, practice applying condoms to a model, or take an HIV test, which involves some form of counselling–rather than passive where participants just receive a communication. They observe that

> samples including men who have sex with men changed more in response to interventions than other samples (...). However, this group was generally insensitive to the type of intervention strategy that was used, with the exception of greater behavior change in response to condom provision and lesser change in response to attitudinal arguments (885)

This suggests that gay and bisexual men may be so eager to see their health and sexuality affirmed in a public way, that they respond to public authorities paying attention to them, as much as they respond to any particular message.

Interventions fall largely into three major camps: (1) recruitment and training of popular opinion leaders, who in turn, are expected to influence their peers, (2) training courses delivered over several weeks that address a select population about issues believed to be central in safer sex decision-making, and (3) on-line interventions that are not easily evaluated. Social marketing campaigns, that attempt to promote a few basic messages to a large population, have little presence in the research literature because of the difficulty of evaluating their effectiveness.

Popular opinion leaders

Jeffrey Kelly (1991; 1997; 2004) and associates started with bartenders in four small cities in Wisconsin, New York, West Virginia and Washington who identified "names of the people they judged to be the most popular with the other men" in the local gay bar. They then trained these "opinion leaders" in two-hour sessions each week for five weeks on the

> importance of the carrying of condoms at all times, discussion of risk-reduction precautions with partners before sex, avoidance of sex when intoxicated, or refusal of unwanted sexual coercions. We also taught them to communicate benefits of change, to correct listeners' misconceptions about risk, and to identify safer-sex practices as socially acceptable norms (Kelly et al. 1997:1502).

The opinion leaders, estimated to make up about 8 percent of the total bar population, then promoted these ideas to the men around them. In follow-up surveys, the researchers report a 30 percent drop in UAI and a 50 percent increase in protected sex when compared with a set of small city bars that did not receive the intervention.

The popular opinion leader model has subsequently proven less successful in the United Kingdom (Elford, Bolding and Sherr 2004; Hart, Williamson and Flowers 2004). British researchers wonder if this is because: bartenders do not play such a central role in the gay scene as they do in the United States, the model works best only in small cities with a single major bar, or historical conditions have changed such that basic safer sex promotion no longer has the appeal it once did to gay and bisexual men.

Training programs

The EXPLORE program contained many of the elements typical of training courses: it targeted 2,144 HIV-negative gay/MSM in six US cities with ten

> sessions [which] covered sexual communication, knowledge of personal and others' HIV serostatus in making sexual decisions, and alcohol and drug use in conjunction with risk behaviours. Modules were also offered on how unsafe sex could be triggered by meeting certain types of partners, by places or events related to selection of partners, and by cognitive or emotional cues associated with risk taking (Koblin et al. 2004).

Acquisition of HIV was significantly reduced after six months, measured by survey and blood tests, but after twelve months, the effect of the intervention appears to have washed out.

Thomas Patterson, William Shaw, and Shirley Semple (2003:138) describe a comprehensive program that showed sustained results among HIV-positive men (85% of whom were MSM) and women who had had unprotected sex with partners of negative or unknown serostatus:

> Counselors used techniques associated with SCT [social cognitive theory] to increase knowledge, self-efficacy, and positive outcome expectancies in relation to condom use, negotiation of safer sex practices, and disclosure of serostatus to sex partners. For example, to increase condom use knowledge, participants were provided with information on how to put on a condom, how to store a condom, how to acquire condoms, and so on. With respect to negotiation, participants increased their knowledge by learning five steps in the negotiation process (e.g., know what you want, know what you are willing to compromise, know as much as you can about your partner). In the disclosure module, participants' knowledge levels were increased by learning steps in the disclosure process (e.g., be prepared, know as much as you can about your partner, have a backup plan)....The enhancement of self-efficacy in relation to condom use, negotiation, and disclosure was accomplished through role modeling, role play, practice, and problem solving difficult situations associated with past experiences with the targeted behavior.

Interestingly the investigators found a marked decrease in UAI among all four arms of their study, including an arm devoted to diet and exercise counselling and little discussion of HIV prevention. While some have interpreted this result as a sign of ineffectiveness (because the intervention effect was not statistically distinct from the control), there are at least two other possible interpretations: (1) HIV prevention is not just about safer sex skills development, but may also be influenced by more indirect indicators of well-being. Erectile difficulties, personal turmoil and depression, and self-efficacy (Adam et al. 2005a) may act as risk factors in vulnerability to unsafe sex and these factors may be influenced by health counselling. (2) Sociologists have long noted a "Hawthorne effect" in industrial management studies where workers respond positively to a wide range of different interventions more because management shows that they care about their employees, than because of the particular content of any specific program.

Seth Kalichman (2001:87) and colleagues used scenes drawn from films plus active role playing

in a program delivered to primarily African American HIV-positive men and women, both gay and straight, with the intention of:

> (1) developing skills to effectively cope with HIV-related stressors and sexual risk producing situations, (2) enhancing effective decision-making skills for self-disclosing HIV serostatus to sexual partners, and (3) facilitating the development and maintenance of safer sexual practices.

(More on the *Healthy Relationships* intervention is available at… http://www8.utsouthwestern.edu/vgn/images/portal/cit_56417/51/27/180717HRStarterKit.pdf). Participants reported significantly less unprotected sex with HIV-negative partners or partners of unknown serostatus even after six months. The authors did not break down the results by gender or sexual orientation. Other interventions report variations on this model focussing on improving self-efficacy in negotiating safer sex (Roffman et al. 1998; Carballo-Diéguez et al. 2005; Conner et al. 2005) and/or disclosure skills (Kok 1999; Kalichman, Rompa and Cage 2005).

Some investigators report a measurable impact from risk-reduction counselling done in HIV clinics (Richardson et al. 2004; Kalichman et al. 2005a).

In one of the largest and most intensive interventions developed to date, the Seropositive Urban Men's Intervention Trial (SUMIT) aimed to test

> 6 weekly 3-hour intervention sessions that addressed sexual relationships, HIV and STI transmission, drug and alcohol use, assumptions about the HIV status of sex partners, and disclosure of HIV status. These sessions included large-group activities that gave participants informal opportunities to interact with a number of other HIV-positive MSM and smaller discussion groups that were facilitated by 2 HIV-positive gay men. (Wolitski et al. 2005a:S106).

This program was especially significant in directing itself to HIV-positive men in the epicentres of New York and San Francisco. In the end, researchers found that participants had less receptive UAI (unprotected bottoming) after the six week course, but the effect apparently disappeared three and six months later (S105). Part of the reason for this result may have been a measurement problem that occurred when men in the control group reduced their risk behaviour over time thereby rendering the reduced risk behaviour of the intervention group statistically insignificant (O'Leary et al. 2005b:S112). Using other measures, the SUMIT evaluation showed that "those who had received the intervention displayed a reduced tendency to make HIV-status assumptions,... [were] less likely to think condoms would lose erections..., [had] reduced anxiety..., and reduced depression" after three months (S116). The men who did reduce their risk behaviour were those who subsequently made fewer assumptions about partners' serostatus and regarded condoms more favourably than before (S117). Richard Wolitski and associates speculate that the relative ineffectiveness of SUMIT may also have been due to the influence of some participants in small group discussions who "disclosed that they regularly had unprotected sex, that they believed that their partners should be responsible for

their own health, and that they were not convinced that they could transmit HIV during receptive anal or insertive oral sex" (S107). This may be particularly noteworthy as these views are recognizable as central tenets of the bareback circuit. Earlier interventions directed toward people of mixed sexual orientations and/or mixed serostatuses are less likely to have encountered significant numbers of men identifying with bareback scenes and websites as SUMIT apparently did. As Richard Wolitski (2005b:S2) and colleagues observe, "only a small number of intervention trials have reported significant reductions in transmission risk behavior among HIV-seropositive individuals. None of these recent reports has described an effective intervention specifically designed for HIV-seropositive gay and bisexual men." There is considerable innovative work to be done in this area.

Two New York psychologists working with poz men in the barebacking scene through one-on-one therapy recommend *motivational interviewing* (Shernoff 2006) where the therapist:

- expresses empathy by "see[ing] the client's behavior as contextually understandable and comprehensible" (Parsons 2005b:136-37),
- develops cognitive dissonance by observing "how his current barebacking behavior is in direct conflict with other important personal goals and values (i.e., remaining healthy, maintaining positive self-esteem, protecting others in the gay community),"
- and rolls with resistance as "the client becomes the source of the possible answers, does not feel defeated in sharing his concerns, and is able to take the risk to express his feelings."

Based on their experience with men in many weeks of psychological counselling, they report clients who did shift toward protected sex over time.

Web-based resources

Given the prominence of websites as a meeting place for gay men today, several interventions have been developed in the form of banner ads for services or health workers making themselves available in chat rooms. During the recent syphilis outbreak in San Francisco, health workers found that banners placed in gay.com with the message, "Got a sore or a rash?" had the highest number of click-throughs with 0.14% (Klausner, Levine and Kent 2004:140). Public health provided on-line testing forms that men could take to their nearest clinic. Test results were also made available on-line using a code number. A few major cities have also used http://inspot.org for partner notification. The site allows web surfers to notify partners through their online profile of exposure to a sexually transmitted infection.

In other instances, health workers are logging on to popular chat rooms with a signature that indicates their availability to answer questions about sexual health. Many chatters do contact the worker (Rhodes 2004).

A new generation of websites with good production values are in development to promote HIV prevention information intended, perhaps implicitly, to speak back to bareback websites. See

in particular: http://mysexycity.com/, http://www.safesexcity.com/, and http://gaycruise.nl/ (in Dutch).

Conclusion

HIV is not only an opportunistic infection of immune systems but also of social systems. Its transmission follows the contours of social networks and depends on the social organization of the populations it affects. Gay and lesbian cultures in advanced industrial societies have roots that go back at least three centuries. Men (and later women) began to form the networks that have come to known as *gay* by encountering each other in the new urban territories created or extended through the rise of capitalism: in city streets, parks, railway stations, public baths, and so on (D'Emilio 1983; Adam 1985). These public, anonymous territories remain part of the social sphere of societies such as our own, and supplemented by the internet, continue to be sites where previously unconnected men find each other. It cannot be surprising that these social milieus typically operate according to the norms of the marketplace which shape many of the silences and assumptions that unwittingly facilitate HIV transmission. At the same time, the marvel of it all is the way that entirely new social networks, personal and love relationships among men, and collective solidarity have flourished in the form of self-conscious gay worlds, despite the competitive and dehumanizing effects of the market. Today the social contours of gay communities continue to show the earmarks of their origins. Public and virtual spaces still provide easy access for men of all kinds–including particularly men without personal commitment to, or identification with, things gay–to sexual connection with other men. On this foundation occur the pair bonds, social networks, circuits, and formal organizations that have come to known as LGBT communities, but the personal journey of each (potentially gay) man through these social formations is not necessarily easy or satisfying. It is understandable that for some coming out into commercial venues filled with strangers has as its by-product, feelings of social isolation, depression, sensation seeking, and drug use.

Each of these social formations has its own vulnerability to HIV. Romantic love, trust, and becoming a couple rarely appear in research as "factors" in HIV transmission, but recur frequently in the personal narratives of men who seroconvert. The circuits and micro-cultures of out gay men develop their own world-views and social norms about appropriate personal conduct, some of which presume safe sex every time and others which presume "buyer beware." In San Francisco, the latter view has become so widespread that some observers have become concerned that community norms have reached a tipping point.

> The normalization of the term "barebacking" combined with the media attention and community level discussion about it have contributed to the perception that the behavior is widespread in the community, creating a social pressure to conform. Several respondents reported that in the past they felt peer pressure to use condoms, but now they feel peer pressure to "bareback" (Morin et al. 2003:357).

Nicholas Sheon and G Michael Crosby (2004:2112, 2116) concur in their ethnographic sketch of conversations with San Francisco gay men.

> The narratives suggest that a feeling of embarrassment and a desire not to ''hurt'' their partner's feelings prevents many HIV-negative men from initiating a discussion of HIV-serostatus....A kind of reverse stigma appears to place HIV negative men at a disadvantage when negotiating safer sex with HIV-positive men....Brian's repeated references to his age and being a ''big boy'' suggest a view of HIV disclosure and condom negotiation as something less than mature or manly. The implication is that men who have been ''around for so many years''—i.e. ''real'' men who have a good ''gay resume''—assume HIV risk and remain silent about their status.

Because of this shift in thinking, prevention theorists and workers are turning their attention directly to trying to change community norms (Morin et al. 2003:360). The San Francisco AIDS Foundation has developed a poster that

> displays an anal sex scene, and the man on top is looking directly into the camera. The message reads: "Is he just a piece of meat? Do you care about him at all?" The poster goes on to encourage men to take responsibility for their sex lives and to care about their sex partners (Palmer 2004:274).

This appeal runs against the grain of the traditional prevention message which essentially hailed people to protect themselves against others.

> Homosexuality has perhaps a unique potential to subvert these presumptions [of every man for himself] by creating a capacity to love and care about (an)other man (or men) and be loved and cared about by them. This raises the question of whether appealing to gay men to take care of other men (instead of simply defending themselves against other men) could prove effective in attracting their attention and building community norms. It would be an appeal that would run against leading ideologies in circulation in our society today but one that would likely have considerable resonance among men whose sexual pursuits are often linked with the desire to love and be loved by other men (Adam 2005b:345).

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Research on HIV Sexual Risk Behaviour Among MSM From Ethnoracial Communities

A Synthesis of the Literature

By Trevor A. Hart, Rodney M. Blanco, & Tyrone Williams

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A Synthesis of the Literature

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MSM from ethnoracial communities living in North America and the Western world have typically been underrepresented in both the scientific literature on HIV prevention and in HIV prevention efforts. For purposes of this chapter, "ethnoracial" is defined as encompassing individuals from both ethnic and racial communities that differ from the majority Anglo-Canadian culture in self-identification or in the way that they are identified by others. In order to identify future directions for HIV prevention specific to MSM from ethnoracial communities living in Ontario, Canada, it is important to identify the limited research that has been conducted thus far. As such, this chapter presents a systematic review of the behavioural and social research on HIV risk and prevention relevant to the needs of MSM from ethnoracial communities in Ontario, Canada. This literature review began at the request of, and was directed by the Ethnoracial MSM Research Working Group, a group created by the AIDS Bureau of the Ontario Ministry of Health and Long Term Care to better promote relevant and community-based HIV risk and HIV prevention knowledge among MSM from diverse ethnoracial communities.

Per the recommendations of the Working Group, the reviewers were mandated to examine the available literature specific to HIV risk and prevention among MSM from ethnoracial communities from the year 2000 onward in four major sources. The time period was set at the year 2000 onward in order to collect the more recent literature as well as due to time and staffing constraints within the ten month period between the start of the literature review process in November 2005 until the deadline of the final version of this paper in September 2006. The literature searched for articles related to HIV transmission risk via unprotected sex among MSM using the following terms: "HIV", "AIDS", "transmission", "risk", "unprotected", "sex", "anal", "intercourse", "MSM", "men who have sex with men", "gay", and "bisexual". To further refine the search to MSM from ethnoracial communities, terms specific to ethnoracial communities were also examined, including broad categories such as "Caribbean" and "Asian" as well as more specific categories such as "Jamaican", and "Chinese". Please see Appendix A for a list of search terms used.

The first source included the scientific databases "Medline", encompassing a wide variety of medical and public health journals, "Psycinfo", encompassing various behavioural and psychological journals, and "Sociological Abstracts", encompassing other behavioural and sociological journals. Through this source, 93 journal articles addressing HIV risk behaviour were collected. The second source included scientific abstracts (abstracts are brief summaries of studies typically created for research conferences) from the International AIDS Conferences, the national HIV conferences of the Canadian Association for HIV Research, and the provincial

conferences of the Ontario HIV Treatment Network, which added 52 studies to the review. The third source included unpublished community-based research from AIDS Service Organizations (ASOs) in Canada. This third source was accessed through contacting all known AIDS Service Organizations specializing in the ethnic and/or racial communities encompassed in the review. Requests from AIDS Service Organizations were made via email and in person during the Ontario Gay Men's HIV Prevention Summit sponsored by the AIDS Bureau in May 2006, and resulted in three unpublished community research reports. Two of these reports reviewed other studies that were already published as journal articles (Galati, 2001; Pires & Tsoumbris, 2001), leaving one report (Myers, Travers, Allman, Lau, Maxwell, & Calzavara, 2001), a qualitative review using small samples (<20 participants per sample) of African, East Asian, South Asian, Latino, and Portuguese-speaking MSM and the HIV service providers who serve them in the Greater Toronto Area. The fourth source were articles and abstracts not found via the previous three methods, but that contained a focus on ethnoracial MSM and unprotected sex and that were identified by members of the Ethnoracial MSM Research Working Group. Two articles and one scientific abstract were collected via this method (Bereket, Myers, & Allman, 2006; Dougan et al., 2004; Dougan, Elford, Sinka, Fenton, & Evans, 2005).

The scope of this literature review encompassed the major groups represented at the Ethnoracial MSM Research Working Group: Men of African background, men of Caribbean background, East Asians (e.g., Chinese, Vietnamese; Filipinos), South Asians (e.g., Indians, Pakistanis, Bangladeshis), and Latinos (e.g., Venezuelans, Argentineans, Mexicans). The review also searched for research on ethnic communities not under these major categories but well-represented in Ontario (Statistics Canada, 2005), such as Portuguese-speaking, Italian, and Slavic populations, as well as Francophone Canadians and religious communities (e.g., Muslims, Hindus, Jews). Aboriginal populations were not included in this literature review. This is not to minimize the great importance of examining the current available research on HIV prevention among Aboriginals. Aboriginals were not included in the review as Aboriginal populations are served under a separate HIV/AIDS Provincial Strategy, with separate resources and meetings for Aboriginal populations. White Canadians who do not identify with a given ethnic background identified above were also not included. Although White Canadians clearly represent a "racial group", most studies in the literature of MSM are drawn disproportionately from MSM from White or European backgrounds and are therefore covered in the first chapter (Adam, 2006) of the Gay, Bi, MSM Situation Report.

It should be noted that there are several key limitations of this literature review. Firstly, the review is limited to the research accessible via databases, specific conference abstracts, and reports provided by Canadian AIDS Service Organizations as agreed upon as a first foray into the recent literature on ethnoracial MSM by the Ontario Ethnoracial MSM Research Working Group. As such, there are likely to be studies that were not published, and therefore not accessible to the authors, as well as studies that were not accessible with the search terms used for this review (see Appendix A for the list of search terms used). Secondly, because this review includes research from the year 2000 onward, this document can only discuss these more recent studies. This review should therefore be seen as completion of an initial stage of a work in progress in the effort to review the scientific and community literature on ethnoracial MSM.

This literature review is expected to eventually have an expanded scope both for time period and search terms from databases over time. Because the reviewers are aware of the constraints on this initial stage of the review, some key additional studies and resources that were outside of the scope of the review yet still relevant to ethnoracial MSM can be found in Appendix B. Thirdly, the literature on MSM tended to devote little attention to the ethnoracial diversity found among MSM, and the literature on ethnoracial communities tended to devote little attention to the MSM that are found in these communities. Most research on MSM tends to either 1) ignore the fact that MSM are ethnically and racially diverse or 2) studies a diverse sample of MSM and then fails to report if predictors of risk examined in that study differ by ethnicity or race. This review is therefore limited by the unfortunate lack of attention in the literature to MSM from ethnoracial communities.

Lastly, the review was specific to studies of HIV sexual transmission risk via unprotected intercourse. This review therefore is unable to cover the full breadth of the multifaceted lives of MSM from ethnoracial communities beyond the literature accrued from the research accessed. It is clear that the lives of MSM from ethnoracial communities extend far beyond "sexual transmission risk". However, the review hopes to at least shed light upon what is currently known in the literature about HIV transmission risk among MSM from ethnoracial communities.

To better demonstrate the state of knowledge for each community of MSM, which is more extensive for some ethnoracial communities and quite lacking for others, the review is organized by community. In the literature, two types of factors associated with sexual behaviour that may lead to the transmission of HIV via unprotected sex to uninfected partners were identified. The first group includes social factors, that is, those factors associated with the social and cultural context in which MSM reside. The second group includes individual factors, which include the personality, mental health, and behaviours of individual MSM. Although social and individual factors are often found to be related in the literature, it is useful to present the social and cultural context of risky sexual behaviour before presenting the specific attitudes, personality factors, and behaviours of the individual. As such, both social and individual factors associated with sexual risk behaviour in the literature will be examined. Along with the sections presented in text format below for each group, Table 1 presents the titles and authors for each study by ethnoracial group.

MSM of African and Caribbean Background

Studies on MSM from African communities and MSM from Caribbean communities who live outside of these countries are strikingly limited. Ideally, it would be logical to examine the research on African MSM separately from the research on Caribbean MSM. However, the lack of research on African MSM and the lack of literature on Caribbean MSM necessitated combining these two groups for purposes of the review. The lack of research on these two groups is all the more disturbing considering that most MSM from African and Caribbean countries come from countries with a higher HIV prevalence than that found in Canada, and therefore who may be at increased risk for HIV. Indeed, Canadians who identify as Black, although consisting of approximately 2.2% of the Canadian population, constituted approximately 15.6% of HIV cases reported in the first half of 2002 in Canada (Health Canada, 2003). Two of the few studies to examine Black Caribbean and African MSM as separate groups were conducted in the United Kingdom (Dougan et al., 2004; 2005). Although Dougan and colleagues did not examine unprotected sex, the focus of this review, their findings do illustrate the pressing need for HIV prevention services among Caribbean and African MSM living in developed countries: MSM represented 32.5% of new cases among Black Caribbean persons during 1997-2001 (Dougan et al., 2004). Further, approximately half of new cases of HIV among Black Caribbean and African MSM occurred while in the United Kingdom (39% for African and 61% for Caribbean MSM; Dougan et al., 2005).

The lack of research on MSM of African and Caribbean ancestry is in part due to the fact that most studies on Black MSM were conducted in the United States. It is understood that the ability to take findings from American research and apply them to African or Caribbean MSM in Canada is unknown, as most African Americans came to the United States over 200 years ago during the period of American slavery, and therefore are not an immigrant community. By contrast, most Canadians of African or Caribbean ancestry 1) have much closer ties to a home country or countries and 2) may come from a society in which they are the majority. Extending findings from African-American MSM to Canadian MSM of Caribbean or African background is even more suspect when one considers the cultural, religious, and ethnic diversity found among Caribbean and African countries. Further, it is important to note that many Canadians of Caribbean background are not originally of African ancestry, such as people of Indo-Caribbean or Euro-Caribbean backgrounds. Given the problems in generalizing findings from African American samples, there was a specific effort to find literature on MSM from African and Caribbean communities living in Canada, Europe, and other British Commonwealth countries such as the United Kingdom and Australia. However, only five such studies were found (Myers et al., 2001; McOwan, Gilleece, Chislett, & Mandalia, 2002; Hickson, Reid, Weatherburn, Stephens, Nutland, & Boakye, 2004; Dougan, et al., 2004; 2005). It should be noted that none of the studies listed examined the HIV prevention needs of Caribbean MSM and only one study of African MSM (Myers et al., 2001) who live in Canada.

Despite the significant limitations in generalizing findings, there may be at least some utility in noting findings from African Americans in light of the lack of research on MSM from African and

Caribbean countries, and as a point of reference for future community efforts and research serving the HIV prevention needs African and Caribbean Canadian MSM. The major themes in the current literature related to HIV risk via unprotected sex among African American and other Black MSM are presented below, followed by a discussion as to how U.S. findings may or may not provide knowledge on HIV risk among MSM from African and Caribbean communities in Ontario.

Social Factors

The roles of religion and culture. Many young African American MSM are active in Black churches, or churches run by Black community for other Black Christians (Woodyard, Peterson, & Stokes, 2000). Black churches were identified by many in this sample as a place where African American men are supported versus the effects of racism and economic oppression and as a place where their talents and skills (e.g., in music, administration of the church) are valued and appreciated. Despite the advantages of participation in Black churches and their interest in spirituality (e.g., Malebranche, 2004), many African American MSM expressed feelings of guilt and alienation after repeatedly hearing anti-gay messages in these settings, as well as a desire to keep gay self-identification and same sex sexual behaviour in secret from one's community (Malebranche, 2004; Kipke, Weiss, Kubicek, Wong, Iverson, & Lopez, 2006; Woodyard et al., 2000). Similar results were found for African MSM in Ontario (Myers et al., 2001), as religious pressures that condemn homosexuality and to follow cultural expectations to get married and raise a traditional family may make African MSM less comfortable with discussing their sexuality. However, it is unknown to what extent religious settings serve a supportive function for African or Caribbean Canadian MSM. It is also less clear to what extent findings regarding Christians would be applicable to MSM of other religions.

Self-identification as gay or bisexual. Many African American men do not identify with the terms gay or bisexual because they signify feminine qualities that are undesirable for or inconsistent with their self-perceptions (Gonzalez, 2004; Packer & Clark, 2000; Wheeler, 2006). Many African American MSM have sex with other men without the knowledge of their peers, family or their female sex partners, which has sometimes been termed being on the "down low" (Barnshaw, 2006; Millett, Malebranche, Mason, & Spikes, 2005). Although being on the "down low" about being an MSM is not unique to African American MSM, a recent review (Millett et al., 2005) suggested that African American MSM are more likely than MSM of other ethnic groups to identify as bisexual versus gay, and are less likely than White MSM to disclose their same sex sexual behaviour to others. For African MSM in Ontario (Myers et al., 2001), identifying as an MSM may be seen as inconsistent with being African in their communities, and therefore many African MSM may hide their sexual identities.

Despite the possible benefits of "coming out" as a gay man, it is possible that MSM who self-identify as gay may somehow be more exposed to HIV risk than their non-gay identified peers. A recent review of the literature suggests that the lower proportion of gay-identification among African American MSM is actually associated with lower rates of unprotected anal intercourse (Millett, Peterson, Wolitski, & Stall, 2006). For example, young (18-29 years old) African

American MSM who did not disclose their sexual identity engaged in a lower prevalence of sexual transmission risk behaviour with male partners in the last six months (32% versus 41%) and had a lower HIV prevalence (14% versus 24%) than African American MSM who did disclose their sexual identity (Centers for Disease Control and Prevention, 2003).

The use of "gay" in HIV prevention as a barrier to services. Evidence suggests that HIV/AIDS strategies that rely on the use of labels such as "gay" or "bisexual" could deter men from accessing HIV prevention services (Wheeler, 2006). Indeed, one study found that many African American MSM preferred campaigns that provide HIV prevention messages in neutral settings because this would not publicly signal any involvement in homosexual activity. Exclusive reliance on self-identification as a gay man in HIV/AIDS prevention strategies may also be problematic in efforts preventing HIV transmission to female partners (e.g., Feist-Price, 2002), as a large multi-site study found that among HIV-positive African American MSM, a greater proportion of gay or bisexually-identified MSM reported sex with women than heterosexually identified MSM (Montgomery, Mokotoff, Gentry, & Blair, 2003). Anti-gay stigma may also be a factor in HIV testing, as knowledge of a comfortable and confidential place to get tested was one of the most reliable predictors of ever having been tested across three U.S. cities (Mashburn, Peterson, Bakeman, Miller, Clark, and the Community Intervention Trial for Youth Team, 2004). Although it is not clear how these findings would apply to African or Caribbean MSM in Ontario, many African MSM have noted discomfort in being associated with even HIV prevention services because of the association of HIV with being gay (Myers et al., 2001).

Coping with racism. In a qualitative study of 76 young (18-29 year old) African American MSM, most men reported suffering from both racism in the gay community and homophobia in the African American community (Kraft, Beeker, Stokes, & Patterson, 2000; also Malebranche, 2004). Racism may be experienced not only in social settings but also in personal advertisements looking for partners on the internet, as one U.S. study found that Blacks were the least preferred race among MSM personal advertisements (Phua & Kaufman, 2003). As such, many African American MSM participate in gay African American community organizations and attend African American social settings as safe places where men can feel a sense of "belonging" and as a means to cope with the stresses of racism, homophobia, and economic hardship (Kraft et al., 2000). Further, Black MSM are the most likely among non-White racial groups of MSM to seek or to currently have a same-race partner (Berry, Raymond, Behel, Sanchez, & McFarland, 2006; Fitzpatrick et al., 2004; Phua & Kaufman, 2003). Among African MSM in Ontario, the lack of community and social settings for African MSM may feed into a sense of social isolation that many have (Myers et al., 2001). Black gay community and social venues were perceived as supportive of safer sex yet there were also complaints that most Black gay social settings did not provide enough opportunities for nonsexual interactions.

Using Black-focused messages in HIV prevention campaigns. Two studies suggested that there may be a specific advantage of including Black MSM in HIV prevention campaigns. In one study, respondents specifically favoured the use of media advertisements which included Blacks over other approaches (Peterson, Bakeman, Blackshear, & Stokes, 2003). Respondents also suggested an advantage of using Black organizations and churches to promote HIV prevention

messages. The use of Black-focused messages may also be used to promote HIV testing behaviour among Black MSM. In one of the few studies focusing on Black MSM outside of the United States, a campaign in London, England targeting HIV testing among Black MSM using images of young Black MSM was found to increase HIV testing behaviour in this population (McOwan et al. 2002).

Condom availability. In a qualitative study asking 75 young African American men about their preferences regarding HIV prevention strategies (Peterson et al., 2003), participants noted a preference for increasing condom availability in settings frequented by African American MSM as a method for increasing condom use. Methods to increase condom availability would do well to assess whether condoms are actually taken by participants. Increasing condom carrying may be one simple and effective technique for HIV prevention. Support for this assumption was found in a sample of 758 young African American MSM, as carrying a condom on one's person was associated with a lower prevalence of unprotected receptive anal intercourse (Hart, Peterson, and the Community Intervention Trial for Youth Team, 2004).

Individual Factors

Peer norms. Similar to general studies of MSM (see chapter by Adam, 2006), research suggests that African American MSM who have peers who support condom use are also more likely to use condoms themselves (Peterson et al., 2003). African American MSM may be more likely than White, Asian, or Latino MSM to perceive that their peers support condom use than, as one study suggested that African American MSM report less difficulty than other MSM getting their partners to use condoms (Essien, Ross, Fernández-Esquer, & Williams, 2005). More supportive norms regarding condom use may at least partially explain the finding that African American MSM have lower rates of unprotected anal intercourse than MSM of other racial backgrounds (Berry, et al., 2006; Hart et al., 2004; Hlaing, De La Rosa, Niyonsenga, & Rojas 2006; Peterson, Bakeman, Stokes, & Community Intervention Trial for Youth Study Team, 2001; Valleroy, MacKellear, Secura, & Behel, 2002). In one study (Peterson et al., 2003), African American MSM reported their belief that distribution of condoms in various venues would encourage the adoption of new social norms supportive of condom use. It should be noted that although U.S. studies show that U.S. Black MSM engage in lower rates of unprotected sexual behaviour overall than other MSM, one study of Black MSM in the United Kingdom, who are more similar in ethnic origins (mostly with origins in Caribbean and African countries) to Canadian Black MSM, suggests that Black MSM may be more likely than other MSM to have insertive unprotected anal sex with a partner they knew to be HIV positive (Hickson et el., 2004). However, this finding could be partially due to the higher chances of meeting an HIV-positive sexual partner, because of higher HIV prevalence among Black MSM compared to other MSM (Hickson et al.).

Social support. African American MSM who report having someone with whom they could talk about sex and HIV-related concerns were more likely to have ever been tested for HIV (Mashburn et al., 2004). Recent research has not indicated a clear link between emotional and

other support received from others and unprotected sex. So (2003) has suggested that social support may increase safer sex behaviour, and has added that social support may not come from one's family of origin or heterosexual friends, due to the stigma of being an MSM in the African American community.

Barriers to condom use. Alcohol and drug use, especially alcohol and drug use before or during sex, has been found to be associated with less condom use (Peterson et al., 2003; Porche & Swayzer, 2002; Williams, Crosby, Bein, Durazzo, Headlee, & Bey, 2000). Peterson et al., suggest that alcohol use during sexual intercourse among African American MSM and may "reduce the discomfort many men may experience from the stigma of homosexuality while engaged in homosexual activity" (Peterson et al., p.417). "Spur of the moment" sex and the perception that using condoms reduce the pleasure of sex also were found to be barriers to condom use (Peterson et al., 2003; Porche & Swayzer, 2002).

Specific Recommendations

It is critical that more research be conducted on risk factors for unprotected sex and other HIV prevention needs among Canadian Black MSM, especially given the higher prevalence of HIV among Canadians from African and Caribbean countries. Among African-American MSM, a population that likely shares experiences of racism but that differs in history, immigration status, and other factors from Canadian Black MSM, it has been suggested that any interventions to prevent HIV take into account the multiple social and economic oppressions faced by this community (Mays, Cochran, & Zamudio, 2004; So, 2003). Similarly, it is likely that any interventions for Black MSM from African and Caribbean communities would also benefit from acknowledging the experience of racism from the community in general and from the gay community, the effects of economic hardship related to racism and being an immigrant, and the stigma against same sex sexual behaviour and being "gay". Although not identifying as gay may ironically protect some MSM from HIV by decreasing opportunities for unprotected anal intercourse, men who are not open about their sexuality are also unable to represent their HIV prevention needs to their communities and to the government (see Mays et al., 2004 for a discussion on this topic).

As such, it may be beneficial to take a two-pronged approach to HIV prevention among Black MSM from African and Caribbean communities: 1) to provide more opportunities for supporting men and reducing anti-MSM stigma so men can access HIV prevention resources for MSM more easily and 2) acknowledging that for many men, "coming out" is not an option, and therefore providing HIV prevention messages and condoms in neutral environments that will not force men to self-identify as an MSM. Both approaches may wish to consider fostering a perception that condom use and HIV testing are normative in order to further increase prevalence of these behaviours. The use of images of African and Caribbean MSM as well as active collaboration with community agencies, religious settings, and social settings that serve these groups would be likely to greatly strengthen HIV prevention efforts.

East Asian MSM

East Asian MSM are defined here as MSM with origins in countries including China, Japan, Korea, Taiwan, Southeast Asian countries (e.g., Vietnam, Thailand, and Cambodia) and countries of the Pacific Islands (e.g., Philippines, Indonesia). Despite the vast population of East Asians found in Ontario and across Canada (Statistics Canada, 2005), there has been little research conducted on the HIV prevention needs of East Asian MSM. East Asian MSM are highly diverse, with origins from countries with vastly different majority religions, languages, and cultures (see Chng, Wong, Park, Edberg, & Lai, 2003 for a review of recent and older literature related to sexual health of East and South Asian American MSM). Limited data from a sample that was 94% East Asian MSM suggest there may be some differences in risk behaviour by ethnicity among East Asian MSM (e.g., Choi, McFarland, Neilands, et al., 2002; Yoshikawa, Wilson, & Chae, 2002), but it is unknown to what extent these differences were due to statistical problems versus stable effects that truly exist between East Asian ethnicities. A search of the literature on which factors are associated with unprotected sex among East Asian MSM revealed that again the majority of the research on East Asian MSM was conducted in the United States. Although there may be some similarities between East Asians who immigrated to the United States and those who immigrated to Canada, the use of U.S. data is made more problematic by the tendency to combine East Asians and South Asians (e.g., Indians, Pakistanis) into one category called "Asian". For purposes of clarity, all studies below are comprised of 100% East Asian MSM, unless indicated otherwise.

Social Factors

Racism and its effects. East Asian MSM have a higher proportion of partners from a different ancestry than do MSM from other ethnic groups (Bingham, Harawa, Johnson, Secura, MacKellar, & Valleroy, 2003). In one study, approximately 2/3 of sex partners of Asian MSM were non-Asian (Choi, Operario, Gregorich, & Han, 2003). Although there may be many reasons for choice of non-Asian partners, the limited Ontario data suggest that many East Asian MSM may feel excluded from concepts of beauty that focus on North American White features as being the most attractive versus other features (Myers et al., 2001; Poon & Ho, 2002) and may therefore be more likely to seek partners not of East Asian ancestry. Another possible reason may be an attempt to reduce the perceived isolation that many Asian Canadian MSM experience by making romantic connections with non-Asian Canadians (Chihara, 2006a). Further, many East Asian MSM reported feeling rejected or fetishized in the gay community because of their ethnic identity (Nemoto, Operario, Soma, Bao, Vajrabukka, & Crisostomo, 2003; Myers et al., 2001).

Some may also feel uncomfortable insisting on condom use because they internalize messages in the gay community that East Asian MSM are submissive (Poon & Ho, 2002). Some men may not use condoms as a means to please non-Asian partners, who are often seen to be more wealthy and have more control over relationships (Wilson & Yoshikawa, 2004; 74% of the same was East Asian). Internalization of racist stereotypes may partially explain why East Asian MSM reported

more difficulty than other MSM in getting their partners to use condoms (Essien et al. 2005), despite having appropriate knowledge about HIV and how to prevent HIV/AIDS (Ocampo, 2004). This may be an appropriate target for intervention in Ontario as well, as in a sample of East Asian MSM in Toronto who visit bars and/or bathhouses, nearly a third reported interest in learning from safer sex educators how to discuss safer sex with their partners (Poon, Ho, & J. P.-H. Wong, 2001).

The role of immigration status. East Asian MSM may also suffer from anti-immigrant discrimination (Yoshikawa, Wilson, Chae, & Cheng, 2004; 94% East Asian), especially if they do not believe they can get support from family about their experiences of discrimination. Anti-immigrant discrimination, in turn, may be associated with unprotected sex with casual partners (Yoshikawa et al., 2004). Lack of sensitivity to East Asian culture and immigrant status has been identified as a barrier to effective HIV prevention for Asian MSM (Poon et al., 2002; Poon & Ho, 2002).

One special challenge for East Asian MSM may be providing information in East Asian languages to increase accessibility of HIV prevention information such as how to negotiate safer sex (Chihara, 2006b; Nemoto et al., 2003). Although speculative, it may be possible that lack of accessibility to health services may be associated with recent findings that East Asian MSM were less likely to be tested for HIV than other MSM (Zaidi et al., 2005). Taboos against discussing sexual matters in East Asian cultures may also create a barrier decreasing access to HIV prevention services and HIV prevention messages (Yoshikawa et al., 2003). These taboos may lessen among East Asians who were born in North America or among East Asian immigrants with a greater length of residence in North America, as was found in one U.S study (Yoshikawa et al., 2003).

The role of homophobia and tensions between identities. East Asian MSM also find inherent tensions between their East Asian identity and their gay identity (Nemoto et al., 2003; Mao, McCormick, & Van de Ven, 2002; Myers et al., 2001). For many East Asian MSM, "gay" is seen as equivalent to "white" (Kanuha, 2000; Nemoto et al., 2003), which may lead to a sense of not truly being a part of either the East Asian or gay communities. Further, due to the strong value placed upon family obligations and homophobic attitudes of family members and a taboo on discussing sexuality in general (Kanuha, 2000; Poon et al., 2005; Poon & Ho, 2002), "coming out" as a gay man may not be seen as an option for some East Asian MSM (Poon et al., 2001). MSM who were born in North America may be more likely to identify as gay than those born elsewhere (a sample of 90% East Asians; Scheer, McFarland, Nguyen, Ngo, & Choi, 2002). The dual stigma of homophobia and racism (Mao et al., 2002; Nemeto et al., 2003) may lead to feelings of isolation from both ethnic and sexual communities. Self-identification as gay or bisexual, while associated with ever being tested for HIV (Do, Hudes, Proctor, Han, & Choi, 2006; Yoshikawa et al., 2002), is also associated with having more unprotected anal intercourse (Choi et al., 2002; Yoshikawa et al.), likely because of greater availability of male partners.

Individual Factors

Alcohol or drug use. Sex under the influence of alcohol or other drugs has been found to be associated with not using condoms during intercourse (Choi, McFarland, Chu, et al., 2002; Choi, Operario, Gregorich, McFarland, MacKellar, & Valleroy, 2005; Williams et al., 2004). As is true for other MSM (see Adam, 2006), many East Asian MSM may be aware alcohol and other drugs may increase the tendency to have unprotected sex, but may be used as a means to lose inhibitions and increase confidence in bars and clubs (Nemoto et al., 2003). Club drugs may especially be used to increase sexual arousal and performance.

Social support. In a sample of young East Asian MSM (Poon & Ho, 2002), all of the participants reported feelings of social isolation, which may be associated with difficulties in talking about sexuality or safer sex. Social support may buffer against the negative effects of racism and unprotected sex: those who respond to discrimination by reaching out to others for support were less likely to have had unprotected sex (Wilson & Yoshikawa, 2004). Young men who reported more social support regarding sexuality and HIV concerns were more likely to have gotten tested for HIV (Do et al., 2006).

Sexual behaviours associated with unprotected anal intercourse. Unprotected sex is associated with having a greater number of partners among young East Asian MSM (Choi et al., 2003). However, so was having a main partner, such as a boyfriend, suggesting that many young MSM, who are less likely to have been able to be in a relationship for several years, may be engaging in unprotected sex with partners as a means to achieve intimacy. In another study, engaging in a greater number of less common sexual practices such as fisting (putting a full hand in a partner's bottom, sadomasochism, group sex, and rimming (putting one's tongue in a partner's bottom) was associated with greater likelihood of having unprotected sex (Van de Ven, Mao, & Prestage, 2004; 98% East Asian).

Perceptions of not being at risk. Some East Asian MSM may perceive HIV to be less of a problem among East Asian populations (Yoshikawa et al., 2003). Although this may have been true in the past and may still be true in some countries (e.g., United Kingdom; Hickson et al., 2004), this may be an outdated assumption in North America, as U.S. Asian MSM may be more likely to have unprotected anal intercourse than U.S. White MSM (McFarland et al., 2004). Further, perceptions that Asians are less at risk may lead to young (18-29 year old) U.S. Asian MSM being more likely to have unprotected sex when having sex with other U.S. Asian MSM (Choi et al., 2003). However, studies on Canadian Asian MSM are needed to determine if Asian MSM differ from other ethnic groups in HIV risk in Canada. One reason that perceptions of being less at risk for HIV may be associated with risky behaviour in U.S. samples may be because of a belief that insisting on condoms indicates that one has an STD or is promiscuous (Yoshikawa et al., 2003).

Other beliefs regarding safer sex. In a sample of predominantly (87%) East Asian MSM, men who had stronger beliefs that they were able to use condoms with casual partners and to avoid

risky sex were less likely to have had unprotected sex (Mao, Van de Ven, & McCormick, 2004). In a study of Asian MSM in Ontario who use internet chat rooms (Poon, Ho, J. P.-H. Wong, G. Wong, & Lee, 2005), some men reported that they could discern whether someone was "safe" to have unprotected sex with by subtle cues such as not discussing "barebacking" (intentional unprotected anal intercourse) or being a younger man. Similar to beliefs found among young African American men, young East Asian MSM who perceive their peers as not supporting safer sex were significantly more likely to have unprotected sex (Choi et al., 2003).

Specific Recommendations

Interventions to prevent HIV among East Asian MSM take into account experiences of racism, anti-immigration stigma, and homophobia (Poon & Ho, 2002). HIV prevention work must acknowledge the effects of internalizing racist stereotypes of Asian men as submissive, and should attempt to foster self-empowerment and positive images of Asian MSM as in control of their sexuality and their lives. HIV prevention efforts must work to decrease the social isolation that many Asian MSM experience as well. Efforts must also be sensitive to cultural norms among Asian communities that emphasize respect for family and family obligations, and that avoid explicit discussion about sex. HIV prevention efforts have often been less accessible to Asian MSM who speak English as a second language, and therefore must be conducted in multiple languages to the extent feasible. Lastly, it is important to note that along with some factors more common among Asian MSM, there may be many similarities between Asian and other MSM in what places them at risk. Some of these factors include alcohol and drug use, and beliefs not supporting condom use.

Latino MSM

Latino MSM are defined in this chapter as MSM from Spanish-speaking Latin American countries, including Mexico, Central American countries (e.g., Guatemala, Costa Rica), and South American countries (e.g., Venezuela, Argentina). Brazilian MSM are included in the section on Portuguese-speaking MSM. The following studies examine the social and individual factors that were associated with unprotected sex among Latino MSM:

Social Factors

Self-identification as gay or bisexual. A small study of 10 Ontarian men found that Latino MSM are often forced into silence about their same-sex interests and relationships for fear of being rejected by the Latino community, and for many men, fear of being rejected by the Catholic church (Myers et al., 2001). To avoid the stigma of being an MSM, some Latino MSM may live double lives, which can have many negative consequences such as: a lack of access to information or protection, emotional distress, and lack of validation of feelings and identities (Cedano et al., 2002; Muñoz-Laboy, 2004; see Marín, 2003). Many Latino MSM may also explicitly identify as straight (Barnshaw, 2006; Zellner et al., 2006) and/or have sex with women (e.g., Ritieni, Gomez, Ruiz, Vargas, & Salazar, 2004). Marín (2003) suggests that many Latino MSM do not identify as gay or bisexual because of traditional attitudes about male gender roles. However, others may see same-sex sexual behaviour as being yet another type of sexual activity that one may engage in despite self-identification as heterosexual (Fernández et al., 2006; Muñoz-Laboy, 2004). Non-gay identified Latino MSM are still at risk for engaging in unprotected anal intercourse (e.g., Zellner et al., 2006). Further, many Latino MSM may report attraction to women, which in one sample was associated with greater prevalence of unprotected anal sex in the past three months (Jarama, Kennamer, Poppen, Hendricks, & Bradford, 2005). However, in another study, although there we no differences in risk behaviour over the past six months with men among young (18-29 year old) Latino MSM, it is interesting to note that, more MSM who did disclose their sexual identity were HIV-positive compared to MSM who did not disclose (10% versus 6%, respectively; Centers for Disease Control and Prevention, 2003).

Machismo. Machismo is defined as "a form of masculine ideology whereby men are socialized based upon rigid gender role stereotypes and beliefs about men and masculinity" (Fragoso, 2000). Machismo may play a large role in the rate of HIV infection for Latino MSM. In a sexual context, machismo is associated with a desire to have many sexual partners and a perception of having uncontrollable sexual desire contributing to "heat of the moment" sexual encounters (Guevara, Engler, Frigault, Léobon, Pelletier, & Lévy, 2004; Marín, 2003). For Latino MSM, these traditional attitudes about gender roles and masculinity are associated with more sexual partners and less intimate relationships with their current sexual partners. High self-identification with "machismo" is associated with both alcohol and drug use and unprotected anal sex in the past year (Dolezal, Carballo-Diéguez, Nieves-Rosa, & Díaz, 2000). High

identification with machismo is also associated with viewing condoms as unnecessary when one is the insertive partner (e.g., Agronick et al., 2004. However, men who are perceived as being masculine looking and acting may be more likely to be perceived by some Latino men as the insertive partner only (e.g., Carballo-Diéguez et al., 2004). Given that the insertive partner is at risk for contracting HIV than the receptive partner, more research is needed to determine to what extent machismo as a personality trait is associated with contracting HIV via unprotected sex among Latino MSM.

The role of immigration and acculturation. Immigration to Canada poses many problems for Latino MSM. Community agencies have identified that there are inadequate HIV prevention resources and services for both recent and illegal immigrants (Myers et al., 2001). Recent and illegal immigrants are also faced with cultural taboos that hinder access to services. Often the services are not culturally or linguistically appropriate or accessible for members of the community, especially those with lower education levels. Immigrant Latino MSM have reported that not speaking English and/or being a recent immigrant was associated with being at risk for being sexually exploited by other men (Williams, Wyatt, Resell, Peterson, & Asuan-O'Brien, 2004). On the other hand, connection with the Latino community may be associated with lower prevalence rates of unprotected anal intercourse (O'Donnell et al., 2002). Another study found that Latino MSM who were less acculturated into Latino culture, that is men with a low level of knowledge about Latino culture and Spanish, had more partners with whom they took a receptive role during unprotected anal intercourse (Poppen, Reisen, Zea, Bianchi, & Echevery, 2004). Findings are by no means conclusive on the role of acculturation, as other research found no associations between preferred language and immigration status on the one hand and risky sexual behaviour on the other hand (Duran, San Doval, Myint-U, Blome, O'Donnell, & Stueve, 2000)

Diversity among Latino MSM. Despite the usefulness of looking at what factors make Latino MSM at risk for HIV, it is also quite useful to examine the diversity of the Latino MSM communities (Zea, Reisen, & Díaz, 2003). For example, the U.S. Centers for Disease Control and Prevention noted that in 2000, U.S. Mexican MSM had a much higher (53%) AIDS prevalence than U.S. Puerto Rican MSM (17%; Centers for Disease Control and Prevention, 2000). This huge discrepancy was accounted for by differences in intravenous drug use. This suggests important differences in the behaviours among diverse groups of Latinos that lead to HIV risk.

Individual Factors

Age and educational differences. Age and education level are important factors in predicting which Latino MSM is tested for HIV (Fernández, Perrino, Bowen, Royal, & Varga, 2003). Among HIV-positive MSM, unprotected sex may be associated with being younger and more educated (Perrino, Fernández, Royal, Varga, & Bowen, 2002; Poppen et al., 2005). Older and more educated men were more likely to be get tested for HIV more than once, but repeat testers have more partners and are more likely to have had a sexually transmitted infection in the past

compared to nonrepeat testers (Fernández, et al., 2003; Royal, Bowen, Perrino, Vargas, & Fernández, 2002).

Experiences of abuse and violence. Similar to findings among general samples of MSM (see Adam, 2006) the experience of childhood sexual abuse among both HIV positive and HIV negative Latino MSM is associated with a higher rate of unprotected anal intercourse (Arreola, Neilands, Pollack, Paul, & Catania, 2005; Dolezal & Carballo-Diéguez, 2002; Nieves-Rosa, Carballo-Diéguez, Dolezal, & Decena, 2002). Childhood sexual abuse may be an especially important factor for Latino MSM as incidence of childhood sexual abuse among Latino MSM was almost double that of non-Latino MSM in one U.S. sample (Arreola et al., 2005). Domestic abuse among partners, which has been associated with childhood sexual abuse and unprotected sex among a general sample of MSM (Stall et al., 2004), was also associated with unprotected sex among Latino MSM (Nieves-Rosa et al., 2002)

Internet use. The internet can be a mediator of unsafe sex for some but not all Latino MSM (Ross, Rosser, & Stanton, 2004). Latino MSM who value the "in real life" interaction more are significantly more likely to engage in receptive oral and anal sex than those who use the internet for "cybersex" (sex on the internet), sexual fantasies, and safety. The authors speculate that Latino MSM who use the internet to meet real life partners may be more likely to have unprotected anal intercourse because a) they are less likely to discuss safety and b) because of an illusion of intimacy after discussing private sexual matters on the internet, which may make these men believe they are less at risk since they "know" the person.

Exposure to social discrimination. Exposure to homophobia, racism, and poverty are associated with both low self-esteem and feelings of social isolation among Latino MSM (Díaz, Ayala, Bein, Henne, & Marín, 2001). Exposure to these three forms of discrimination were found to be related to being involved in situations that made it difficult to practice safer sex (e.g., sex when under the influence of drugs or alcohol; sex with partners who resist condom use), which in turn was related to having unprotected anal intercourse (Díaz, Ayala, & Bein, 2004). In another study, low self-worth was associated with unprotected anal intercourse (Dolezal, Carballo-Diéguez, Nieves-Rosa, & Díaz, 2000), possibly because of decreased concern about one's health. It is therefore possible that the experience of homophobia and racism may be associated with unprotected sex. There is some support for this hypothesis, as in one study, anti-gay discrimination was indeed associated with a greater prevalence of unprotected sex in the past three months (Jarama et al., 2005).

HIV status of sexual partner. Among Latino MSM, unprotected anal intercourse is much more common among MSM who share the same HIV status (e.g., HIV-positive men with HIV-positive sexual partners; Poppen, Reisen, Zea, Bianchi, & Echeverry, 2004). Disclosure tends to be reciprocal such that one partner is likely to reveal his HIV status if his partner does as well (Zea, Reisen, Poppen, & Díaz, 2003). HIV-positive Latino MSM more readily disclose to their main partners rather than their causal partners, and are also more likely to have unprotected anal intercourse when their partner is also HIV-positive (Zea, Poppen, Reisen, Bianchi, & Echeverry, 2004).

Drug and alcohol use. Most studies have found that use of drugs and alcohol is associated with an increased frequency of unprotected anal sex, especially unprotected anal sex with casual partners (Dolezal et al., 2000; Fernández et al., 2005; González Montiel, Diaz, Gutierrez, Feliciano, & Lopez, 2006; Guevara et al., 2004; Nieves-Rosa, et al., 2002; Perrino et al., 2002; Poppen, et al., 2004). Although men who use multiple drugs are more likely to have sex under the influence of drugs, multiple drug use is not always associated with unprotected anal intercourse (Fernández, Collazo, Perrino, Varga, & Bowen, 2004; Fernández et al., 2005). It is possible that sensation seeking (see Adam, 2006) may be a causal factor for both substance use and unprotected sex, as one study found that sensation seeking was associated with both behaviours (Dolezal et al., 2000).

Specific Recommendations

Latino MSM experience pressures to conform to traditional cultural and religious conceptualizations of masculinity, which exclude and stigmatize same sex sexual behaviour. These traditional attitudes may lead to psychological distress and social isolation among Latino MSM, many of whom may therefore avoid disclosing their sexual orientation and behaviour. The experience of homophobia may be associated with greater risk of engaging in unprotected sex. It is therefore important that HIV prevention services for Latinos provide a welcoming and confidential environment for MSM, and do not automatically assume these men identify as gay or bisexual. Further, it may be useful to assess the effects of multiple forms of oppression, such as racism, homophobia, and economic hardship, on HIV risk among Latino MSM. HIV prevention services would also do well to assess childhood sexual abuse, which although occurs among men of all ethnicities, may be somewhat more prevalent among Latino MSM versus men of other ethnic backgrounds.

South Asian MSM

Review and Specific Recommendations

Despite the growing population of South Asians in North America, there has been almost no research on the HIV prevention needs of South Asian MSM. South Asian MSM are defined as MSM from India, Pakistan, Bangladesh, and Sri Lanka. Two studies were found on which factors were associated with unprotected sex among South Asian MSM, with one not directly asking questions from MSM but instead asking providers about the MSM they serve (Myers et al., 2001). Compared to MSM of European origin in Toronto and Vancouver, South Asian MSM in the same cities reported higher levels of homophobia. However, homophobia was associated with unprotected oral sex but not unprotected anal sex. South Asian men who were less acculturated to the majority Canadian culture were more likely to have unprotected anal intercourse. In the Greater Toronto Area, Myers et al. (2001), HIV service providers who serve South Asian MSM reported that these men may have difficulty with cultural and religious norms that emphasize heterosexual marriage and family, and stigmatize same sex sexual behaviour. As such, some may not identify with being gay. Regarding individual factors, men who enjoyed the thrill of unprotected sex and men who did not believe strongly that they were able to use condoms with partners were more likely to have unprotected anal sex (Ratti, Bakeman, & Peterson, 2000).

Portuguese-Speaking MSM

Review and Specific Recommendations

To our knowledge, only one study has been conducted on which factors are associated with unprotected sex among Portuguese-speaking MSM (Myers et al., 2001). This study of 12 MSM included people with ancestry from Portugal, the Azores, and Brazil. Despite the diversity of this small group, some themes were found. Like other ethnic groups identified here, many MSM in this group do not identify as gay. Many also fear rejection from their ethnic communities for being an MSM due to religious and cultural traditions that stigmatize same sex sexual behaviour. Further, some mistakenly believe that being the insertive partner (the "top") versus the receptive partner (the "bottom") ensures safety against HIV. Mistaken beliefs about HIV may therefore need to be targeted in this group. According to Myers et al., another target for prevention may be providing HIV prevention resources in an oral format to avoid problems with literacy and to be consistent with an "oral" culture among Portuguese-speaking individuals in Ontario.

Overall Summary and Recommendations

The profound lack of research on MSM from ethnoracial communities is greatly hindering any ability to create an evidence-based strategy for preventing HIV in Ontario. Most of the research conducted has been in the United States, and it is unclear how U.S. findings would generalize to Ontarian MSM from African, Caribbean, East Asian, South Asian, Latino, and Portuguese-speaking communities. MSM from other ethnic groups, such as MSM from the Middle East, as well as MSM from non-visible ethnic populations such as Italians, Slavic populations, Greeks, and religious minorities, appear to have been completely ignored in the literature. There is a consistent gap in the research on ethnoracial MSM, most of whom are from recent immigrant communities: the research on immigrant communities ignores the presence of MSM, and the MSM research ignores the presence of immigrant and other ethnoracial communities.

Further, there has also been almost no research on diverse populations of MSM living with HIV. There is therefore a profound lack of research on how HIV transmission via unprotected sex can be prevented among ethnoracial MSM living with HIV nor what social, psychological, and health factors affect the health of this important group. Given the growing racial and ethnic diversity of Ontario, it is critical that research on MSM from diverse ethnoracial communities be conducted on a continuous basis. It is therefore critical that there be a large increase in research funding from government and other agencies on the HIV prevention needs of MSM from ethnoracial communities.

One way to increase the reach of HIV prevention services toward marginalized MSM from ethnoracial communities is to make these services better reflect the ethnoracial diversity of Ontario. Many immigrant MSM may be unaware of services because lack of familiarity with Canada and the idea of HIV prevention services, along with difficulties in understanding and reading English. HIV prevention services may also be seen as inaccessible to many MSM from ethnoracial communities because of fears of racial discrimination and lack of service provision in languages other than English. HIV prevention services for MSM clearly need to acknowledge the ethnoracial diversity of MSM, and provide services in multiple languages with messages tailored for different ethnoracial groups and men of different levels of acculturation into the dominant Canadian culture. All of these concerns were recently identified by Canadian AIDS Service Organizations as barriers to dissemination of HIV/AIDS prevention information (Bereket, Myers, & Allman, 2006)

Another similarity among most MSM among many ethnoracial groups is the difficulty in identifying as gay or bisexual, or even as an MSM, given the homophobic and heterosexist attitudes that exist in many communities. It is therefore important for mainstream organizations serving a majority heterosexual population to provide a safe place for MSM from ethnoracial communities to confidentially disclose their sexual behaviour without adverse consequences. These services should also be aware of the importance of religious and cultural traditions among ethnic communities, and strive for a healthy middle ground between the two

extremes of endorsing homophobic traditions or dismissing the importance of tradition and ethnic or racial community.

The experience of multiple oppressions including racism, anti-immigrant discrimination, economic pressures, and homophobia, may lead to a sense of being socially isolated. Although this question has not been well-examined, it is likely that the sense of social isolation may be even more than that experienced by MSM from majority White samples (see Adam, 2006 in this paper for a review of themes found in general populations of MSM). It would also be useful to further explore how the experience of multiple oppressions leads to risky sexual behaviour among diverse populations of MSM. For example, within general populations of MSM, having a sense of inferior status to a partner may be associated with a greater likelihood of forgoing condom use (Adam, Sears, & Schellenberg, 2002). It is therefore possible that MSM who perceive themselves as being in an inferior status because of their ethnic or racial background may find it difficult to insist on condom use in sexual situations for fear of being rejected by a sexual partner.

Future research in Ontario should seek to examine not only the similarities but also the differences in HIV prevention needs between MSM from diverse ethnic groups. MSM from ethnoracial communities should not be viewed as a unitary entity of "minorities", as there are likely to be profound cultural, religious, historical, and other differences between ethnoracial communities. Studies of specific ethnoracial groups of MSM should also pay special attention to the cultural and individual diversity within each group (e.g, Zea, Reisen, & Diaz, 2003). For example, a highly educated, middle-class Mexican MSM and a poor refugee MSM from Bolivia may have very different HIV prevention needs even if both identify as Latino. There also are likely to be significant differences in HIV-related attitudes, knowledge, and behaviour between a gay-identified 20 year old Chinese MSM who was born in Ontario and fluent in English, and a 45 year old recent immigrant MSM from China who moved to Ontario with his wife and children and who is earning English as a second language. It is therefore critical that these HIV prevention services recognize the diversity in HIV knowledge and attitudes toward sexuality and in sexual behaviour within each community, such as between immigrants and non-immigrants, as well as recent versus non-recent immigrants.

To better examine the HIV prevention needs of MSM from ethnoracial communities, it would be logical for researchers and government agencies to collaborate actively with organizations which already serve ethnoracial communities in Ontario. Many of these organizations already are doing HIV prevention work with the MSM in their communities, and are therefore an invaluable source of information for HIV prevention efforts. This wealth of knowledge on HIV prevention also makes ethnic- and racial-specific AIDS service organizations a natural place for conducting culturally-competent and relevant research. As such, building research capacity in these organizations would greatly serve HIV prevention needs of MSM from diverse ethnoracial communities.

In summary, a review of the literature from the year 2000 onward revealed a lack of attention to the factors associated with unprotected sex among MSM from ethnoracial communities. Even less research has been conducted with Canadian populations. The limited research that exists suggests that MSM from ethnoracial communities suffer from multiple oppressions that may lead to a sense of social isolation and may possibly be associated with unprotected sex in these groups. However, more work clearly needs to be done to examine how social and individual factors interact with each other to either protect or harm the health of MSM from various ethnoracial communities. As Ontario specifically and Canada more broadly become more diverse, there is an ever increasing importance of attending to this diversity among MSM in HIV prevention research in order to confront the epidemic across the province and nationwide.

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South Asian

Myers, T., Travers, R., Allman, D., Lau, W., Maxwell, J., & Calzavara, L. (2001). *An HIV research needs assessment of MSM in ethno-cultural communities: perspectives of volunteers and service providers.* Toronto: University of Toronto.

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Portuguese

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Adam, B. D., Sears, A., Schellenberg, E. G. (2000). Accounting for unsafe sex: Interviews with men who have sex with men. *The Journal of Sex Research, 37,* 24-36.

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Statistics Canada. (2005). *Visible minority population, by province and territory (2001) census.* Retrieved September 11, 2006, from http://www40.statcan.ca/l01/cst01/demo52b.htm

Van de Ven, P., Mao, L., & Prestage, G. (2004). Gay Asian men in Sydney resist international trend: No change in rates of unprotected anal intercourse, 1999-2002. *AIDS Education and Prevention, 16*(1), 1-12.

Table 1

Useful Sources Listed By Ethnoracial Group

HIV Research

XVI International AIDS Conference Website - www.aids2006.org
Eastern European and Central Asian AIDS Conference - www.eecaac2006.org/
Canadian HIV Research Inventory – www.hivresearch.ca
Seventh International Congress on AIDS in Asia and the Pacific - http://www.icaap7.jp

AIDS Service Organizations - General

ACT – AIDS Committee of Toronto - www.actoronto.org
Canadian AIDS Society - http://www.cdnaids.ca/
Canadian AIDS Treatment Information Exchange - www.catie.ca

AIDS Service Organizations - African

African and Caribbean Council on HIV/AIDS in Ontario - http://www.accho.ca/
Africans in Partnership against AIDS - www.apaa.ca
Black Coalition for AIDS Prevention - www.black-cap.com

AIDS Service Organizations – Latino

VIVER – Portuguese Speaking Coalition -
http://www.actoronto.org/website/referrals.nsf/pages/referrals.0586

AIDS Committee of Toronto – Information and Services in Portuguese
http://www.actoronto.org/website/home.nsf/pages/portuguese

AIDS Service Organizations - Asian

Alliance for South Asian AIDS Prevention - www.asaap.ca
Asian Community AIDS Services - www.acas.org
Asian Society for the Intervention of AIDS - http://www.asia.bc.ca/

Other

Salaam, The Queer Muslim Community of Toronto - http://www.salaamcanada.com/

Appendix A

List of Search Terms Used

African and Caribbean

Afric*
African American
Afro-Caribbean
Baham*
Black
Carib*
Dominc*
Eritre*
Ethiopi*
Ghan*
Guyan*
Jamaic*
Keny*
Nigeri*
Somali*
South Afric*
Zimbabw*

East Asian

Asia*
Cambodi*
Chin*
Filipino
Indonesi*
Japa*
Kore*
Malaysi*
Pacific Islander
Phillipines
Southeast Asian
Thai*
Vietnamese

Latino

Argentin*
Brazi*
Central Americ*
Columbi*
Costa Ric*
Latin*
Mexic*
Puerto Ric*
South Americ*

South Asian

Bangaladesh
Indi*
Pakist*
South Asi*
Pakista*

European

Dutch
Europ*
French
Germa*
Great Britain
Gree*
Ital*
London
Netherlands
Pol*
Portug*
Russi*
Slavic
Spa*
Ukrai*

General Terms

AIDS	Drug	Oral
Anal	Epidemi*	Origin
Americ*	Florid*	Persi*
Anti-Retroviral	Gay	Risk
Armeni*	HIV	Sex*
Bisexual	Homosexu*	Stigm*
Canad*	Identity	Therap*
Closet	Immigrant	Test
Color	Ira*	Treatment
Commonwealth	Leban*	Turk*
Condom	Minority	United States
Descent	North Afri*	Urban
Down Low	North Americ*	

Note: The asterisk (*) symbol after the first part of a word is used when searching for multiple variations of the "root word". For example, using the word "Afric*" would provide research summaries using the word "Africa", "African", and "Africans".

The ethnicities included in this review are consistent with the major ethnic groups represented in Ontario according to Statistics Canada.

Retrieved September 11, 2006 from
http://www40.statcan.ca/l01/cst01/demo26a.htm?sdi=ethnic%20ontari
http://www40.statcan.ca/l01/cst01/demo52b.htm

Appendix B

Articles Relevant to Ethnoracial MSM But Not Under The Scope of The Review

African and Caribbean

Brooks, R. A., Etzel, M. A., Hinojos, E., Henry, C. L., & Perez, M. (2005). Prevention HIV among Latino and African American gay and bisexual men in the context of HIV-related stigma, discrimination, and homophobia: perspectives of providers. *AIDS Patient Care & STDS, 19*(11), 737-744.

Gant L. M. & Ostrow, D. G. (1995). Perceptions of social support and psychological adaptation to sexually acquired HIV among White and African American men. *Social Work, 40*(2), 215-224.

Malebranche, D. J. (2003). Black men who have sex with men and the HIV epidemic: next steps for public health. *American Journal of Public Health, 93*(6), 862-865.

Peterson, J. L., Coates, T. J., Catania, J., Hauck, W. W., Acree, M., Daigle., D., et al. (1996). Evaluation of an HIV risk reduction intervention among African-American homosexual and bisexual men. *AIDS, 10*(3), 319-325.

Peterson, J. L., Coates, T. J., Catania, J. A., Middleton, L., Hilliard, B., & Hearst, N. (1992). High-risk sexual behaviour and condom use among gay and bisexual African-American men. *American Journal of Public Health, 82*(11), 1490-1494.

Wheeler, D. P. (2005). Working with positive men: HIV prevention with Black men who have sex with men. *AIDS Education and Prevention, 17*(Suppl.A), 102-115.

East Asian

Do, T. D., Chen, S., McFarland, W., Secura, G. M., Behel, S. K., MacKellar, D. A., Valleroy, L. A., & Choi, K. H. (2005). HIV testing patterns and unrecognized HIV infection among young Asian and Pacific Islander men who have sex with men. *AIDS Education and Prevention, 17*(6), 540-554.

Kang, E., Rapkin, B. D., Remien, R.H., Mellins, C. A., & Oh, A. (2005). Multiple dimensions of HIV stigma and psychological distress among Asians and Pacific Islanders living with the HIV illness. *AIDS and Behavior, 9*(2), 145-154.

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Current HIV Prevention Programs

By Sandra Bortolin

Current HIV Prevention Programs

Sandra Bortolin

There is no agreed upon best method for addressing the HIV prevention needs of gay, bisexual or other men who have sex with men (gay/MSM). There are a range of reasons why gay/MSM engage in unprotected anal sex, despite the constant threat of HIV/AIDS. Diverse programs have emerged in an attempt to respond to the reasons for unprotected sex by gay/MSM, and these programs elicit themes in HIV prevention. These themes include mechanics of condom use, the role of the Internet, the questioning of assumptions, drug use and partying, safely introducing men to new scenes and cruising, relationships, access to and community building with other gay/MSM, building self-esteem through empowerment and social support, health promotion and counselling, programs for sex trade workers, campaigns directed at youth, and finally, prevention for gay/MSM with HIV/AIDS. As this review shows, these programs are numerous and diverse, and despite their varying components, are each an integral part of the battle to address the HIV prevention and sexual health needs of gay/MSM.

Mechanics of Condoms

One of the main messages in campaigns addressing the mechanics of condoms is their effective use in reducing the risk of transmitting or acquiring HIV ("Get it on" – AIDS Council of New South Wales). Many of these campaigns also carry the message to monitor one's own health as well ("Live the Sensation" – ACON; "Last Night I Picked Up Someone…And Something!" – AFAO, NAPWA Education Team, Australian Federation of AIDS Organizations, National Association of People Living With HIV/AIDS). Similar programs elaborate on these themes and also advocate that men carry condoms and lube with them at all times ("Condoms in the Real World – Buy Them Carry Them, Use Them" – Gay Men Fighting AIDS; London Gay Men's HIV Prevention Partnership; Metromate; "If He Doesn't Reach for a Condom, Will You?" – AFAO, NAPWA; "At Home/Away" – AFAO, NAPWA, ANET, Australian National Council on AIDS, Hepatitis C and Related Diseases). In addition, the "Condoms in the Real World" campaign includes the message that condom thickness is irrelevant, but that proper use of condoms and lube is essential. Furthermore, many of these programs attempt to ingrain the notion that condoms are the most effective tool in the fight against HIV ("Cover Yourself in Canberra" – AIDS Action Council of the Australian Capital Territory; AIDS Action Council Sex Worker Outreach Project) while others advocate condom use as a community norm and universal practice for gay/MSM ("Gay Men Play Safe" – AIDS Vancouver, "Condom Country", AIDS Committee of Toronto).

Some campaigns go one step further by distributing condoms directly to "at-risk" groups, such as the "Condom Crew" in the Niagara area. Under the direction of Angela Arsenio and Steve Byers from AIDS Niagara, an outreach crew distributes condoms, lube and literature at local drinking establishments and other venues in an attempt to reach those who may not otherwise

access their services. Overall, this campaign received positive feedback for its non-threatening approach to HIV prevention (A. Arsenio, personal communication, January, 2006).

As part of Thailand's Ministry of Public Health's efforts to strengthen its HIV prevention activities, the "Sex Alert" campaign was initiated in Bangkok and Chiang Mai and includes condom distribution. The program targets various at risk groups, including gay/MSM, and includes a road show which began in February 2006 and stops at various locations popular among gay/MSM in those cities. Booths set up at various sites include information packets and protection kits, which include condoms and lube donated by the Thai Nippon Rubber Industry Company.

Similarly, Peterborough AIDS Resource Network's (PARN) "Open It, Use It: Get Thinking, Get Talking, Get Tested, Get Together" social marketing campaign distributes condom packs at various events throughout the city of Peterborough, Ontario. PARN adds another component to their campaign by promoting discussion – not only around condom use, but also about feelings, sex, and a partners' HIV status – through a web-based, peer-led intervention. The campaign, consisting of condom packs, posters and bus advertisements is also made available for others to use (PARN – You're Community AIDS Resource Network).

The AIDS Committee of Toronto "Handy-Dandy" campaign not only attempts to educate men on the correct use of condoms, but delves further into concerns men have with wearing them and reasons why they may not wear them. These concerns or reasons include: erectile difficulties, latex allergies, lack of comfort, ruining the mood, slipping off, already HIV positive, uncertainty with how to introduce it, too drunk/high, 'I know him well', and so on. Information is offered on how to enhance the condom wearing experience, including tips about safer and more pleasurable use and storage. The campaign also incorporates other facets, such as strengthening gay men's abilities to develop healthy relationships and to protect themselves in cruising areas.

Due to its hard-hitting television and radio commercials, one of the most striking programs dealing with condom use also touches on the theme of treatment optimism. AIDS Vancouver's "Cocktail or Condom?" media campaign attempts to dispel the myths surrounding "cocktail" therapies, communicating that they are not a cure and that they carry unpleasant side effects. Through various media outlets, the campaign's clear and effective message was able to reach a wide audience and received mainly positive feedback.

The Internet

In keeping with changes in how gay/MSM connect with each other, various campaigns have incorporated the use of the Internet. For example, the "iRice initiative," a website launched in 2003 by Asian Community AIDS Services, aims to support, educate, and bring together Asian men via the Internet. A website and chat room are used to promote safer sex by reducing the

negative effects of isolation and discrimination, while also providing positive imagery (Ho, P. Personal Communication, January, 2006). Action Séro-Zéro also uses the Internet to reach gay/MSM. In a website created specifically for gay and bisexual men, discussion groups have been created to address HIV and other health concerns, while outreach workers "hang out" in chat rooms to provide guidance and answer questions (T. Haig, personal communication, January, 2006). In response to the Internet becoming an important venue where gay/MSM come together and form social networks, the Centre for AIDS Prevention Studies is developing a web-based, structural HIV Prevention initiative, to address risk factors which have emerged with the Internet. This multi-component, structural intervention combines individual and community level web-based interventions into a website, which offers participants a choice of skills-building interactive and educational tools, with the goal of fostering healthy norms.

The "Naïve Risks" campaign, a web based initiative, incorporates many distinct features in order to challenge men's assumptions about a partner's HIV status. For example, the website includes a game which highlights situations in which risk may occur. Users can complete an on-line quiz regarding safer sex with the incentive of winning DVDs and are also offered a free copy of the magazine "Exposed" (Terrence Higgins Trust, CHAPS).

Questioning of Assumptions

One of the most comprehensive campaigns dealing with assumptions gay/MSM make that contribute to high risk sex is the "How Do You Know What You Know Campaign" which was promoted nationally in Canada in 2004. The campaign, which was adapted from San Francisco, asks men to think about the specific assumptions they make before choosing whether or not to use a condom, and aims to get men to rethink how to protect their health and the health of their partners. Specifically, it asks men to think about their assumptions regarding partners' sero-status, targeting beliefs such as "He hasn't asked for a condom. He must be negative" or "He does it raw, he must be positive" or "I don't have it, I must be immune." An evaluation indicated that the campaign successfully reached its target audience. Messages received included those to rethink risks involved in sex, use condoms, and protect your partner and yourself. The campaign also encouraged discussion with friends, prompted a rethinking of assumptions, and promoted positive change in sexual practices for some (ACT).

The main message that emerges from other campaigns that deal with assumptions is for gay/MSM to not assume the sero-status of partners and to always engage in safer sex ("Responsibility: Yours or His?" – GMFA, LGMHPP). Others elaborate on this message by challenging the beliefs that may influence unprotected sex, and by demonstrating the flaws in these beliefs ("Think Again,"AFAO & NAPWA). Some campaigns also focus on promoting a healthy lifestyle, including HIV negative status as a valuable goal ("Staying Negative," Victoria AIDS Council, Gay Men's Health Centre). The "Expose the Myths" campaign incorporates all of these elements, and also supports both HIV positive and HIV negative men in making more informed decisions when negotiating sex (ACON).

Other campaigns try to convey the message that HIV is still around – it has not disappeared - through avenues such as advertisements and radio spots ("Le Sida Circule Toujours," Santé et Services sociaux Quebec) and that measures must be taken to avoid infection. The "Infectious Situations" campaign not only states that HIV is still around, but through press advertisements, identifies common or realistic situations in which transmission may occur (CHAPS, THT).

Action Séro-Zéro's "SIDA pour la vie!" campaign also plays upon the notion that HIV is still around, as it attempts to shock people out of their complacency, and transmit the message that HIV needs to be addressed and is an increasing concern. This initiative has been seen widely through such avenues as "MusiquePlus" (Lavoie, R. Personal Communication, May, 2006). The initiative includes a series of three instant lottery style scratch cards, which detail HIV transmission and prevention methods. Furthermore, images on posters and in various print media display startling imagery including coffins and cemeteries. Radio spots produced in French and English focus on the importance of always using a condom (T. Haig, personal communication, January, 2006).

Drug Use and Partying

Campaigns dealing with partying seek to ensure safer sex habits in an environment that tolerates or encourages recreational drug use and sexual activity. The Toronto Vibe campaign utilizes a website to address issues pertaining to gay/MSM who use club drugs, including a guide to safer partying and links to resources for HIV positive men. In addition, during Toronto's Pride Week, the campaign provides outreach at various Toronto nightclubs and party venues by distributing condoms and lube, as well answering questions related to drugs or sex.

Through the dissemination of messages on a website and posters in various party venues and the gay press, the "Prepared to Party" campaign seeks to reinforce safer sex messages with details particular to the party culture. Men are advised to carry condoms and lube, to be prepared for safer sex, and to not let circumstances dictate behaviour. In addition, gay/MSM are advised not to assume the sero-status of their partners and to manage recreational drug use. The campaign also reaches out to HIV positive gay/MSM with regards to the difficulties which may arise in mixing HIV medications and recreational drugs (AFAO). A study based initiative "Intervention to Reduce Sexual Risk among Substance Using MSM" also aims to reduce the incidence of unprotected anal sex, which may occur under the influence of alcohol or drugs among non-injection, substance using gay/MSM. Through behavioural interventions, the study seeks to provide the necessary skills to reduce risk and to promote positive interpersonal interactions that will sustain healthy behaviours (San Francisco Department of Public Health & Centre for AIDS Prevention Studies).

The recently launched, "Hi! My Name is Tina" campaign tackles similar issues, although it is aimed specifically at gay/MSM that use crystal methamphetamine. In addition to safer sex messages, the campaign's website also provides an interactive forum for users and a resource

guide for support and other services (Toronto Gay Bisexual Men's Crystal Methamphetamine Task Force). Another campaign aimed at crystal methamphetamine users is Peter Staley's "Buy Crystal Meth, Get HIV Free!" advertising campaign. This campaign uses phone booths advertisements in New York City to state "Huge Sale: Buy Crystal Meth, Get HIV Free!" and "Bonus Special: Buy this trendy accessory pipe, get a life-time addiction absolutely free!" Within days, the advertisements generated desired attention to this issue, resulting in major news coverage from The New York Times, The New York Daily News, and three local television stations, as well as a response from the City's Health officials and political leaders. The "Speed Project" is a harm reduction project organized for and by methamphetamine users. By providing accurate information about substance use, risk reduction support through a network of peer advocates, and small group activities to share experiences and build social connections, the program supports HIV positive men to stay healthier and HIV negative men to stay negative (San Francisco AIDS Foundation).

Safely Introducing Men to New Scenes and Cruising

The main message conveyed by campaigns that discuss cruising and new scenes for gay/MSM is that safer sex negotiation is required in sex on site venues. For instance, the "Cruising" campaign instructs gay/MSM in the use of non-verbal communication to negotiate safer sex (VAC, GMHC). The issue of drug use is also addressed with regards to sex on site venues, as gay/MSM are encouraged to think about how drug use may compromise safer sex ("When You're Hot, You're Hot," ACON). Other campaigns elaborate on the above messages, and also reach out to those men who engage in online chat as a means of engaging in sex. As such, these campaigns incorporate other common messages, such as to not assume the sero-status of partners, to monitor one's own health and HIV status, and to be prepared by carrying condoms and lube so as not to allow the circumstance to dictate risky behaviour ("Cruising for Sex", Camden and Islington Gay Men's Team, Health Promotion Service, Metromate; "Cruising," VAC, GMHC).

The "Handy-Dandy" campaign has created a handbook to assist men who are either new to cruising or curious about hooking up for sex in different places. The handbook includes information on what to expect when cruising in bars, bath houses, on the Internet or phone chat lines, and in parks or public washrooms. It includes details on safer sex, as well as how to deal with rejection and other difficult emotions. This campaign addressed issues that have emerged from the literature and the community, with an emphasis on negotiating relationships safely and building the cultural competence of newcomers to the gay scene (ACT).

Asian Community AIDS Services (ACAS) uses an innovative approach to reaching men in sex on site venues by deploying "sexperts" into bathhouses to reach gay and bisexual Asian men. In order to carry out this peer program, ACAS recruits Asian men who frequently attend bath houses. They then provide education and training about HIV prevention, assessing participants' level of knowledge about HIV prevention and clarifying any misconceptions, Resources, such as

condoms and lube, are also provided for participant use and to give away. As such, the "Sexpert Initiative" has been successful in reaching many areas within the bathhouses and creating prevention based on natural interactions, thereby reducing boundaries or hierarchies typically in place between outreach workers and patrons. Some Asian men have reported that they like the message and felt it empowered them by creating a space for Asian men in the bathhouse and including them in the conception of male beauty (P. Ho, personal communication, January, 2006).

Another initiative targeted to a specific ethnic group is the "Multi-level Prevention in Culture and Context with Latino MSM." The Centre for AIDS Prevention Studies and the City of Berkeley collaboratively designed this program in dialogue with Latino MSM to ensure a culturally sensitive, multi-level approach that addresses HIV prevention both to the individual and to the environments where sex takes place. This initiative uses a social marketing campaign to encourage men to continue an internal community dialogue about risk and risk behaviour (Binson & Blea).

Relationships

A pressing issue that arises among gay/MSM involved in relationships is HIV sero-discordancy. As such, various campaigns aim to reinforce safer sex practices among such couples ("Mates," ACON). The "Opposites Attract" campaign targets couples at any stage of their relationship, aiming to inform them of their options regarding safer sex, recreational drug use, interpersonal problems and domestic violence. The program aims to reinforce the importance of safer sex practices and to encourage understanding of disclosure issues in general (ACON). Another type of initiative is the drop-in group, where men meet to discuss issues such as relationships and sex. The "VariAsian" program is one such initiative, targeting South Asians who are immigrants just coming out with no access to the gay community (ASIA – Asian Society for the Intervention of AIDS).

Access and Community Building

One of the goals of community building campaigns is to make community organizations accessible, aiming to attract those with HIV and those at risk of getting HIV. The AIDS Committee of Toronto (ACT) "A-Z" campaign aims to encourage young gay and bisexual men to engage in open conversation, and to connect with a healthy sexuality before getting HIV. The campaign aims to establish ACT as an accessible and safe place to discuss anything, while attempting to eliminate the perception that ACT is only for people with HIV/AIDS. The campaign aims to move beyond the notion of wearing a condom by creating a larger discussion on health and sexuality; including ways to reduce risk for harm in sexual acts that typically are not discussed (Houghten, ACT).

Similarly, the Ontario Gay Men's HIV Prevention Strategy Working Group has recently launched the "Be Real" campaign. Available in 14 languages, the campaign is being delivered by 26 community-based HIV prevention organizations across Ontario. The campaign's main message, "Be Real – Respect. Protect. Each Other." and "Think about the things going on in your head – and his." are followed by messages addressing various reasons why men may not wear condoms, including depression and loneliness, not fitting in, fear of rejection, and assumptions about HIV status. The messages are disseminated through public advertisements, print media, television commercials and the campaign website, all of which feature a group of men of various ages and ethnicities. In addition, the multi-faceted campaign website includes links to AIDS and health service organizations, gay community and social groups, and counselling services in cities across Ontario. The website also includes a brochure listing reasons gay/MSM may engage in unsafe sex, as well as information about safer substance use, condom use issues, and issues specific to queer transmen.

Another common theme that emerges in campaigns dealing with community building is racism or stigma, which place further barriers to HIV prevention for men who face these in their lives. The "Our Love" San Francisco is one such initiative which focuses on African American men (STOP AIDS project). The "Black Brothers Esteem" initiative reaches out to African American gay, bisexual and same gender loving men. The program provides education and skills building, such as multiple session workshops, leadership training, social events, and community development projects including a peer health advocate program, community service, creating health outreach messages, and performing outreach at public events. In addition, a weekly drop-in group – "Phoenix Rising" –targets HIV negative and HIV positive men, addressing the emotional impact of HIV as well as recovery issues. The program aims to increase social connection in order to diminish sexual risk taking. It has had a measure of success, as men who have participated in the program have reported that it enhanced their sense of belonging to various larger communities (San Francisco AIDS Foundation).

Other initiatives aim to assist men whose sexual activity with men is hidden from people in their lives and face discrimination based on their race/ethnicity and their sexuality. Such programs aim to bring these men together in the hopes that once they are linked to a support system HIV prevention can become a focus for them. Action Séro-Zéro's "Ethno-cultural project" is one such initiative, which arose out of a consensus that many ethno-cultural gay/MSM do not identify with or feel accepted in the mainstream queer community. As a result of this initiative, a coalition of queer and HIV community groups has been formed and developed campaigns translated in various languages, including Arabic (T. Haig, personal communication, January, 2006).

The Alliance for South Asian AIDS Prevention's (ASAAP) "Tamil project" aims to bring together Tamil South Asian gay/MSM for workshops (D. Egbert, personal communication, January, 2006). The ASAAP has also produced two ground-breaking television commercials aiming to address the stigma faced by gay men and other MSM from their families and communities. The commercials, which debuted during primetime South Asian programming in Toronto, are part of ASAAP's attempts to normalize homosexuality and create safer spaces for the gay/MSM.

Finally, many initiatives use gay/MSM themselves to deliver prevention programs. Many effective interventions stem from the "Mpowerment" project ("HIV Translation Research with Young, Black, Same Gender Loving Men," CAPS, the Sexual Minority Alliance of Alameda County; "A Community AIDS/HIV Risk Reduction Program for Gay Men," CDC). The "Mpowerment" project targets young gay/MSM, and is run by a core group of young gay and bisexual men, who along with other volunteers, design and carry out all outreach activities. The program, which aims to mobilize young gay men to shape a healthy community for themselves, is based on the premise that people are likely to adopt new behaviours that have already been accepted by others who are similar to them and whom they respect. The project appears to have had a strong measure of success, and has been touted in the Centre for Disease Control's "Compendium of HIV prevention interventions with evidence of effectiveness." The project includes an outreach centre, formal and informal outreach, ongoing publicity campaigns, and M-groups, in which young gay and bisexual men meet to discuss factors contributing to unsafe sex. M-groups also offer skills-building exercises in order to promote safer sex negotiation and correct condom use, and distribute free condoms and lube to participants (University of California, and CAPS).

NAZ Foundation International developed a peer-based framework for delivering sexual health programs in various South Asian countries. In order to adopt safer sex as a community norm, the framework suggests utilizing existing community networks of gay/MSM and engaging them in community building and ownership with others ("Developmental Manual – Implementing an MSM Sexual Health Project," NAZ Foundation International).

Building Self-Esteem through Empowerment and Social Support

Campaigns which deal with building self-esteem usually attempt to do so by empowering individuals. For instance, through fostering a safer environment for men to talk about sex, health, and well-being with other guys, the "Men's Wellness Programs" attempts to empower gay/MSM to make informed choices about their sexual health and well-being and reduce HIV and STI infections (AIDS Vancouver Island). The "Making it Count" framework (third edition) employs similar strategies. For instance, this initiative strongly advocates that rather than make choices for gay/MSM by telling them what to do or influencing behaviour by indoctrination, misinformation and removal of options, that educating and empowering men about sex and HIV and increasing their control over their sex lives is a more effective approach. The first two editions of this framework were successful at developing a sense of common purpose among diverse groups of gay/MSM, and can be adopted by other communities interested in this type of prevention (CHAPS, GMFA, Lesbian and Gay Foundation, Yorkshire MESMAC, Trade, THT, Sigma).

The "Hermanos de Luna y Sol" program attempts to address those factors which promote HIV risk behaviour in immigrant, Spanish speaking gay and bisexual men in San Francisco's Mission District. The program uses workshops that provide opportunities for self-reflection and critical self-observation specific to sexuality, a network of peers for social support, and other activities

that support self-esteem and pride for Latino gay and bisexual men. Also offered are follow-up resources and activities in support of the maintenance of safer sex behaviours overtime (Díaz & Ceballos, CAPS).

Health Promotion and Counselling

Health promotion programs encourage sexually active gay/MSM to get regular checkups to maintain their sexual health. Information on the purpose and process of checking for STIs, recognizing signs and symptoms, and typical treatments are all provided ("Check it Out," VAC, GMHC). On the other hand, the Gay City Health Project's Centre for LGBT Health moves away from a medical model by adopting a more holistic approach. This centre aims to address the complex social and psychological factors that influence decisions gay, bisexual, and transsexual men make. By blending grassroots organizing, culturally relevant marketing, and empowerment theories, the Gay City Health Project engages the community and supports gay, bisexual and transsexual men to determine how to best take care of themselves. This approach works to build community, foster communication, and nurture self-esteem in order to promote the health of gay and bisexual men and prevent HIV transmission.

An initiative currently being developed uses counselling to a create culturally and gender appropriate HIV intervention tailored to the needs of African American MSM who do not identify as gay – one of the groups at highest risk for HIV in the United States. This initiative will compare an enhanced HIV intervention, which involves counselling, testing and a series of individual health promotion counselling sessions, to a standard program involving HIV counselling, testing and referral to general case management services (Kegeles, Dillard-Smith, Operario, & Rhodes, California Prevention and Education Project and CAPS).

Street Worker Campaigns

Prevention work is also being carried with a population at very high risk for HIV – sex trade workers. One approach to reaching sex trade workers is through drop-in centres. For instance, the "Boys R Us" program aims to support male sex workers in Vancouver, and runs in partnership with community groups, public health services and researchers. The drop-in centre offers social support, access to resources, prevention information, condoms and lubricant, and a program to help men exit from sex work (Vancouver Richmond Health Board and AIDS Vancouver). British Columbia's "Street Nurse Program" offers services at a clinic, including HIV/STI education, testing, diagnosis and treatment, patient support and advocacy, counselling, first aid and medical and social service referrals. Furthermore, the program offers bathhouse outreach and street outreach to male sex workers (British Columbia Center for Disease Control).

Action Séro-Zéro's "Male Sex Project" conducts outreach in parks and saunas and provides peer and case workers at a drop-in location. The program aims to prevent HIV among male sex

workers while reaching a population that has little to no resources. The program places importance on building relationships between clients, peers and case workers, helping to increase accessibility to services. Staff have been successful in building trust and rapport with this community, allowing for effective dissemination of information and resources. Program staff have also noticed increased self-acceptance among clients, who have become more comfortable with themselves and their sexuality, and who are no longer hesitant to define themselves as gay or bisexual. (T. Haig, personal communication, January, 2006).

Campaigns Targeting Youth

Many initiatives aimed at youth use a "for youth, by youth" peer-based approach and encourage open discussions on issues related to sex and sexuality, while emphasizing respect for an individual's needs and choices (Peer Outreach Program, ACT). The "YouthCo" initiative incorporates these principles in the delivery of their services, which include outreach, prevention education, training, advocacy and support programs for HIV-positive youth. YouthCo's creative and interactive website offers a forum for discussion around various sexual health issues, including a general information area and a forum for HIV-positive youth. In addition to information on HIV and links to resources, facts and statistics, the website offers fun sections, including a sexual health quiz and a condom cartoon.

An example of a program specifically for HIV positive youth, the "Positive Youth Outreach" (PYO) initiative aims to empower, support and affirm people under 30 living with HIV. PYO offers retreats, a weekly drop-in, peer counselling, support groups, advocacy, career planning, and social activities, seeking to address all aspects of young people's lives in order to reduce isolation, self-destructive behaviours, and the cycle of oppression (ACT).

The "Queer Asian Youth Initiative" also aims to provide social support, but to gay and bisexual Asian youth, who may lead secretive, isolated lives. The initiative creates a social space, the "Queer Asian Bubble Tea Lounge" where support is offered on issues such as coming out to family and friends, relationships, education around HIV and STIs, and peer pressure. The social function of the space is important, as many of these youth had no other place to gather, being too young to attend bars and unable to be with partners at home (ACAS).

Building on the success of similar programs that used gay/MSM to deliver the prevention message, the Vancouver based "Totally Outright" aims to train youth to become sexual health opinion leaders and to foster leadership and communication skills. As well, the program has created a manual for others who may want to use the program model (Community Based Research Centre).

Prevention for People with HIV/AIDS

Programs aimed at HIV positive gay/MSM promote healthy living as a priority and urge safer sex by highlighting situations in which transmission can occur. Some programs convey the message that HIV positive gay/MSM can play a role in preventing HIV transmission by always wearing a condom (Live Positive, Canadian AIDS Treatment Information Exchange). The "HIV Stops with Me" campaign acknowledges the important role that HIV positive people have in ending the epidemic. In addition to dealing with issues such as sex, condom use, responsibility, communication, and disclosure of status, the campaign aims to reduce the stigma associated with HIV. In doing so, the campaign utilizes spokes-models from various cities in the United States, who each have their website and deliver personalized hopeful and supportive messages to other people who are HIV positive. This is done in an effort to get HIV positive people to think about what they are doing to stop the disease (Positive People Preventing HIV).
Other programs attempt to reduce the stigma of living with HIV by bringing gay/MSM together into prevention activities through social support and educational events. "Positive Force" is one such campaign, which brings together HIV+ gay and bisexual men of all ages, ethnicities and economic backgrounds through seminars, book clubs, cafes, clubs, and drop-in groups (STOP AIDS San Francisco).

In addition to raising awareness about situations where HIV transmission is more likely to occur, the "It's Complicated" campaign sought to empower HIV positive gay men by treating them as sexual beings and acknowledging their rights and normalcy. Through messages conveyed in print advertising, this campaign also sought to promote disclosure and dialogue about sero-status between HIV positive and HIV negative gay men. This campaign has had some measure of success as the advertisements became conversation starters among HIV positive and HIV negative men (British Columbia Persons with AIDS Society).

Other initiatives promote health and safer sex choices among HIV positive gay/MSM. These are framed by models which have previously been carried out, such as those developed by the Centres for Disease Control, which service providers may utilize. For instance, "A Brief Safer-Sex Intervention in HIV clinics" calls upon medical providers to conduct brief counselling sessions with HIV positive patients. In these sessions, the provider delivers messages that focus on self-protection, partner protection and disclosure. The provider gives consequences framed messages, emphasizing positive outcomes which may be missed or negative results which may occur if a patient engages in unsafe sexual behaviours; or advantages framed messages, which focus on a positive outcome that may happen or a negative result that may be avoided if a patient engages in safer sexual behaviours or discloses sero-status to partners. As such, it was found that patients who had two or more sex partners or at least one casual partner and received consequences framed messages were significantly less likely to engage in unprotected sex (Richardson & Hawkins, CDC, 2005).

The CDC's "Healthy Relationships: Prevention for Positives" model uses a group discussion setting. Using modelling, role-play and feedback, skills which address stress related to coping

with safer sexual behaviours and the disclosure of sero-status are taught and practiced. This model has some measure of success, as six months after taking part in the program, participants reported less unprotected sex with non-HIV positive partners, fewer sexual contacts overall, and having refused to engage in unsafe sex (Freeman, CDC).

Conclusion

As demonstrated, the varying components of HIV prevention programs are almost as diverse as the population they cater to. As such, it is difficult to create one "cure all" program, but instead, programs must be tailored to specific groups of individuals taking into account the social reality they live within. Although the battle against HIV may be a long and complex one, programs such as these are an integral component in the fight, as it is only through awareness, education, support and the combating of harmful societal influences such as homophobia, and racism that the fight against HIV may be won - once and for all.

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The epidemiology of HIV infection among Men who have sex with other men in ontario: The situation in 2005

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Executive Summary

From October 1985 to December 2005, 26,461 HIV-infected persons were newly diagnosed in Ontario of whom 64% were MSM. While MSM constituted a decreasing proportion of HIV diagnoses (~90% in the 1980s to ~50% in recent years), MSM continue to be the population most affected by HIV infection in Ontario.

The age group most affected by HIV/AIDS continues to be those 25-44 years old, though in recent years older men constitute an increasing proportion of new HIV diagnoses (11% compared to 5%). Ethnoracial communities comprise an increasing proportion of HIV diagnoses, reflected both in HIV data from Toronto and Ottawa and AIDS cases from Ontario as a whole.

The pattern of reported AIDS cases mirrors that of HIV rates with 69% of AIDS cases reported in Ontario since 1981 being among MSM. Though AIDS incidence among MSM has decreased by over 80% from its peak in 1994, after correcting for delayed reporting, AIDS incidence in MSM now appears to have increased from 2002 to 2004.

According to our statistical model, 14,900 MSM in Ontario were infected with HIV as of 2004. Overall, we estimated that 16.3% of Ontario MSM were HIV-positive. 10,650 MSM in Toronto were infected, constituting 71% of the Ontario total. Based on our same model, HIV incidence among MSM appears to have almost doubled since 1996, from 467 to 866 new infections in 2004. HIV prevalence increased by 42% during the same period.

Despite dramatic improvement in survival related in large part to the advent of HAART in 1996, the epidemic of HIV infection among MSM in Ontario is still not effectively controlled.

1. Background

Since the beginning of the HIV epidemic in Canada, men who have sex with men have been the group most affected. The infection likely began to spread in this population in the early 1980s through contacts in large US cities where HIV infection had begun to spread in the late 1970s. AIDS became reportable in Ontario in 1981 and most reported AIDS cases were among MSM during the first decade. The licensing of the HIV serodiagnostic test in October 1985 added an important indicator to help track the epidemic though, due to a number of social and environmental factors, many gay men chose not to be tested until five or years after the test became available.

The present report analyses the situation with respect to the HIV epidemic among MSM in Ontario as of 2005, using available surveillance and research findings and epidemiologic modeling.

2. Methods

In this section, we briefly describe the databases used to prepare this report, the selection of cases within that database and analytic methodology. Each data source contained cases diagnosed among the Ontario population, from which cases among MSM were selected for more detailed analyses.

Almost all HIV diagnostic testing in Ontario is performed the Central Public Health Laboratory (CPHL) and six regional HIV laboratories. HIV tests are provided free of charge and are prescribed by a physician or at an anonymous test centre.

In this report, we analyzed the trend of new HIV diagnoses (persons with a first-time HIV-positive test) among MSM from 1985 to 2005 in Ontario, as well separate analyses for Toronto, Ottawa and the other regions. We also analyzed data on ethnicity of reported HIV-positive tests in Toronto and Ottawa, based on data provided by these two public health unit reportable disease databases; cases were available until about April 2004. Approximately 60% of reported HIV cases included information on ethnicity.

AIDS cases in Ontario are reported to local public health units and then forwarded to the Public Health Division, Ontario Ministry of Health. The Division provided data on reported AIDS cases diagnosed from January 1981 to December 2005 and reported to September 2006. Cases among MSM were examined by year of diagnosis and health region, as well cases among MSM-IDU. Cases among MSM who were born in an HIV-endemic region (sub-Saharan Africa and Caribbean) were examined by year of diagnosis and modified health region. Lastly, we included analyses on ethnicity of AIDS cases in Ontario.

We attempted to estimate as precisely as possible the incidence, cumulative incidence and prevalence of HIV infection and AIDS among MSM from 1977 to 2004. To accomplish this, we used data from a variety of sources, including (with source) HIV diagnoses (CPHL), AIDS incidence (OASP), AIDS mortality. To estimate HIV incidence (e.g. the number of new HIV occurrences in a population over a period of time) among persons in Ontario, we examined seronconversions among repeat testers in the HIV diagnostic database and the results of the detuned assay (which detects recent infections) to through the Laboratory Enhancement Study. Data from the Laboratory Enhancement study and other studies where available were also used. The methodology for the model has been presented elsewhere <1>.

3. Results

3.1 HIV diagnoses and HIV incidence

Table 1.1 presents new HIV diagnoses among MSM and MSM-IDU by year of diagnosis. From October 1985 to December 2005, 26,461 HIV infections in all were diagnosed in Ontario, which includes 16,880 (64%) diagnoses among MSM and 925 (3.5%) in MSM-IDU. In the late 1980s, MSM comprised the vast majority of HIV diagnoses, accounting for 80-90% of diagnoses. This proportion decreased almost every year subsequently; from 1998 to 2005, 45- 50% of HIV diagnoses were among MSM. However, the number of new HIV diagnoses among MSM has increased in recent years. From 1999 to 2005, new HIV diagnoses increased 29% (average annual increase 5.2%). Figure 1 illustrates the trend of new HIV diagnoses among MSM from 1985 to 2005.

Table 1.2 shows new HIV diagnoses among MSM and MSM-IDU by five-year period of diagnosis and health region. The majority (74%) of diagnoses among MSM were from Toronto, followed by 8.2% from Ottawa and 7.2% in the Southwest region. The number of new HIV diagnoses among MSM decreased about half during the period 1995-2005 compared to 1985-1994, especially in the Southwest region and Toronto.

The majority of HIV diagnoses among MSM-IDU were also from Toronto (55%), Ottawa (14%) and the Central West region (11%). Figure 2 illustrates the trend of the number of new HIV diagnoses among MSM by health regions.

Mean age at HIV diagnosis from 1985 to 2005 was 35.1 years old. However, MSM diagnosed in recent years were somewhat older than those diagnosed earlier. The mean age at time of HIV diagnosis was 34 in 1985-89, 35 in 1990-94, 36 in 1995-99 and 37 years in the latest five-year period. The proportion of infected MSM 50 years of age or older increased from 5.0% in 1985-89 to 10.7% in 2000-05.

According to the detuned assay, HIV incidence in Ontario MSM was relatively stable at around 1.0 per 100 person-years from 2001 to 2004 (Table 1.3 and Figure 5). Toronto had the highest

HIV incidence density in each year, followed by Ottawa. The adjusted incidence in Toronto decreased from 2000 to 2001 and was stable since.

3.1.1 New HIV diagnoses in Toronto

As seen in Table 1.4, from October 1985 to December 2005, 17,517 HIV infections were diagnosed in Toronto, which included 12,484 (71.3%) HIV diagnoses among MSM and 509 (2.9%) in MSM-IDU. In the late 1980s, MSM comprised the vast majority of HIV diagnoses in Toronto, accounting for 80-90% of diagnoses. This proportion decreased gradually to a low of 49% in 2001, but increased slightly in the most recent four years. At the same time, the number of new HIV diagnoses among MSM has also increased in recent years. From 2001 to 2005, new HIV diagnoses increased 27%, for an average annual increase of 6.2%. Figure 6 illustrates the trend of new HIV diagnoses among MSM in Toronto from 1985 to 2005.

Table 1.5 presents the distribution of HIV cases from Toronto among MSM by ethnicity and five-year period of HIV diagnosis from 1980 to 2004. The distribution of ethnicity among HIV-infected MSM changed over time. While the proportion of White persons decreased, the proportion of other ethnic groups, including Black, Asian, South Asian, Arab/West Asian and Latin American, increased.

3.1.2 HIV diagnoses in Ottawa

From October 1985 to December 2005, 2,904 HIV infections were diagnosed in Ottawa, including 1,382 (48%) HIV diagnoses among MSM and 129 (4.4%) in MSM-IDU (Table 1.6).

The proportion of MSM among total cases in Ottawa decreased from over 80% in the mid-1980s to a low of 30% in the mid-1990s, but has been unstable since, representing about 40% in the most recent five years. The average annual number of new HIV diagnoses was 54 from 2001 to 2005. Figure 7 illustrates the trend of new HIV diagnoses among MSM in Ottawa from 1985 to 2005. Similar to the whole province and Toronto, MSM diagnosed in recent years were older than those diagnosed earlier. The proportion of infected MSM 50 years of age or older increased from 2.2% in 1985-89 to 12.6% in 2000-05.

Table 1.7 presents the ethnicity distribution of reported HIV cases among MSM by five-year period in Ottawa from 1980 to 2004. The proportion of White MSM decreased and the proportion of other ethnic groups, including Black, Asian and Latin American, increased.

3.1.3 New HIV diagnoses in other regions

From October 1985 to December 2005, 6,040 HIV infections were diagnosed in other regions of Ontario, including 3,014 (50%) HIV diagnoses among MSM and 287 (4.8%) in MSM-IDU (Table 1.8). The proportion of MSM has decreased from about 80% the early years to 24% in 2003. However, it increased somewhat in 2004 and 2005. The number of new HIV diagnoses increased 67% (an

excess of 44 cases) in 2004 compared to 2003 and further increased 42% (an excess of 46 cases) in 2005 compared to 2004 (Figure 8).

3.2 AIDS diagnoses

Table 2.1 presents the number and proportion of AIDS cases among MSM and MSM-IDU by year of diagnosis from 1981 to 2005. Overall, 8,233 cases were reported in Ontario, of which 5,793 (70%) were among MSM and 341 (4.1%) among MSM-IDU. As for HIV diagnoses, the proportion of AIDS cases comprised by MSM decreased over time, particularly in recent years. MSM generally constituted more than 80% of AIDS cases diagnosed in the 1980s and the proportion of MSM gradually decreased in almost every year. In the five years from 2001 to 2005, the proportion of MSM remained relatively stable at about 41% each year. Figure 9 displays the trend of reported AIDS cases among MSM.

The majority of AIDS cases (66%) among MSM were reported from Toronto, followed by 8.2% from the Central West region and 7.7% from the Southwest region. The number of reported cases in each health region decreased dramatically after 1996 and a decreasing trend of the proportion of MSM among total AIDS cases was also observed in all health regions. 207 AIDS cases were MSM from HIV-endemic countries; 86% of those were from Toronto.

Table 2.2 presents the distribution of reported AIDS cases among MSM and MSM-IDU by ethnicity in Ontario from 1981 to 2005. Similar to HIV diagnoses, the distribution of ethnicity among AIDS cases changed over time. The proportion of MSM constituted by those classified as White decreased, while the proportion of AIDS cases among other ethnic groups increased.

3.3 HIV statistical model

Based on the results of our statistical model, we estimated that cumulatively 20,283 MSM have been infected with HIV from 1977 to December 2004 (Table 3.1). To 2004, 6,270 cases of AIDS have occurred and 5,785 HIV-infected persons have died, 5,356 of whom died from HIV-related causes. At end-2004, 14,927 MSM were living with HIV infection, representing 62% of HIV-infected persons in Ontario. Of these, 10,602 (71%) have been diagnosed.

HIV incidence among MSM increased steeply from 1977 to 1984, then decreased to its lowest level in 1996 and increased since. HIV incidence was 85% greater in 2004 than in 1996, from 467 to 866 new infections annually. HIV prevalence increased over the study period, increasing sharply from 1997 to 2004. In the five years since 1999, HIV prevalence increased 29%, for an average annual increase of 5.2%. Figure 10 and Figure 11 illustrate the trends in modeled HIV incidence and prevalence among MSM.

To December 2004, 1,146 MSM-IDU have been infected with HIV (Table 3.2); 414 persons have developed AIDS and 492 persons have died, 343 from HIV-related causes. 653 persons were estimated to be living with HIV infection, representing 2.7% of HIV-infected persons in Ontario.

The trend in HIV incidence among MSM-IDU was similar that among MSM: HIV incidence increased 74% in 2004 compared to 1996. HIV prevalence increased over time, with the greatest increase from 1997 to 2004. HIV prevalence among MSM-IDU was 26% greater in 2004 than in 1999, for an average annual increase of 4.8%.

As of 2004, the highest rate of HIV infections among MSM was in Toronto with an estimated prevalence of almost 20% and an annual incidence of 1.4%. Nevertheless, the rates among MSM in Ottawa and in the rest of Ontario were not negligible (Table 3.3). Annual HIV incidence rate and prevalence of HIV infections among MSM-IDU was notably higher in Ottawa (3.4% and 25.5%, respectively) and other regions of Ontario (2.2% and 33.0%, respectively) (Table 3.4).

Table 3.5 presents the results of a preliminary analysis of HIV infection among MSM by health region and public health unit (PHU). The estimated HIV prevalence among MSM varied markedly by PHU: highest prevalence was 25.2% in Hamilton-Wentworth, followed by Middlesex-London at 20.6% and Toronto at 19.6%. The lowest modeled prevalence was 2.1% in North Bay-Parry Sound, 2.3% in Renfrew and 2.8% in Algoma PHU.

4. Discussion

In this report, we analyzed available surveillance and research data to 2005 to characterize the evolution of the HIV epidemic among MSM in Ontario. Overall, we estimated that, as of December 2004, almost 15,000 MSM were infected with HIV and that, in the same year, almost 900 men became newly infected. Not surprisingly, the greatest concentration of HIV infection among MSM is in Toronto, which consistently constitutes about 75% of the MSM epidemic in Ontario. HIV prevalence among MSM has increased 29% since 1999, with an average annual increase of 5.2%. In 2004, the HIV prevalence rate among MSM was 16% in Ontario with almost 20% infected in Toronto. The complexion of the HIV epidemic among MSM has changed over time: White MSM constituted about 90% of HIV and AIDS cases 1990 compared to 70-80% in the most recent five years.

There are several methodologic limitations to our analyses. HIV data was adjusted using results of the Laboratory Enhancement Study and AIDS cases, at least for the purposes of the model was adjusted for underreporting and delayed reporting. These adjustments are subject to some uncertainty. Although the methodology used to assign exposure categories to cases without risk factors indicated or reassign risk factors initially misclassified is appropriate, some imprecision is unavoidable due to the small number of respondents in the Laboratory Enhancement Study for some exposure categories. Reported AIDS cases are subject to under-reporting and reporting delay; the latter is more of a problem for cases in the most recent years. In addition, there existed several possible sources of bias in calculation HIV incidence among repeat testers. Thus, our results should be interpreted with some caution.

Although the proportion of HIV diagnoses comprised by MSM gradually decreased from 90% in the late 1980s to about 45-50% in recent years, the increasing numbers of HIV diagnoses among MSM is concerning. From 2000 to 2005, new HIV diagnoses increased 29% (average annual increase 5.2%). This increase in HIV diagnoses could be related in part to an increase in HIV testing: testing among MSM increased by 35% in Ontario in 2004 compared to 2000. Thus, although increased HIV testing appears to account for some of the increase in diagnoses, it is likely due to an increase in HIV incidence as well.

HIV infection remains a major public health challenge to the health of MSM in Ontario. The continued increase in HIV prevalence is due to both positive and negative factors related to the evolving HIV epidemics. The increase in HIV prevalence is in part related to increased survival due to the advent of HAART in 1996, leading to improved life expectancy among HIV-infected persons. The other principal reason for increased HIV prevalence is more discouraging, related to increasing HIV incidence. To model HIV incidence in MSM, we examined several independent data sources, including an analysis of repeat testers and data from the detuned assay carried in the context of the Laboratory Enhancement Study. We also reviewed the results from a back-calculation model carried out by Ping Yan <2> and HIV incidence data from other Canadian cities <*3,4*>. Based on these sources and our analysis, we conclude that HIV incidence among MSM has increased substantially since 1996. According to our model, annual HIV incidence increased from 467 in 1996 to 866 in 2004, a 1.9-fold increase.

Despite the limitations associated with the available data, we believe our results indicate that the HIV epidemic in Ontario MSM is not yet under control. Thus, improved surveillance and further research are needed to better understand and control the epidemic. Policy and programs for primary and secondary HIV prevention should focus on approaches that have proven effective. Measures to increase the proportion of HIV-infected MSM who know they are infected, currently estimated at 71%, may also likely help to reduce HIV transmission.

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Table 1.1 Number and proportion[1] of new HIV diagnoses (adjusted[2]) among MSM and MSM-IDU by year of diagnosis, Ontario, 1985 to 2005

Year	MSM		MSM-IDU		Total[3]
	No.	%	No.	%	
1985	303	90.4%	12	3.5%	335
1986	1,199	87.8%	49	3.6%	1,365
1987	1,324	85.6%	44	2.9%	1,547
1988	1,155	80.0%	48	3.3%	1,443
1989	1,366	80.0%	62	3.6%	1,706
1990	1,629	78.7%	69	3.3%	2,069
1991	1,401	76.6%	57	3.1%	1,828
1992	1,242	68.7%	85	4.7%	1,809
1993	902	60.6%	81	5.4%	1,488
1994	699	53.2%	73	5.5%	1,313
1995	743	56.0%	73	5.5%	1,326
1996	562	54.1%	40	3.8%	1,040
1997	484	51.8%	32	3.4%	933
1998	459	47.9%	43	4.5%	958
1999	427	47.5%	29	3.2%	900
2000	439	49.1%	34	3.8%	894
2001	413	42.9%	23	2.4%	962
2002	529	46.5%	15	1.3%	1,139
2003	466	42.1%	20	1.8%	1,105
2004	572	48.6%	28	2.4%	1,177
2005	567	50.4%	10	0.87%	1,124
Total	16,880	63.8%	925	3.5%	26,461

1 Percentage of MSM or MSM-IDU cases among all new HIV diagnoses in Ontario
2 Adjusted for unknown region, sex and exposure category (see 'Report on HIV/AIDS in Ontario' for more details), thus, total may differ due to rounding
3 Total HIV diagnoses in Ontario

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.2 Number and proportion[1] of new HIV diagnoses among MSM and MSM-IDU (adjusted[2]) by 5-year period of diagnosis and health region, Ontario, 1985 to 2005

	Northern		Ottawa		Eastern, other		Toronto		Central East, other		Central West		Southwest		Total
Period	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**
MSM															
1985-1989	46	0.86%	406	7.6%	73	1.4%	4,147	77.6%	154	2.9%	234	4.4%	286	5.4%	5,346
1990-1994	49	0.84%	431	7.3%	109	1.9%	4,277	72.8%	161	2.7%	263	4.5%	582	9.9%	5,873
1995-1999	26	0.95%	246	9.2%	61	2.3%	1,956	73.1%	90	3.4%	114	4.3%	183	6.8%	2,676
2000-2005	31	1.0%	299	10.0%	68	2.3%	2,104	70.5%	173	5.8%	155	5.2%	157	5.2%	2,986
Total	152	0.90%	1,382	8.2%	311	1.8%	12,484	74.0%	578	3.4%	766	4.5%	1,207	7.2%	16,881
MSM-IDU															
1985-1989	4	2.1%	7	3.2%	3	1.4%	155	72.1%	9	4.1%	25	11.5%	12	5.7%	215
1990-1994	8	2.1%	65	17.9%	18	4.9%	195	53.5%	30	8.2%	27	7.5%	22	5.9%	364
1995-1999	5	2.5%	35	16.0%	15	6.9%	90	41.5%	17	7.7%	39	18.2%	16	7.3%	216
2000-2005	8	6.4%	23	17.4%	0	0.0%	69	53.3%	11	8.4%	12	9.2%	7	5.4%	129
Total	26	2.8%	129	14.0%	36	3.8%	509	55.0%	66	7.1%	103	11.2%	57	6.1%	925

1 Row percent
2 Adjusted for unknown region, sex and exposure category (see 'Report on HIV/AIDS in Ontario' for more details), thus, total may differ due to rounding

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.3 HIV incidence density (per 100 person-years) (adjusted[1]) based on the detuned assay among MSM by year of diagnosis and aggregated health region, Ontario, 2000 to 2004

Year	Toronto	Ottawa	Ontario, other[3]	Ontario
2000	2.41	0.92	0.96	1.75
2001	1.21	1.10	0.51	0.95
2002	1.44	1.84	0.47	1.14
2003	1.19	0.91	0.31	0.85
2004	1.27	1.14	0.61	1.02

1 Adjusted for bias factor
2 Rest of Ontario, i.e. outside Toronto and Ottawa

Data sources: Laboratory Enhancement Study, HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.4 Number and proportion[1] of new HIV diagnoses (adjusted[2]) among MSM and MSM-IDU by year of diagnosis, Toronto, 1985 to 2005

Year	MSM		MSM-IDU		Total[3]
	No.	%	No.	%	
1985	215	95.6%	8	3.5%	225
1986	888	89.4%	36	3.6%	994
1987	1,013	87.3%	28	2.4%	1,160
1988	894	85.2%	40	3.8%	1,049
1989	1,138	87.1%	44	3.4%	1,306
1990	1,267	83.8%	45	3.0%	1,511
1991	982	81.4%	26	2.2%	1,206
1992	877	75.0%	42	3.6%	1,170
1993	665	67.4%	61	6.2%	986
1994	487	63.3%	21	2.8%	769
1995	579	65.6%	23	2.6%	882
1996	411	60.8%	23	3.4%	676
1997	341	63.1%	16	2.9%	541
1998	309	56.3%	16	2.8%	549
1999	315	58.5%	13	2.4%	539
2000	317	57.1%	20	3.6%	555
2001	285	48.8%	14	2.4%	583
2002	378	50.7%	12	1.6%	746
2003	359	51.4%	7	1.0%	699
2004	403	56.8%	11	1.6%	710
2005	362	54.7%	5	0.74%	663
Total	12,484	71.3%	509	2.9%	17,517

1 Percentage of MSM or MSM-IDU cases among new HIV diagnoses in Toronto
2 Adjusted for unknown region, sex and exposure category (see 'Report on HIV/AIDS in Ontario' for more details), thus, total may differ due to rounding
3 Total HIV diagnoses in Toronto

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.5 Number and proportion[1] of reported HIV cases among MSM by ethnicity and period of HIV diagnosis, Toronto, Ontario, 1985 to 2004[2]

	1985-1989[3]		1990-1994		1995-1999		2000-2004		Total	
Ethnic group	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
White	817	90.0%	1,137	87.1%	728	76.5%	449	71.2%	3,131	82.5%
Black	34	3.7%	53	4.1%	69	7.2%	44	7.0%	200	5.3%
Asian	13	1.4%	20	1.5%	31	3.3%	44	7.0%	108	2.8%
South Asian	9	1.0%	20	1.5%	17	1.8%	12	1.9%	58	1.5%
Arab/West Asian	0	0.0%	3	0.23%	6	0.63%	14	2.2%	23	0.61%
Latin American	20	2.2%	38	2.9%	51	5.4%	60	9.5%	169	4.5%
Aboriginal	3	0.33%	13	1.0%	13	1.4%	4	0.63%	33	0.87%
Other	12	1.3%	21	1.6%	37	3.9%	4	0.63%	74	1.9%
Unknown	1,071		732		477		564		2,844	
Total	**1,979**		**2,037**		**1,429**		**1,195**		6,640	

1 Column percent with known ethnicity
2 Data incomplete for 2004
3 Including 25 cases indicated as having been diagnosed from 1980 to 1984

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.6 Number and proportion[1] of new HIV diagnoses (adjusted[2]) among MSM and MSM-IDU by year of diagnosis, Ottawa, 1985 to 2005

Year	MSM		MSM-IDU		Total[3]
	No.	%	No.	%	
1985	19	68.7%	0	0.0%	27
1986	105	91.0%	0	0.0%	116
1987	105	87.3%	5	4.1%	120
1988	106	75.2%	0	0.0%	141
1989	71	57.2%	2	1.6%	124
1990	126	66.1%	11	5.9%	190
1991	81	49.2%	16	9.6%	164
1992	99	46.7%	12	5.6%	212
1993	74	41.7%	10	5.8%	176
1994	52	28.2%	16	8.7%	184
1995	48	33.4%	12	8.4%	143
1996	40	38.7%	5	4.9%	104
1997	36	26.4%	0	0.0%	134
1998	70	41.3%	14	8.2%	169
1999	52	36.6%	4	2.4%	143
2000	31	31.1%	6	6.0%	99
2001	52	40.4%	0	0.0%	129
2002	67	46.9%	0	0.0%	144
2003	40	30.1%	6	4.1%	135
2004	60	43.3%	11	8.0%	138
2005	49	44.5%	0	0.0%	109
Total	1,382	47.6%	129	4.4%	2,904

1 Percentage of MSM or MSM-IDU cases among all new HIV diagnoses in Ottawa
2 Adjusted for unknown region, sex and exposure category (see 'Report on HIV/AIDS in Ontario' for more details), thus, total may differ due to rounding
3 Total HIV diagnoses in Ottawa

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.7 Number and proportion[1] of reported HIV cases among MSM by ethnicity and period of HIV diagnosis, Ottawa, Ontario, 1985 to 2004[2]

Ethnic group	1985-1989[3]		1990-1994		1995-1999		2000-2004		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
White	95	89.5%	135	93.1%	31	79.5%	68	77.3%	329	87.0%
Black	7	6.7%	4	2.8%	4	10.3%	8	9.1%	23	6.1%
Asian	1	0.95%	1	0.7%	0	0.0%	2	2.3%	4	1.1%
South Asian	0	0.0%	0	0.0%	0	0.0%	1	1.1%	1	0.26%
Arab/West Asian	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Latin American	2	1.9%	2	1.4%	3	7.7%	7	8.0%	14	3.7%
Aboriginal	1	0.95%	1	0.69%	1	2.6%	2	2.3%	5	1.3%
Other	0	0.0%	2	1.4%	0	0.0%	0	0.0%	2	0.53%
Unknown	47		37		100		49		233	
Total	**153**		**182**		**139**		**137**		**611**	

1 Column percent with known ethnicity
2 Data incomplete for 2004
3 Including 1 case diagnosed in 1983

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.8 Number and proportion[1] of new HIV diagnoses (adjusted[2]) among MSM and MSM-IDU by year of diagnosis, Other Regions, 1985 to 2005

Year	MSM		MSM-IDU		Total[3]
	No.	%	No.	%	
1985	69	83.6%	4	4.8%	83
1986	206	80.5%	13	5.0%	255
1987	206	77.3%	12	4.5%	267
1988	155	61.3%	9	3.4%	253
1989	157	56.9%	16	5.7%	276
1990	237	64.4%	13	3.5%	368
1991	338	73.7%	15	3.2%	458
1992	266	62.3%	31	7.3%	427
1993	164	50.3%	10	3.0%	326
1994	160	44.4%	36	9.9%	360
1995	116	38.6%	38	12.7%	301
1996	112	43.0%	12	4.5%	260
1997	107	41.3%	16	6.1%	258
1998	80	33.4%	13	5.6%	240
1999	59	27.3%	13	5.9%	217
2000	92	38.1%	8	3.5%	241
2001	76	30.3%	9	3.6%	250
2002	84	33.7%	3	1.2%	249
2003	66	24.3%	7	2.6%	271
2004	110	33.4%	5	1.7%	329
2005	156	44.3%	5	1.4%	352
Total	3,014	49.9%	287	4.8%	6,040

1 Percentage of MSM or MSM-IDU cases among all new HIV diagnoses in Other regions
2 Adjusted for unknown region, sex and exposure category (see 'Report on HIV/AIDS in Ontario' for more details), thus, total may differ due to rounding
3 Total HIV diagnoses in Other regions

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 2.1 Number and proportion[1] of reported AIDS cases (adjusted[2]) among MSM and MSM-IDU by year of AIDS diagnosis, Ontario, 1981 to 2005

	MSM		MSM-IDU		Total[3]
Year	No.	%	No.	%	No.
1981	1	50.0%	0	0.0%	2
1982	6	85.7%	0	0.0%	7
1983	15	73.9%	3	15.2%	20
1984	51	86.2%	4	6.9%	59
1985	144	88.8%	5	3.3%	162
1986	232	88.1%	9	3.6%	264
1987	342	82.0%	20	4.7%	417
1988	385	82.9%	19	4.0%	464
1989	446	82.0%	21	3.8%	544
1990	506	78.8%	22	3.5%	642
1991	494	77.9%	23	3.7%	634
1992	545	74.4%	34	4.6%	732
1993	550	74.9%	34	4.7%	735
1994	500	73.4%	39	5.7%	681
1995	444	67.8%	37	5.7%	656
1996	276	61.1%	21	4.6%	452
1997	164	60.2%	7	2.5%	272
1998	130	54.5%	6	2.5%	239
1999	122	57.5%	7	3.3%	212
2000	74	46.9%	5	3.4%	158
2001	87	42.8%	6	2.9%	204
2002	69	41.8%	3	2.0%	164
2003	74	39.9%	5	2.9%	186
2004	70	41.9%	6	3.7%	167
2005	66	41.0%	4	2.5%	160
Total	5,793	70.4%	341	4.1%	8,233

1 Percentage of MSM or MSM-IDU cases among all AIDS cases in Ontario
2 Adjusted unknown exposure category according to proportion among the known cases stratified by sex, health region and year and diagnosis
3 Total AIDS cases in Ontario

Data source: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to September 2006)

Table 2.2 Number of proporiton[1] of reported AIDS cases among MSM by ethnicity and period of AIDS diagnosis, Ontario, 1981 to 2005

	1981-1984		1985-1989		1990-1994		1995-1999		2000-2005		Total	
Ethnic group	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
MSM												
White	42	95.5%	913	91.2%	1,691	89.0%	718	87.6%	157	73.7%	3,521	88.5%
Black	0	0.0%	23	2.3%	75	3.9%	28	3.4%	15	7.0%	141	3.5%
Asian	2	4.5%	15	1.5%	48	2.5%	23	2.8%	13	6.1%	101	2.5%
South Asian	0	0.0%	5	0.50%	11	0.58%	6	0.73%	5	2.3%	27	0.68%
Arab/West Asian	0	0.0%	0	0.0%	3	0.16%	1	0.12%	1	0.47%	5	0.13%
Latin American	0	0.0%	33	3.3%	38	2.0%	29	3.5%	14	6.6%	114	2.9%
Aboriginal	0	0.0%	5	0.50%	12	0.63%	7	0.85%	4	1.9%	28	0.70%
Other	0	0.0%	7	0.70%	21	1.1%	8	0.98%	4	1.9%	40	1.0%
Unknown	25		494		556		244		177		1,496	
Total	**69**		**1,495**		**2,455**		**1,064**		**390**		**5,473**	

1 Column percent with known ethnicity

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 3.1 Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among MSM, Ontario, 1977 to 2004

Year	HIV incidence rate	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV prevalence (%)	HIV diagnoses	HIV diagnoses cumulative	Proportion HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	0.12%	79	79	79	0.12%	0	0	79	0.0%	0.0%	0	0	0	0	0	0
1978	0.25%	159	238	238	0.37%	0	0	238	0.0%	0.0%	0	0	0	0	0	0
1979	0.43%	280	518	518	0.79%	0	0	518	0.0%	0.0%	0	0	0	0	0	0
1980	0.62%	402	920	920	1.4%	0	0	920	0.0%	0.0%	0	0	0	0	0	0
1981	0.98%	645	1,565	1,565	2.4%	1	1	1,564	0.07%	0.05%	1	1	1	1	0	0
1982	1.6%	1,051	2,616	2,614	3.9%	8	9	2,607	0.34%	0.24%	6	8	9	6	2	3
1983	1.7%	1,130	3,746	3,736	5.5%	16	24	3,722	0.65%	0.39%	15	16	24	15	7	10
1984	2.5%	1,611	5,357	5,325	7.7%	54	79	5,278	1.5%	0.89%	47	54	79	47	22	31
1985	2.3%	1,476	6,833	6,732	9.6%	403	482	6,351	7.1%	5.7%	381	172	251	151	69	101
1986	2.0%	1,270	8,102	7,846	11.0%	1,104	1,586	6,517	19.6%	16.9%	1,329	296	547	290	156	257
1987	1.5%	959	9,061	8,540	11.7%	1,221	2,806	6,255	31.0%	26.8%	2,285	416	962	441	265	521
1988	1.2%	769	9,830	8,979	12.1%	1,066	3,872	5,958	39.4%	33.6%	3,021	437	1,399	548	330	851
1989	1.1%	745	10,575	9,398	12.3%	1,258	5,130	5,445	48.5%	42.1%	3,953	499	1,898	720	326	1,177
1990	1.0%	715	11,290	9,760	12.6%	1,509	6,639	4,651	58.8%	52.3%	5,109	558	2,456	925	353	1,530
1991	0.98%	679	11,969	10,082	12.8%	1,311	7,950	4,019	66.4%	60.1%	6,063	497	2,952	1,066	356	1,886
1992	0.86%	602	12,571	10,274	12.8%	1,182	9,132	3,439	72.6%	66.5%	6,834	578	3,530	1,233	411	2,298
1993	0.80%	567	13,138	10,375	12.8%	892	10,023	3,115	76.3%	70.0%	7,260	578	4,108	1,345	465	2,763
1994	0.74%	528	13,667	10,406	12.7%	688	10,711	2,955	78.4%	71.6%	7,451	507	4,615	1,354	498	3,261
1995	0.70%	505	14,171	10,434	12.7%	743	11,454	2,718	80.8%	74.0%	7,716	452	5,067	1,329	477	3,738
1996	0.64%	467	14,639	10,512	12.6%	563	12,017	2,622	82.1%	75.1%	7,890	284	5,352	1,225	389	4,127
1997	0.74%	547	15,185	10,753	12.7%	484	12,501	2,684	82.3%	75.0%	8,069	170	5,522	1,090	305	4,432
1998	0.80%	599	15,784	11,117	13.0%	462	12,963	2,821	82.1%	74.6%	8,296	133	5,655	988	235	4,667
1999	0.89%	669	16,453	11,595	13.4%	434	13,397	3,056	81.4%	73.6%	8,539	117	5,772	914	191	4,858
2000	0.86%	657	17,109	12,100	13.8%	444	13,841	3,269	80.9%	73.0%	8,831	84	5,856	846	152	5,010
2001	0.92%	714	17,823	12,704	14.2%	432	14,273	3,550	80.1%	72.1%	9,154	91	5,947	828	109	5,119
2002	0.98%	770	18,593	13,400	14.7%	562	14,835	3,758	79.8%	72.0%	9,643	74	6,020	828	74	5,193
2003	1.0%	824	19,417	14,148	15.3%	510	15,345	4,072	79.0%	71.2%	10,076	88	6,108	839	76	5,269
2004	1.1%	866	20,283	14,927	16.0%	613	15,957	4,326	78.7%	71.0%	10,602	162	6,270	914	87	5,356

Table 3.2 Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among MSM-IDU, Ontario, 1977 to 2004

Year	HIV incidence rate	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV prevalence (%)	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	Proportion HIV infections diagnosed	HIV infected diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	0.07%	1	1	1	0.07%	0	0	1	0.0%	0.0%	0	0	0	0	0	0
1978	0.22%	5	6	6	0.29%	0	0	6	0.0%	0.0%	0	0	0	0	0	0
1979	0.66%	14	20	20	0.94%	0	0	20	0.0%	0.0%	0	0	0	0	0	0
1980	1.3%	28	49	48	2.2%	0	0	49	0.0%	0.0%	0	0	0	0	0	0
1981	1.8%	38	86	85	3.9%	0	0	86	0.0%	0.0%	0	0	0	0	0	0
1982	2.6%	56	143	141	6.3%	0	0	143	0.0%	0.0%	0	0	0	0	0	0
1983	3.3%	70	213	207	9.2%	4	4	209	1.8%	1.4%	3	4	4	3	1	1
1984	4.4%	91	304	293	12.8%	5	9	295	2.9%	1.7%	5	5	9	5	3	4
1985	3.3%	67	371	350	15.1%	19	27	343	7.4%	2.0%	7	8	16	8	5	8
1986	2.6%	53	423	391	16.6%	52	79	345	18.6%	11.8%	46	11	28	12	7	16
1987	2.2%	44	468	415	17.3%	52	130	337	27.9%	18.8%	78	28	55	26	14	29
1988	2.0%	40	508	431	17.6%	52	183	325	36.0%	24.5%	106	24	79	31	19	48
1989	2.0%	41	549	448	17.8%	63	246	303	44.8%	32.3%	145	26	104	39	18	66
1990	1.9%	40	589	462	18.0%	72	318	271	54.0%	41.3%	191	29	134	49	19	85
1991	1.9%	40	629	476	18.3%	62	380	249	60.4%	47.6%	227	26	159	55	19	104
1992	1.9%	40	669	486	18.4%	77	457	213	68.2%	56.3%	274	40	199	72	23	127
1993	1.8%	39	708	489	18.2%	73	530	179	74.8%	63.5%	310	41	240	84	29	155
1994	1.5%	34	742	482	17.8%	67	597	145	80.4%	69.8%	336	48	287	98	34	189
1995	1.3%	30	772	470	17.3%	61	657	114	85.2%	75.7%	355	40	327	104	35	224
1996	1.3%	29	800	463	16.8%	40	698	102	87.2%	77.9%	360	25	352	100	29	252
1997	1.7%	38	839	472	16.9%	32	730	109	87.0%	77.0%	363	9	361	87	22	275
1998	1.8%	41	880	489	17.3%	40	771	110	87.5%	77.6%	380	7	368	76	17	292
1999	2.1%	50	930	517	18.1%	28	798	132	85.9%	74.5%	385	11	379	73	15	306
2000	1.7%	39	969	536	18.5%	34	832	137	85.9%	74.5%	399	7	386	67	12	319
2001	1.5%	37	1,006	556	18.8%	27	859	147	85.4%	73.5%	409	6	392	64	9	328
2002	1.7%	42	1,048	584	19.5%	19	878	170	83.8%	70.9%	414	3	395	62	5	333
2003	1.9%	47	1,095	617	20.3%	21	899	196	82.1%	68.3%	421	4	398	60	5	338
2004	2.0%	50	1,146	653	21.2%	30	930	216	81.2%	67.0%	438	15	414	71	5	343

Table 3.3 Modeled MSM number, HIV prevalence and incidence by aggregated health region, Ontario, 2004

Health region (aggregated)	Proportion MSM	Number MSM	Number HIV	Prevalence HIV	Annual HIV incidence (No.)	Annual HIV incidence (%)
Toronto	5.5%	54,308	10,650	19.6%	610	1.4%
Ottawa	3.4%	10,586	1,500	14.2%	100	1.1%
Rest of Ontario	0.80%	26,621	2,750	10.3%	160	0.67%
Total	2.0%	91,515	14,900	16.3%	870	1.1%

Table 3.4 Modeled MSM-IDU number, HIV prevalence and incidence by aggregated health region, Ontario, 2004

Health region (aggregated)	Number MSM-IDU	Number HIV	Prevalence HIV	Annual HIV incidence (No.)	Annual HIV incidence (%)
Toronto	2,009	330	16.4%	30	1.8%
Ottawa	392	100	25.5%	10	3.4%
Rest of Ontario	666	220	33.0%	10	2.2%
Total	3,067	650	21.2%	50	2.1%

Table 3.5 Modeled number and HIV prevalence[1] among MSM by health region and public health unit, Ontario, 2004

Public Health Unit	Number MSM	Prevalent HIV-infected, number	Prevalent HIV-infected, proportion (%)	Rank
Algoma	320	9	2.8%	34
North Bay-Parry Sound	350	7	2.1%	36
Northwestern	340	17	5.0%	27
Porcupine	250	10	4.0%	31
Sudbury & District	800	84	10.5%	11
Thunder Bay District	650	30	4.6%	30
Timiskaming	100	3	3.1%	33
Northern	2,810	160	5.7%	
Ottawa	10,600	1,500	14.2%	5
Eastern Ontario	540	26	4.8%	28
Hastings & Prince Edward	430	41	9.5%	14
Kingston, Frontenac, Len & Add	750	95	12.7%	7
Leeds,Grenville-Lanark	460	27	5.9%	23
Renfrew County and District	270	6	2.3%	35
Eastern, other	2,450	195	8.0%	
Toronto	54,300	10,650	19.6%	3
Durham Regional	2,200	150	6.8%	21
Haliburton, Kawartha, Pine Ridge	690	23	3.3%	32
Peel Regional	3,020	345	11.4%	8
Peterborough County-City	530	42	7.9%	17
Simcoe-Muskoka	1,240	88	7.1%	19
York Regional	2,300	133	5.8%	24
Central East, other	9,980	781	7.8%	
Brant County	330	45	13.6%	6
Haldimand-Norfolk Regional	300	21	7.0%	20
Halton Regional	1,100	117	10.6%	10
Hamilton-Wentworth Regional	1,250	315	25.2%	1
Niagara Regional	1,100	201	18.3%	4
Waterloo	1,240	125	10.1%	13
Wellington-Dufferin	690	71	10.3%	12
Central West	6,010	895	14.9%	
Chatham-Kent	310	25	8.1%	16
Elgin-St. Thomas	230	13	5.7%	25
Grey-Bruce-Owen Sound	430	28	6.5%	22
Huron County	170	8	4.7%	29
Middlesex-London	2,280	470	20.6%	2
Oxford County	280	22	7.9%	18
Perth District	210	17	8.1%	15
Sarnia-Lambton	360	20	5.6%	26
Windsor-Essex County	1,080	115	10.6%	9
Southwest	5,350	718	13.4%	
Ontario	91,500	14,900	16.3%	

1 Results of preliminary analysis; estimates are indicative only

Figure 1 Number and proportion of new HIV diagnoses (adjusted) among MSM by year of diagnosis, Ontario, 1985 to 2005

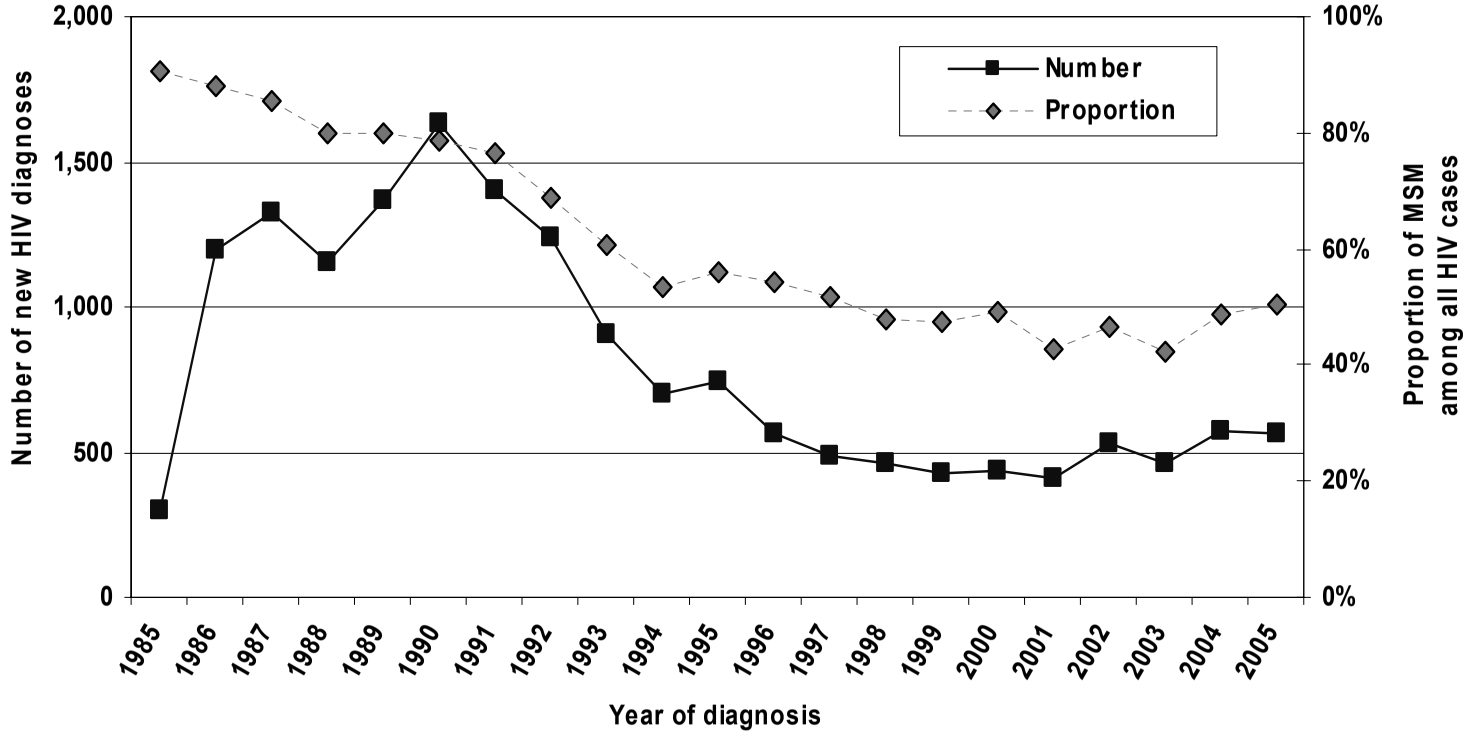


Figure 2 Number of new HIV diagnoses (adjusted) among MSM by year of diagnosis and health regions, Ontario, 1985 to 2005

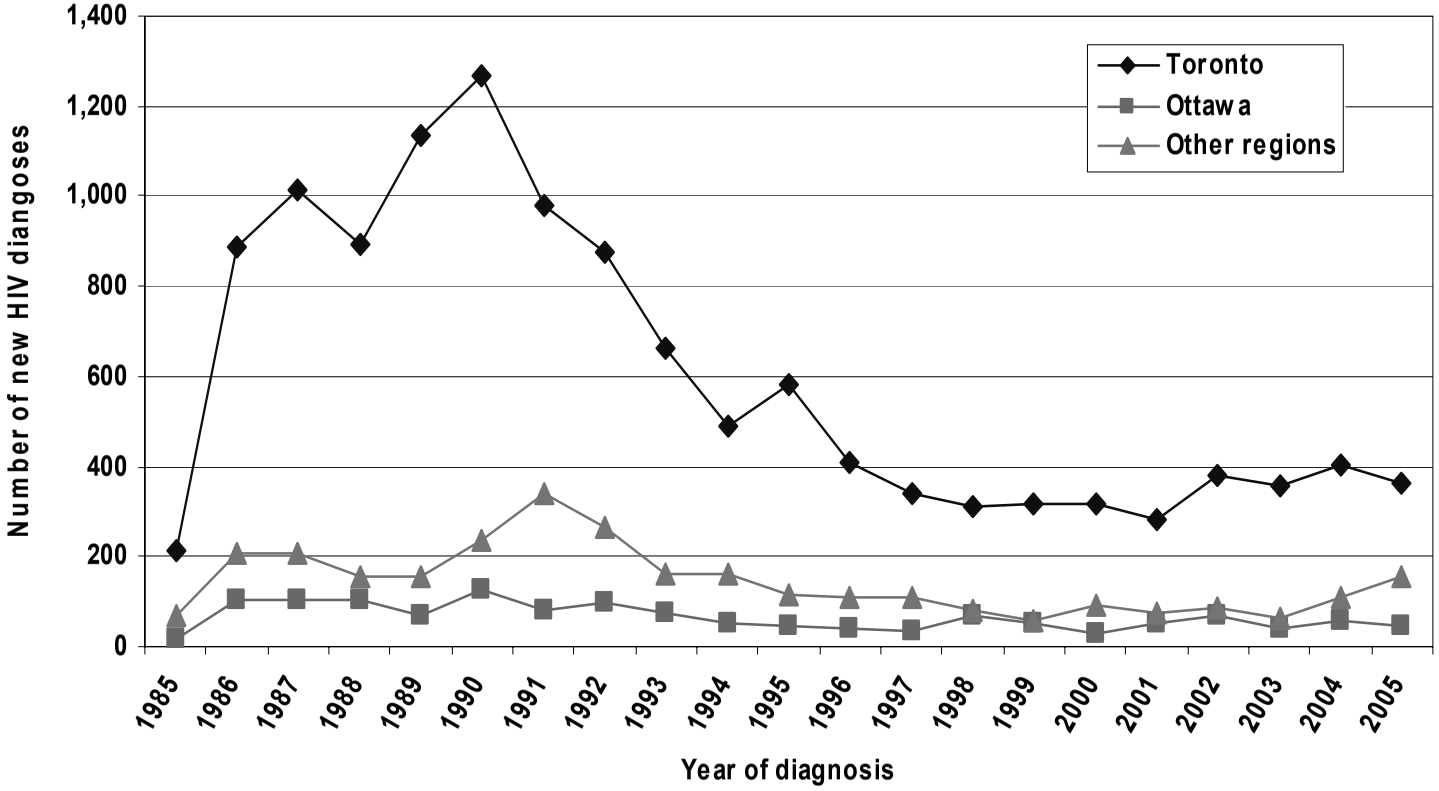


Figure 3 HIV positivity rates (adjusted) among MSM by year of diagnosis, Ontario, 1992 to 2005

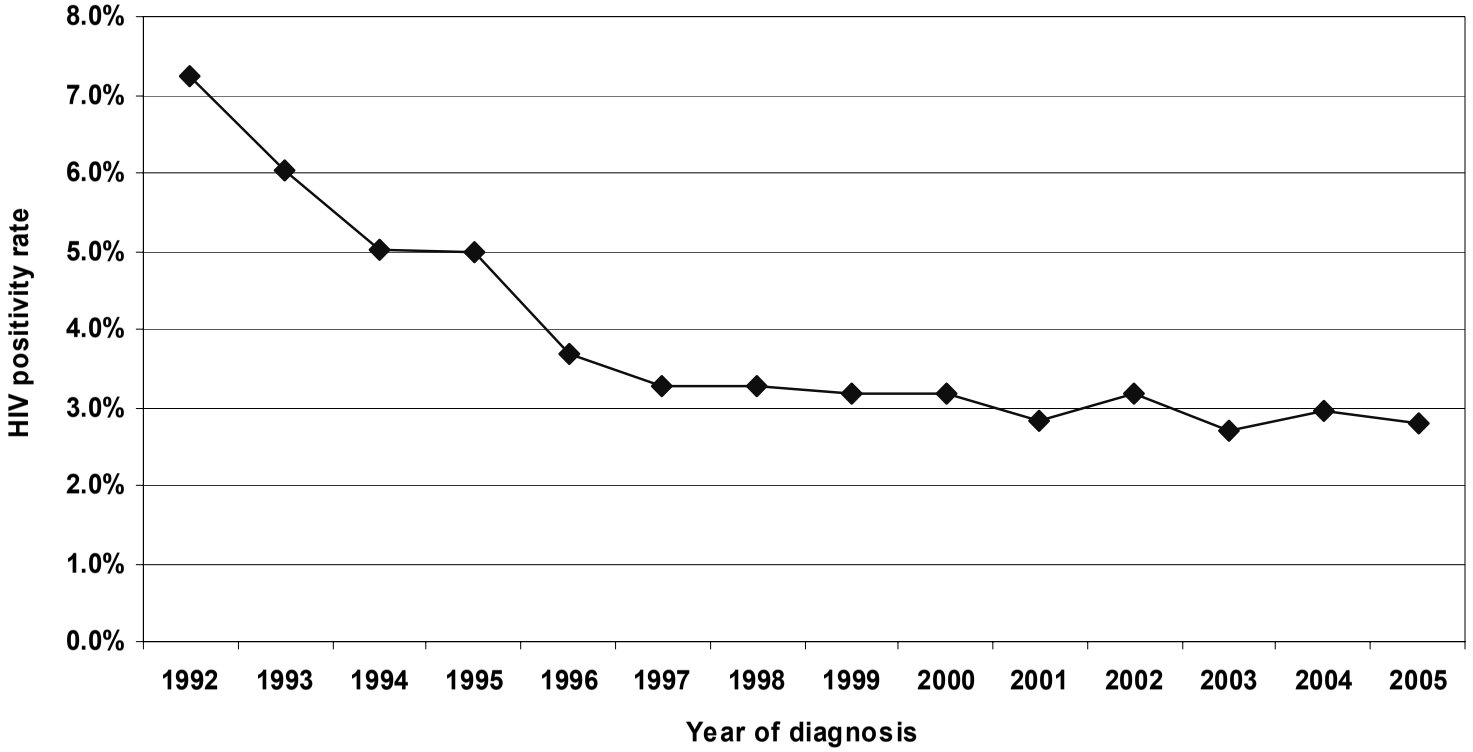


Figure 4 HIV incidence density among MSM repeat testers with 95% confidence intervals, 1993 to 2004 (n = 69,209 person-years)

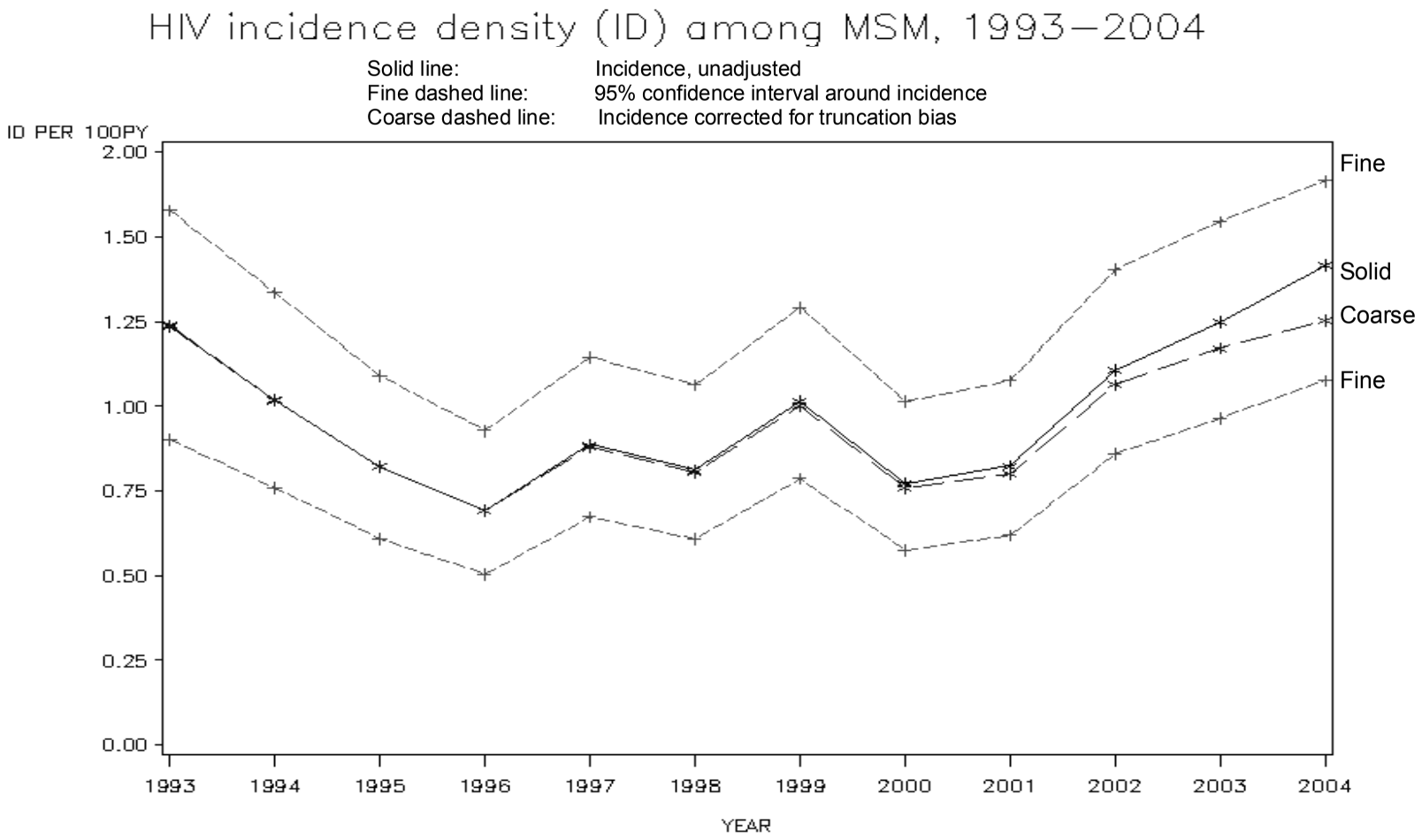


Figure 5 HIV incidence density (adjusted) based on the detuned assay among MSM by health region, Ontario, 2000 to 2004

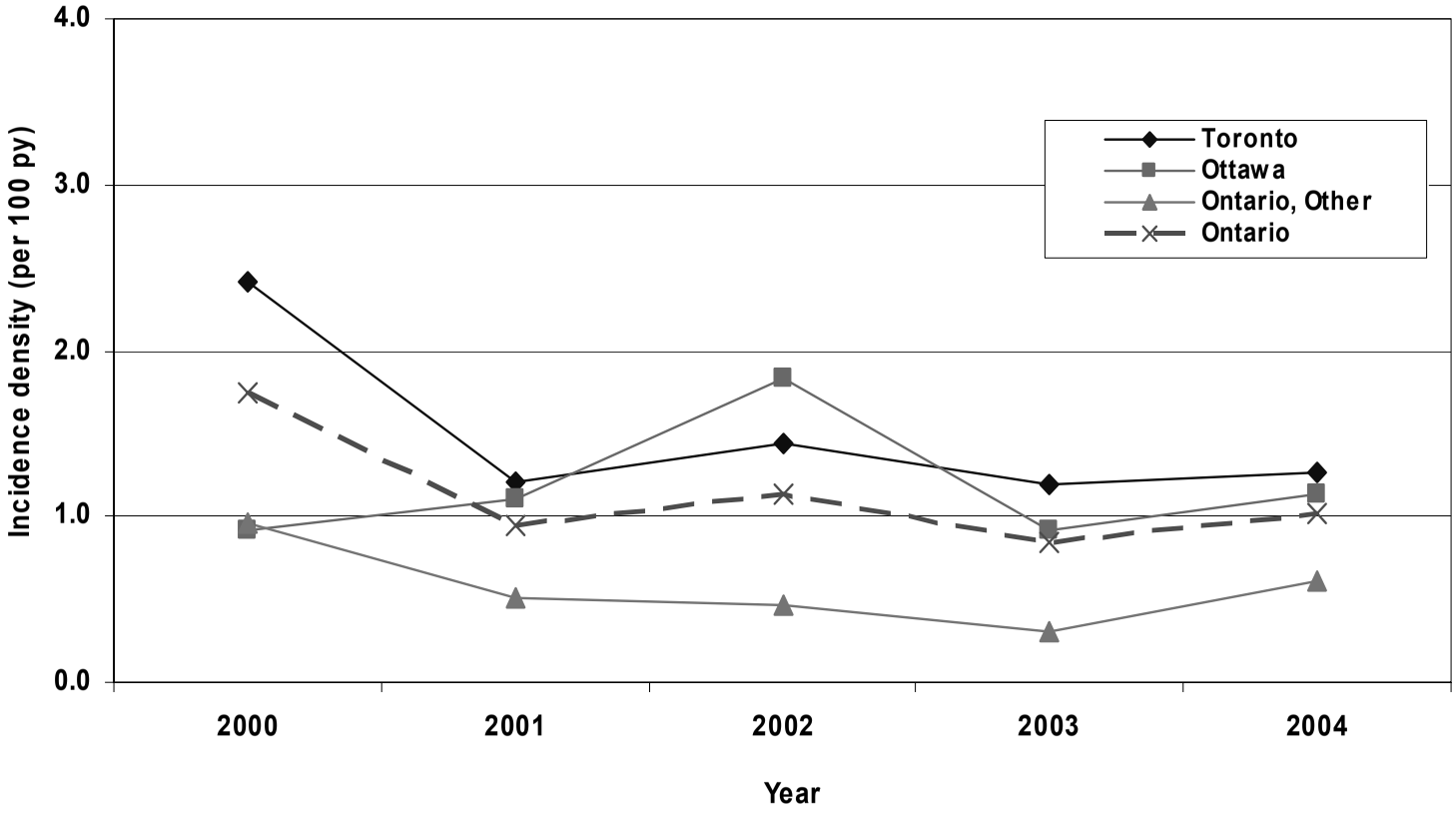


Figure 6 Number and proportion of new HIV diagnoses (adjusted) among MSM by year of diagnosis, Toronto, 1985 to 2005

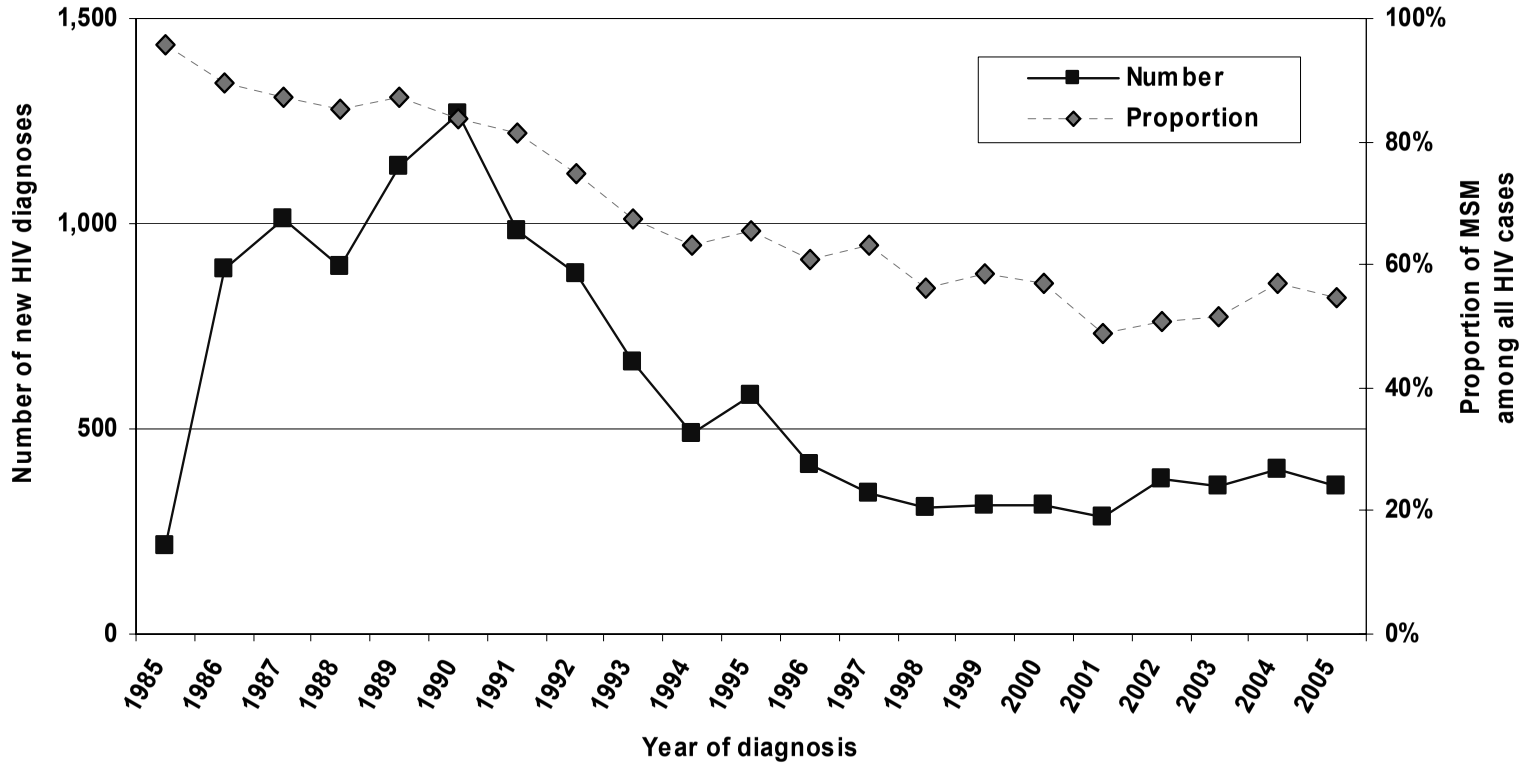


Figure 7 Number and proportion of new HIV diagnoses (adjusted) among MSM by year of diagnosis, Ottawa, 1985 to 2005

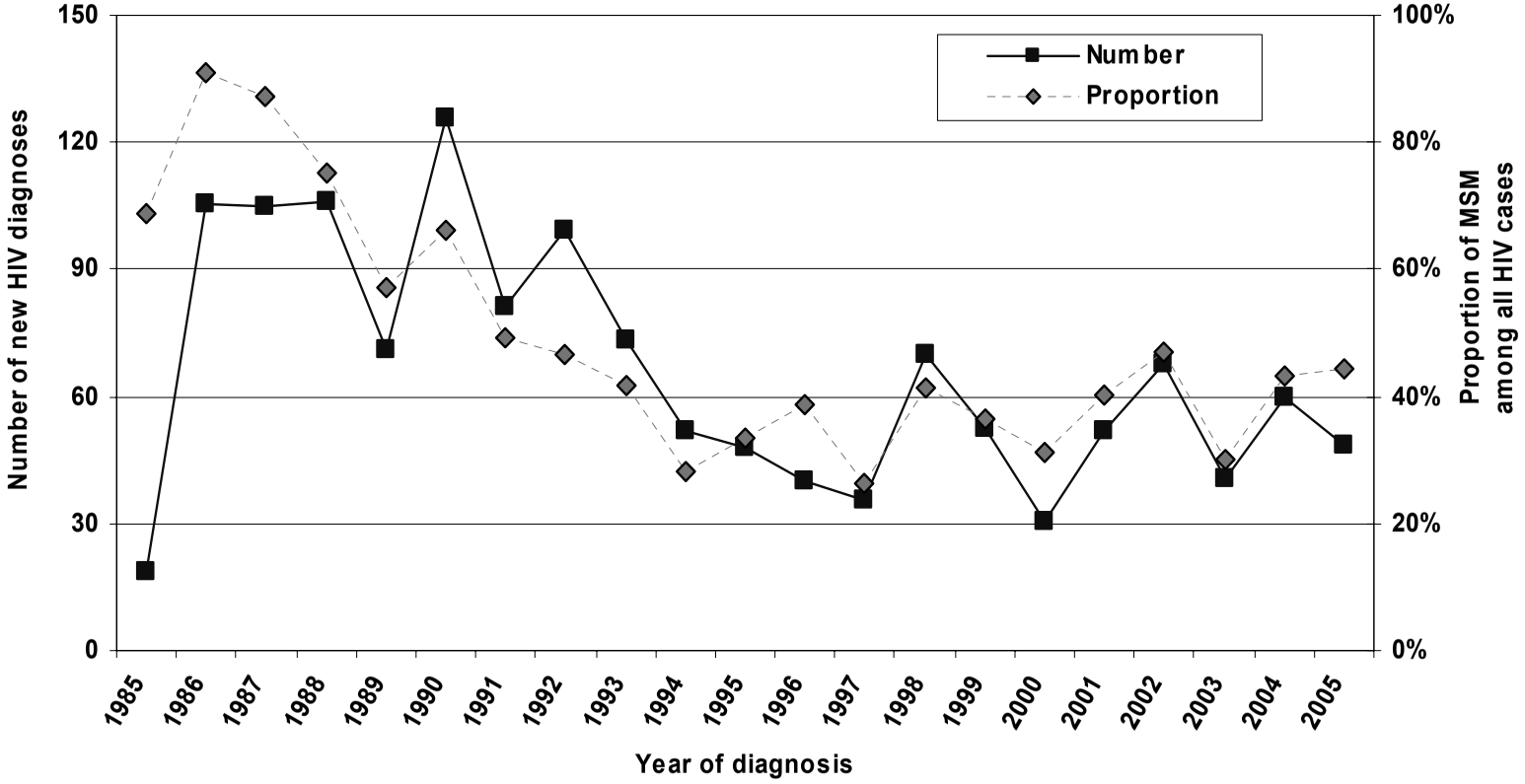


Figure 8 Number and proportion of new HIV diagnoses (adjusted) among MSM by year of diagnosis, Other Regions, 1985 to 2005

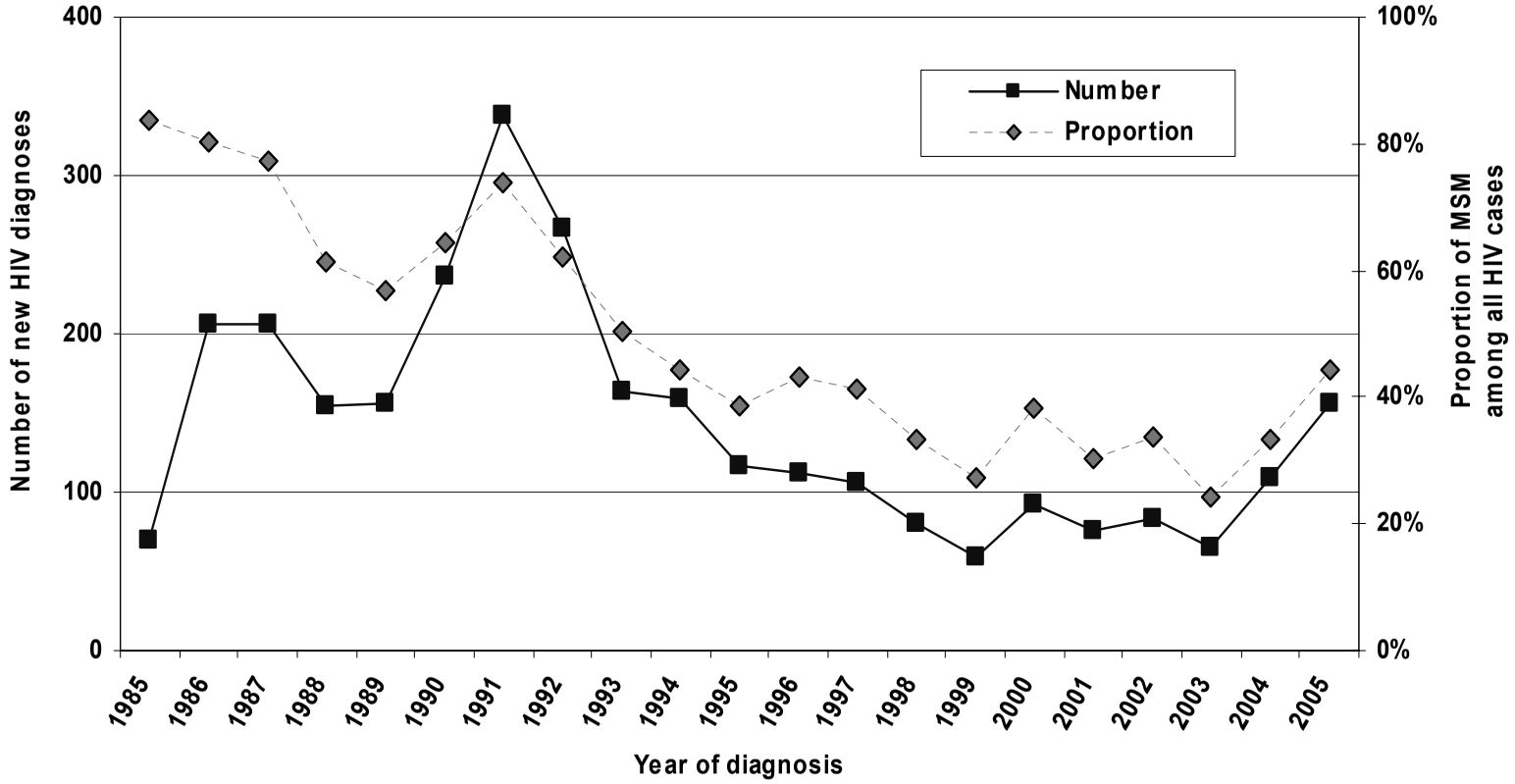


Figure 9 Number and proportion of reported AIDS cases (adjusted) among MSM by year of AIDS diagnosis, Ontario, 1981 to 2005

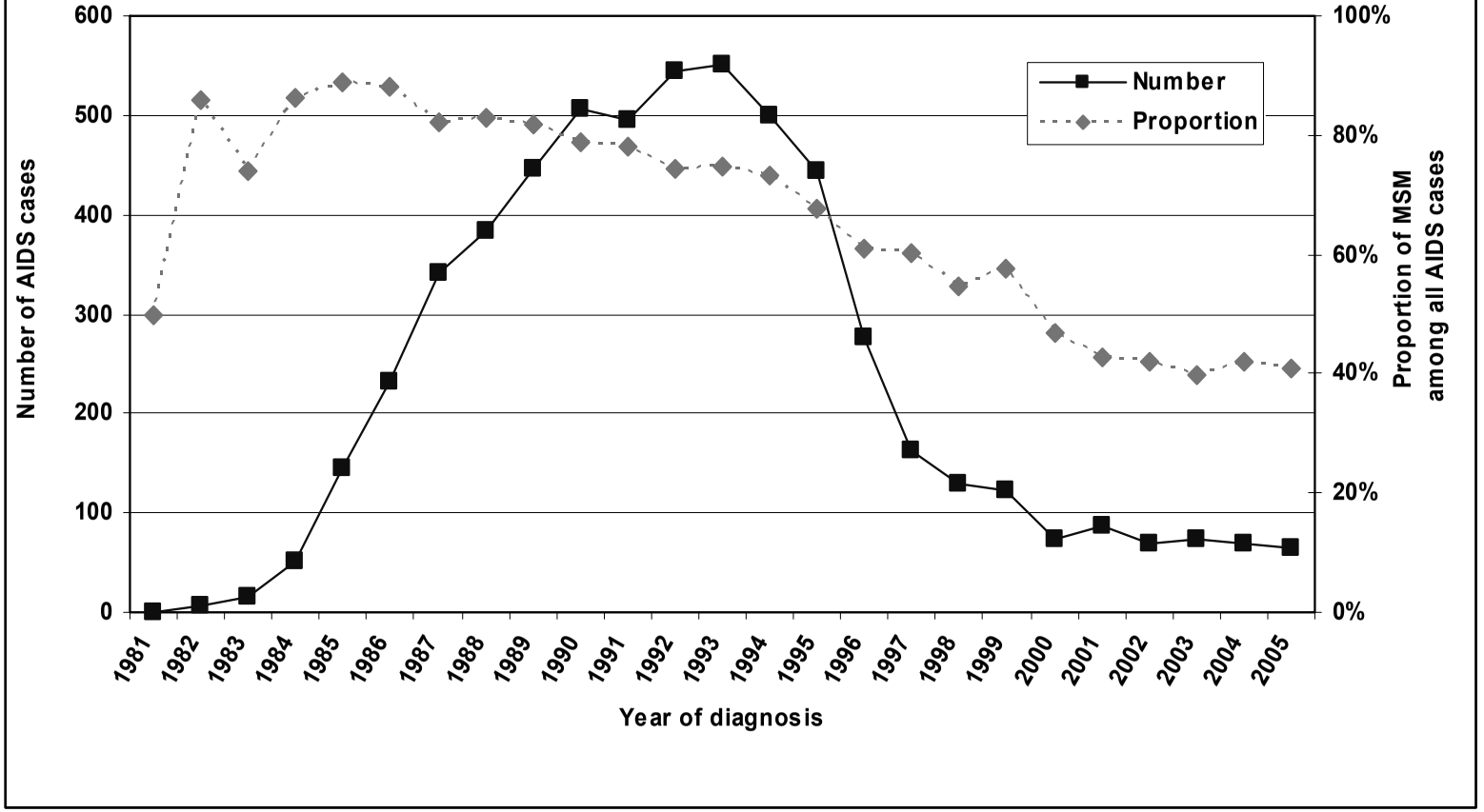


Figure 10 Modeled HIV incidence among MSM, Ontario, 1977 to 2004

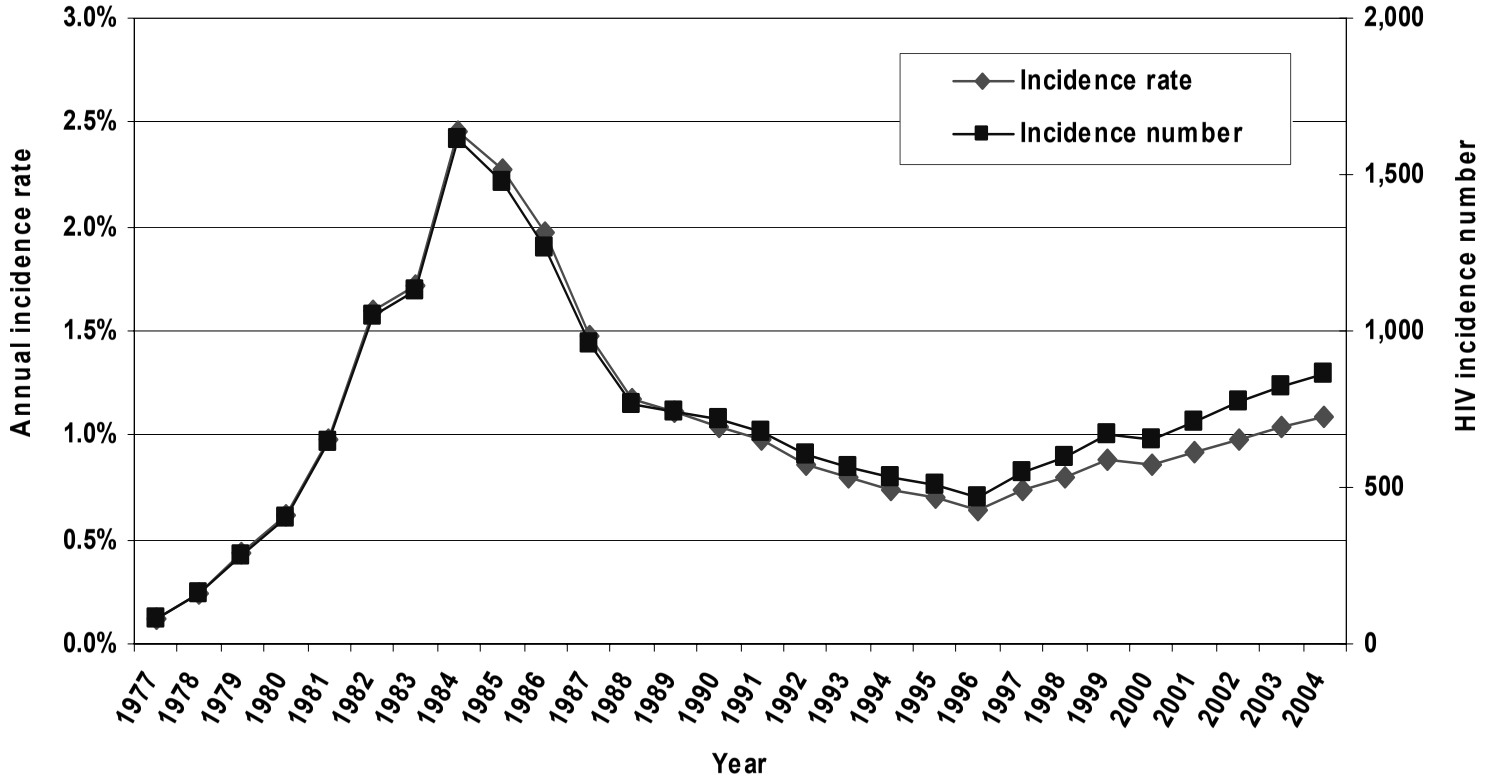
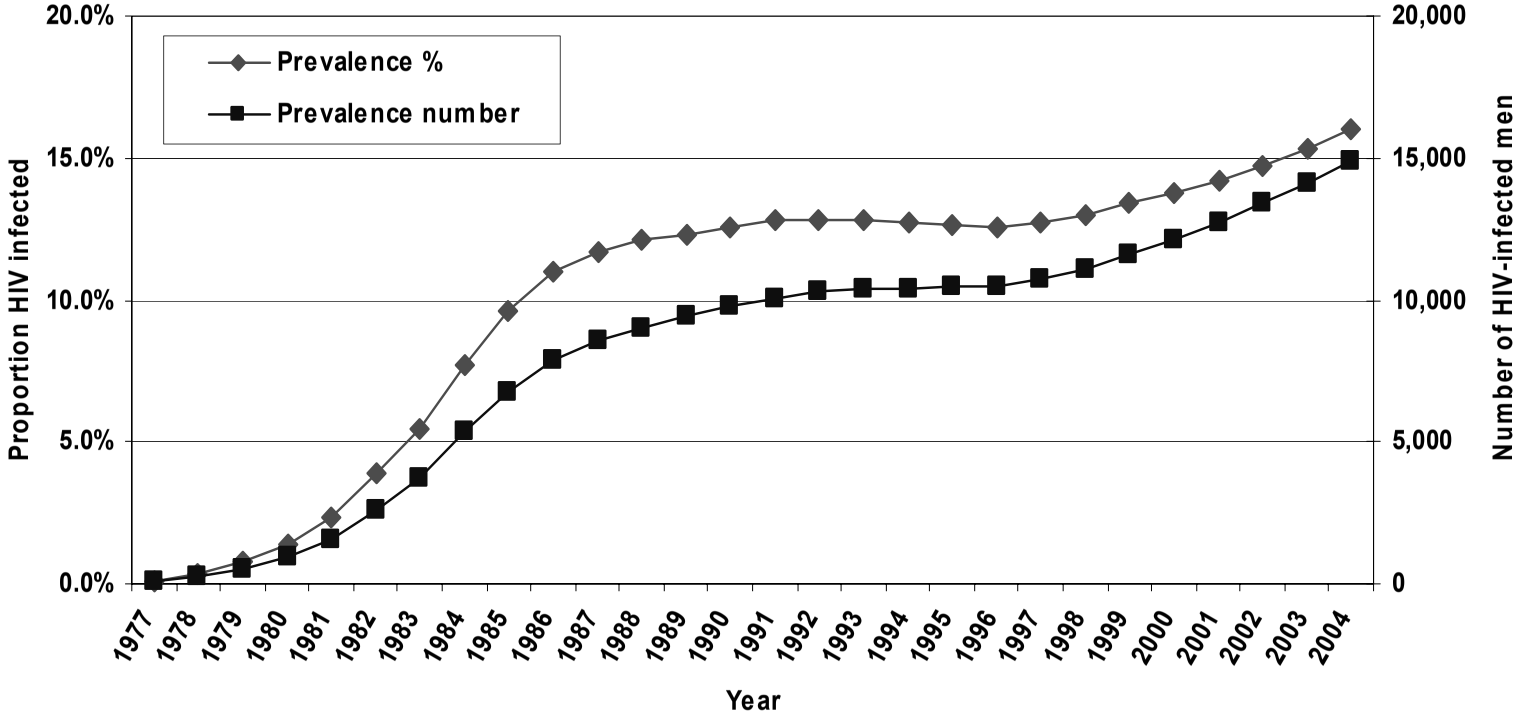


Figure 11 Modeled HIV prevalence among MSM, Ontario, 1977 to 2004



Notes

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