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Community – University Institute for Social Research

***The Cost of Homophobia:  
Literature Review on the  
Human Impact of Homophobia  
On Canada***

**by Christopher Banks**



*Building Healthy Sustainable Communities*

## **Community-University Institute for Social Research**

CUI SR is a partnership between a set of community-based organizations (including Saskatoon District Health, the City of Saskatoon, Quint Development Corporation, the Saskatoon Regional Intersectoral Committee on Human Services) and a large number of faculty and graduate students from the University of Saskatchewan. CUI SR's mission is "to serve as a focal point for community-based research and to integrate the various social research needs and experiential knowledge of the community-based organizations with the technical expertise available at the University. It promotes, undertakes, and critically evaluates applied social research for community-based organizations, and serves as a data clearinghouse for applied and community-based social research. The overall goal of CUI SR is to build the capacity of researchers, community-based organizations and citizenry to enhance community quality of life."

This mission is reflected in the following objectives: (1) to build capacity within CBOs to conduct their own applied social research and write grant proposals; (2) to serve as a conduit for the transfer of experientially-based knowledge from the community to the University classroom, and transfer technical expertise from the University to the community and CBOs; (3) to provide CBOs with assistance in the areas of survey sample design, estimation and data analysis, or, where necessary, to undertake survey research that is timely, accurate and reliable; (4) to serve as a central clearinghouse, or data warehouse, for community-based and applied social research findings; and (5) to allow members of the University and CBOs to access a broad range of data over a long time period.

As a starting point, CUI SR has established three focused research modules in the areas of Community Health Determinants and Health Policy, Community Economic Development, and Quality of Life Indicators. The three-pronged research thrust underlying the proposed Institute is, in operational terms, highly integrated. The central questions in the three modules—community quality of life, health, and economy—are so interdependent that many of the projects and partners already span and work in more than one module. All of this research is focused on creating and maintaining healthy, sustainable communities.

Research is the driving force that cements the partnership between universities, CBOs, and government in acquiring, transferring, and applying knowledge in the form of policy and programs. Researchers within each of the modules examine these dimensions from their particular perspective, and the results are integrated at the level of the Institute, thus providing a rich, multi-faceted analysis of the common social and economic issues. The integrated results are then communicated to the Community and the University in a number of ways to ensure that research makes a difference in the development of services, implementation of policy, and lives of the people of Saskatoon and Saskatchewan.

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## ABSTRACT

This study reviewed research related to homophobia's negative results on gays, lesbians, and bisexuals (GLB) in terms of its human impact, which was defined as the number of "pre-mature" deaths caused by homophobia. That is, compared to non-GLB mortality rates, human cost measures determine how many GLB have had their lives shortened because of homophobia. Homophobia was defined as an irrational fear of, or aversion to, homosexuals and homosexuality. The related construct of heterosexism was defined as a belief system that values heterosexuality as superior to and/or more natural than homosexuality, and/or assumes that all people are inherently heterosexual. The reviewed research showed that GLB and heterosexuals were equivalent in terms of psychological and psychosocial health and functioning, but that GLB had a shorter life expectancy and faced health risks and social problems at greater rates than the heterosexual population. The suspected reason for these increased problems is the chronic stress placed on GLB resulting from coping with society's negative responses and stigmatization.

Eight major health and social issues were examined: suicide, smoking, alcohol abuse, illicit drug use, depression, unemployment, murder, and HIV/AIDS. In addition, because homophobia results in substandard health care for GLB, the issue of access and quality of health care services was examined for ineffective health services and practices that exacerbate health and social problems.

Using the assumption that GLB and the heterosexual population would have equivalent rates of health and social issues without the existence of homophobia, estimates of the annual number of pre-mature deaths caused by homophobia were developed based on five and ten percent base rates of homosexuality:

- Suicide = 818 to 968 deaths per year
- Smoking = 1232 to 2599 deaths per year
- Alcohol abuse = 236 to 1843 deaths per year
- Illicit drug use = 64 to 74 deaths per year

There was insufficient data to calculate mortality estimates for the issues of depression, unemployment, murder, and HIV/AIDS. However, the annual human costs associated with these issues are substantial, and evidence exists that indicates GLB are

at increased risks for contracting HIV/AIDS, of being victims of murder, and of being unemployed, which ultimately results in pre-mature mortality.

The present research has several weaknesses that are reviewed in the Limitations section. Most of these, however, can be overcome with further research. Additional research needs to be conducted in the area of homophobia, its consequences on GLB, and the human impact of those consequences. In addition, methodological improvements need to be implemented in further research in the area to ensure valid conclusions.

## **FOREWARD BY GENS HELLQUIST**

If there has been one constant in my nearly 40 years of participation in the gay and lesbian community and my over 30 years as a gay activist, it has been death. Some of my earliest memories of being a part of this community are hearing about the death of someone that I had known in the gay, lesbian, and bisexual community. While it was often difficult to understand what dark force would lead someone to take their life, it became easier to understand after listening to people's stories of rejection and verbal and physical violence. These were people who believed that they could no longer survive in so hateful and intolerant an environment. I have watched close and dear friends slowly kill themselves with alcohol and drugs, and I have watched a generation of gay men decimated by AIDS. This is not something that simply happened in the early days of my involvement in the gay, lesbian, bisexual, and transsexual (GLBT) community, but occurs regularly today.

Gay & Lesbian Health Services commissioned this study because we work with that pain and intolerance and know first hand the enormous toll that homophobia exacts on our community and lives. We also know the importance of being mindful that we are talking about real people in this study, not just abstract statistics. These victims of homophobia are somebody's child, grandchild, parent, brother, sister, aunt, uncle, or best friend. Each death has an impact far beyond the loss of that one life.

Two of the men who were important mentors to me when I first came out have been dead for a number of years. Both died a slow and painful death from alcoholism long before their time. They were brilliant, witty men who dedicated their lives to educating others. If they were still alive, they would be reaching retirement age. However, the stressors brought about by homophobia caused them to adopt coping mechanisms that killed them before their time.

I remember a young man who grew up in my neighbourhood. Jim was a few years younger than me, and after I moved out of the neighbourhood I had no expectation of seeing him again. However, he was soon back in my life when he called Saskatoon's first gay/lesbian phone-line and specifically asked for me. He talked about his feelings of being gay and how frightening it was for him to embrace those feelings. He felt that being gay would be a major disappointment to his family.

Like most mothers, mine kept me up-to-date about the lives of those who grew up in the neighbourhood and it was no different with Jim. She kept me informed about Jim's marriage, divorce, remarriage and birth of his first child. Occasionally, I ran into Jim hanging in the shadows of a gay venue, and we once again spoke about his difficulty in his accepting being gay. He was a gentle and kind man, respected by all who knew him. This went on for a number of years. One morning, I opened the newspaper and learned that he had driven out to the country, put a pistol to his head, and killed

himself. On my next visit with my mother, she talked about the confusion that his family was going through, trying to figure out why someone who appeared to have everything going for him would kill himself. I, however, knew the reason.

Jim is only one of countless young people whom I have watched kill themselves because the stressors of living in a homophobic environment were too much to bear. Usually the survivors are left wondering why their loved one chose to kill themselves. What was so bad that it drove them to take their life? In most cases, the real story is never told.

In the 1980s, AIDS hit my community hard and a new round of death and dying began. Those who have worked in the AIDS field are only too aware of how homophobia causes people to devalue their life and take risks that make them susceptible to HIV. Issues of low self-esteem are epidemic in my community and cause people to devalue their lives. Marginalization has a negative impact on any community that is denied the full rights of citizenship, whether it occurs because of racism, colonialism, sexism, or homophobia.

The maddening thing about these deaths is that they are preventable. Our health care and education systems are rife with homophobia. Governments are reluctant to take action for fear of hostile reactions from those segments of society who wish to keep homophobia alive. While the research clearly shows that the health and social problems endemic to the GLBT population result from stressors of living in a climate of ignorance and hate, those enablers of homophobia twist that research to suggest that merely being gay is the problem's cause.

It is time that we looked at the facts and addressed the issues. A 2001 study that looked at the economic cost of homophobia shows that it could be as high as 8 billion dollars a year. This study clearly shows that it is killing people at an alarming rate. Make no mistake about it, homophobia is clearly killing us.

## INTRODUCTION

This literature review is a companion report to “The Cost of Homophobia: Literature Review of the Economic Impact of Homophobia on Canada” (Banks, 2001). While the original report examined homophobia’s financial costs, the present report examines its human costs. This is defined as the annual number of gays, lesbians, and bisexuals (GLB) who die each year “pre-maturely,” most likely as a result of homophobia. That is, without homophobia, death rates of GLB and non-GLB should be equivalent.

The present report’s purpose is similar to that of the original: to examine and synthesize existing data and research on homophobia’s human impact on Canadian society. Generally, the literature search focused on answering three questions<sup>1</sup>:

1. What is homophobia’s effect on GLB?
2. Compared to the general population, do GLB have increased rates of health and social problems resulting from homophobia?
3. How many “premature” deaths are due to these increased rates of health and social problems?

Some short, informal overviews of the issues related to homophobia, GLB health, and related human costs have been attempted (e.g. Hellquist, 1996), but none have sought to integrate all three components in a single document.

This literature review is not entirely comprehensive for several reasons. First, although a wide-ranging search of medical, psychology, and sociology databases was undertaken on subjects related to homophobia, the human impact of various health and social issues, and homosexuality’s base rate, there are large gaps in knowledge for which there was no research or data available. As Ryan, Brotman, and Rowe (2000) and Goldfried (2001) pointed out, documentation on GLB health is relatively scarce, and homosexuality issues in general have been largely ignored in mainstream research. Especially scarce is information on homophobia’s effect on GLB health. The present document does not attempt to fill in such knowledge gaps, but rather to summarize current knowledge and suggest future research.

Second, research and literature reviews already exist that attempt to answer the first two questions posed above. Therefore, an in depth analysis of those and some related areas is not repeated here. For example, the present review does not examine in detail the health effects and subsequent mortality of illicit drug use on humans.

Given these limitations on this literature review’s comprehensiveness, the present review seeks to accomplish three important goals: (1) synthesizing research on homophobia, GLB health, and social issues; (2) providing an exploratory analysis of homophobia’s human impact; and (3) identifying gaps in the research and further needed work.

## **HOMOPHOBIA**

### ***DEFINITION***

Negative attitudes toward homosexuality exist on a continuum, from homophobia to heterosexism (Berkman and Zinberg, 1997).

- **Homophobia:** Any belief system that supports negative myths and stereotypes about homosexual people, or any of the varieties of negative attitudes that arise from fear or dislike of homosexuality. It is an irrational fear of, or aversion to, homosexuals and homosexuality. Homophobes react to homosexuals as enemies to be feared, hated, and actively repressed (Mihalik, 1991).
- **Heterosexism:** A belief system that values heterosexuality as superior to, and/or more natural than, homosexuality. It does not acknowledge the existence of non-heterosexuals. It believes that heterosexuality is normative and that non-heterosexuality is deviant and intrinsically less desirable. Heterosexists react to homosexuals as unfortunate, devalued individuals (Mihalik, 1991).

Homophobia can manifest itself in a number of ways:

- **Internal Homophobia:** Learned biases that individuals, including GLB, incorporate or internalize into their belief systems.<sup>2</sup>
- **External Homophobia:** Overtly observed or experienced expression of internal biases, such as social avoidance, verbal abuse, and civil discrimination.

Additionally, there are other types of homophobia/heterosexism:

- **Institutional Homophobia or Heterosexism:** Refers to the many ways that governments, businesses, churches, educational institutions, and other organizations and institutions discriminate against people on the basis of sexual orientation. These organizations and institutions set policies, allocate resources, and maintain unwritten standards for their members' behaviour in ways that discriminate. For example: many religious organizations have stated policies against GLB holding offices; most educational institutions fail or refuse to allocate funds and staff for GLB support groups; and most businesses have norms for social events that prevent GLB employees from bringing their same sex partners, while heterosexual employees are encouraged to bring their opposite sex partners.
- **Cultural Homophobia or Heterosexism:** Refers to social standards and norms that dictate that being heterosexual is better or more moral than being GLB, and that everyone is (or should be) heterosexual. While these standards are not written as such, they are spelled out regularly in television shows where a vast majority of characters and relationships are heterosexual. It is also in the assumption made by most adults in social situations that all "normal" children will eventually be attracted

to and marry a person of the opposite sex. Heterosexual people often do not realize that these standards exist, while GLB people are acutely aware of their existence. This results in GLB feeling like social outsiders.

Heterosexism is subtler than homophobia, and permeates cultures and social institutions (Berkman and Zinberg, 1997). Homophobia and/or heterosexism have been demonstrated in mental health practitioners (Rudolph, 1988; Rudolph, 1989; Garfinkle and Morin, 1978; Glenn and Russell, 1986; Lawrence et al, 1990; Trezza, 1994), undergraduates (O'Hare, Williams, and Ezoviski, 1996), nurses (Smith, 1993b; Strasser and Damrosch, 1992), governments (Herek, 1990), and social workers (Berkman and Zinberg, 1997).

Homophobia, or, more accurately, sexual prejudice, can be directed at homosexual behaviour, people with a homosexual or bisexual orientation, GLB communities (Herek, 2000), or children of GLB (Gershon, Tschann, and Jemerin, 1999).

Most individuals do not perceive themselves as homophobic, yet unfamiliarity with the GLB community can inadvertently result in acceptance of misinformation or biased attitudes (O'Hanlan, 1995). Several studies have shown that individuals who know one or more GL personally demonstrate less hostility toward all gays and lesbians (GL) (Ellis and Vasseur, 1993; Smith, 1993b).

Some evidence indicates that homophobia and GLB stigmatization is a serious and prevalent social problem in North America (Tremblay and Ramsay, 2000; Herek, 1991). For example, King, Beazley, Warren, Hankins, Robertson, and Radford (1988) found that only 33% of Canadian grade seven students agreed with the statement, "Homosexuals should be allowed to be teachers," and only 18% reported that they "would be comfortable talking with a homosexual person."

The reasons for homophobia's existence are varied and numerous and have been reviewed in detail (e.g. Stein, 1999). Some examples include:

- There is an absence of accurate and positive GLB portrayals in media (O'Hanlan, 1995). There is also a lack of positive GLB role models in society (Morrow, 1993).
- There is an absence of accurate information available to the public regarding same-sex orientation (Dempsey, 1994).
- The American Psychiatric Association regarded homosexuality as psychopathology until 1973. Homosexuality is still a classification category in the International Classification of Diseases (World Health Organization, 1997).
- Some religious institutions and other groups portray homosexuality as immoral and perpetuate negative stereotypes associated with homosexuality (Stokes, Kilman, and Wanlass, 1983; O'Brien, 1991; Forstein, 1988).
- The education system does not usually teach school-aged children about sexual

diversity or orientation (Morrow, 1993; Remafedi, 1993; Glasgow Women's Library, 1999).

- There are minimal sanctions against those who harass and discriminate against GLB (Morrow, 1993). Also, society regularly tolerates homophobic and heterosexist attitudes (Morrison and L'Heureux, 2001).
- Governments at all levels often pass laws that classify homosexual behaviour as wrong or criminal (Dempsey, 1994).
- Most GLB hide their true identity and so constitute an invisible population. Therefore, the majority of the heterosexual population is not familiar with GLB, thereby allowing biases to flourish.

### ***EFFECT OF HOMOPHOBIA ON GAY, LESBIAN, AND BISEXUAL INDIVIDUALS***

Being GLB is not genetically or biologically hazardous to one's physical or psychological health (O'Hanlan, 1995; Remafedi, French, Story, Resnick, and Blum, 1998; Ross, Paulsen, and Stalstrom, 1988; Wayment and Peplau, 1995). Although few studies have directly linked particular stressors resulting from homophobia and their health and social outcomes, most researchers agree that homophobia increases a multitude of risk factors associated with psychological, psychosocial, psychiatric, social, and health problems (Bagley and D'Augelli, 2000; D'Augelli and Hershberger, 1993; Frable, Wortman, and Joseph, 1997; Schneider, Farberow, and Kruks, 1989; Muehrer, 1995), and that homophobia is a major health hazard to GLB and society (Wagner, 1997). Ross (1989) studied homosexually oriented males in four countries (Sweden, Finland, Ireland, and Australia) and found that homosexual adolescents are likely to have more problems in more anti-homosexual countries. This suggests that the level of homophobia manifested in a particular country or culture may be directly linked to the extent of GLB health and social problems.

Some examples of the specific problems that GLB suffer from and are associated with homophobia include: higher rates of depression, anxiety, substance abuse, loneliness and other forms of psychological distress (Morrow, 1993; Rudolph, 1988; Rudolph, 1989; Ungvarski and Grossman, 1999; Ziebold and Mongeon, 1982; Kehoe, 1990).

### ***REASONS FOR NEGATIVE EFFECTS***

Generally, the chronic stress of coping with social stigmatization and societal hatred is the primary reason for homophobia's negative effects (Bux, 1996; Greene, 1994; Ross, 1978; Cochran and Mays, 1994; Gillow and Davis, 1987; Savin-Williams, 1994; Ungvarski and Grossman, 1999). Meyer (1995) conceptualized the homophobia that GLB feel as a component of minority stress, which is the psychosocial stress derived

from membership in a low status minority group. Meyer (1995) theorized that GLB are subjected to chronic stress related to their stigmatization, internalized homophobia, and actual events of discrimination and violence. More specifically, reasons for homophobia's deleterious effects are listed below.

#### *Lack of Support and Helping Resources*

GLB feel isolation, alienation, and disenfranchisement from the resources and assistance that society ordinarily provides in the face of life stressors (Waldo, Hesson-McInnis, and D'Augelli, 1998; Saunders and Valente, 1987; Prince, 1995). Well-being and health are negatively affected when GLB lack social and family support and a sense of community (Nesmith, Burton, and Cosgrove, 1999; Strommen, 1989b; Hershberger and D'Augelli, 1995; Turner, Pearlin, and Mullan, 1998; Johnston, Stall, and Smith, 1995; Watkins, 2000). Loss of support is also seen in the workplace. GLB who experience greater heterosexism demonstrate greater job withdrawal (Waldo, 1999). Although everybody experiences health and social problems, GLB are especially vulnerable because of a lack of support and denial of information and helping resources. Additionally, stress caused by homophobia may be worse than other stressors because of the loss of friend and family support systems (Bradford, Ryan, and Rothblum, 1994; DiPlacido, 1994; Brooks, 1981; Larson and Chastain, 1990). These support systems are lost because GLB have been rejected or feel a need to hide their thoughts and emotions.

#### *Internalized Homophobia*

GLB feel distress resulting from internalized negative attitudes toward one's own homosexuality (Protor and Groze, 1994; Malyon, 1982; Forstein, 1988; Meyer and Dean, 1996). Internalized homophobia in GLB results in lower levels of community integration and social support, lower self-esteem, increased feelings of guilt, demoralization, alienation, and isolation, and other problems (Bux, 1996; Meyer and Dean, 1996; McGregor et al, 2001; Flowers and Buston, 2001). Meyer and Dean (1996) found that GLB with higher internalized homophobia had fewer coping abilities. Hershberger and D'Augelli (1995) found in a sample of GLB that self-acceptance (i.e. low internalized homophobia) was the largest predictor of mental health.

#### *Self-concealment of Sexual Orientation*

As a result of living in a homophobic society, many GLB feel pressure to conform, and fear discrimination and reprisals. This, in turn, causes many GLB to conceal their sexual orientation, to be secretive in their lives, and to repress their feelings, which causes unusual stress (Roberts and Sorensen, 1995; D'Augelli, Hershberger, and Pilkington, 1998; Ungvarski and Grossman, 1999; Herek, 1991; Sewell et al, 2000; Mays and

Cochran, 2001). Concealing homosexuality has been found to have a negative effect on physical health (Larson and Chastain, 1990). In a sample of 222 GB males, Cole, Kemeny, Taylor, and Visscher (1996) found that the incidence of cancer and moderately serious infectious diseases (e.g. pneumonia, bronchitis, sinusitis, tuberculosis) increased in direct proportion to the degree to which participants concealed their homosexual identity. These effects could not be accounted for by demographic characteristics, health relevant behavioural patterns, depression, anxiety, repressive coping, or social desirability response biases. In general, openness to others about sexual orientation is associated with greater psychological adjustment, less fear of exposure, increased mental health services support, and increased choice as to where to seek help (Bradford, Ryan, and Rothblum, 1994). However, there are also risks associated with such disclosures (see Garnets and Kimmel, 1991; Gonsiorek and Rudolph, 1991).

### *Behaviour Alteration*

Homophobia results in behaviour alteration to avoid anti-GLB harassment or violence (e.g. not speaking about their lives to co-workers, friends, or family; altering clothing; avoiding physical contact with partner/lover in public; altering political involvement in community issues) (e.g. Padesky, 1989). Although these behaviours probably do not directly result in increased health problems, the increased isolation that results may indirectly lead to such exacerbation of health and social problems.

### *Coming Out Stress*

The process of coming out of secrecy and disclosing one's homosexuality to friends and family is an emotionally stressful process that often results in social rejection, non-supportiveness, shame, diminished sense of self, intolerance, lowered self esteem, emotional isolation, severe anxiety, loss of loved ones, discrimination, verbal and physical abuse, depression, and other stress related patterns (e.g. dissatisfaction with sex lives, problems in close relationships, feeling overwhelmed) (Roberts and Sorensen, 1995; D'Augelli, Hershberger, and Pilkington, 1998; O'Hanlan, 1995; Schneider, Farberow, and Kruks, 1989; Strommen, 1989a; Strommen, 1989b; Garnets, Herek, and Levy, 1990; Morrison and L'Heureux, 2001).

### *Coming Out and Risk Behaviours*

The results of revealing one's sexual orientation increase the possibility that GLB will engage in both individual and clusters of risk behaviours (e.g. unsupportive health habits, self-destructive actions). Garofalo, Wolf, Kessel, Palfrey, and DuRant (1998) analyzed data from a survey of 4159 Massachusetts' youth, 104 of whom self-identified as GLB. Results indicated that more than 30 health risk behaviours were positively associated

with self-reported GLB orientation, including violence-related behaviours, suicidal ideation and attempts, multiple substance abuse, and sexual risk behaviours.

#### *Confusion Related to Expressing Sexuality*

GLB are not usually confused about sexuality, but are often confused about how to express it in a hostile social environment (Herrell, Goldberg, True, Ramakrishnan, Lyons, Eisen, and Tsuang, 1999). Sexual identity was cited 3.5 times more frequently as a source of stress in lesbians than heterosexual women (Bernhard and Applegate, 1999).

#### *External Homophobia*

Many of homophobia's outcomes are related to external homophobia, such as hostile attitudes and verbal and physical assaults (Herek, 1986; Larsen, Reed, and Hoffman, 1980; Remafedi, 1987; Hershberger and D'Augelli, 1995; Herek, 1991), as well as denial of employment, housing, custody, and legal representation (Wagner, 1997). For example, victims of GLB hate violence can suffer psychological and emotional outcomes such as phobias, post-traumatic stress syndromes, chronic pain syndromes, eating disorders, headaches, increased agitation, sleep disorders, uncontrollable crying, and depression (Barnes and Ephross, 1994; Otis and Skinner, 1996).

#### *Coping and Substance Abuse*

Wells (1999) notes that GLB may use substances as a mechanism for coping or a means of escaping painful emotional issues or sexual identity.

#### *Positive Responses*

Not all GLB exhibit negative effects as a result of homophobia. Many GLB often exhibit resiliency (Savin-Williams, 2001), even in the most extreme situations (Tremble, 1993). For example, Anderson (1998) found that in a sample of gay male youth, many individuals developed strengths that enabled them to successfully cope with the stresses of being gay. Also, Bennett and Thompson (1980) found that older gay men had more stable self-concepts and greater satisfaction with their heterosocial lives than younger gay men, suggesting, perhaps, that GLB individuals acquire more successful coping strategies over time.

### ***ALTERNATIVE EXPLANATIONS FOR INCREASED INCIDENCES OF NEGATIVE HEALTH AND SOCIAL PROBLEMS***

Fergusson, Horwood, and Beautrais (1999) concluded that, although there may be an association between sexual orientation and several health and social problems, such

problems' cause cannot be definitively interpreted as being a result of homophobic attitudes and social prejudice. The researchers offered three alternative explanations: (1) associations are artifactual as a result of measurement and other research design problems; (2) a possibility of reverse causality in which people prone to some problems (e.g. psychiatric disorders) are more prone to experience homosexual attraction or contact; and (3) a possibility that lifestyle choices made by GLB place them at greater risk of adverse life events and stresses that include risks of health and social problems, independent of sexual orientation (also discussed by Bux, 1996). The three alternative explanations given by Fergusson, Horwood, and Beatrais (1999) have not been accounted for in much of the conducted research.

Bux (1996) reviewed several theories to explain health problems in GLB, including: (1) internalized homophobia (self-hatred of one's own sexuality); (2) gender role conflict and gender non-conformity (discomfort or rejection of traditional gender role); (3) social stress and discrimination (due to experienced discrimination and prejudice, GLB experience high levels of stress, tension, and anxiety); (4) aspects of gay and lesbian subculture (e.g. reliance on bars for social outlets); and (5) differences in social roles and adult development. Bux (1996) found that, although there was little empirical evidence to support any of these theories, the social stress and discrimination theory enjoyed the most support. Therefore, although several alternate theories exist to explain health problems in GLB, Bux's (1996) results suggest that homophobia is the most likely cause.

## **HOMOSEXUALITY AND BISEXUALITY'S BASE RATE**

This literature review analyzes studies that estimate homosexuality's base rate in the general population. Homosexuality's base rate must first be determined (i.e. percentage of the population who are GLB) in order to estimate the human impact of increased gay and lesbian health and social issues. There are many difficulties in estimating this base rate. The first difficulty is that there are a multitude of conceptual and operational definitions of the terms "gay," "lesbian," "bisexuality," and "homosexuality." For example, homosexuality can be defined behaviourally (i.e. sexual practices) or by identity constructs, such as participation in a GLB socio-cultural network. Homosexuality can also be defined as a dichotomous construct or a continuum (Kinsey, Pomeroy, and Martin, 1948 & 1953). Although some strong definitions exist (e.g. "a man [or woman] who has affection and attraction, both emotional and physical, for other men [or women]" (Government of Canada, 1998)), a detailed review of the various definitions is not provided here (see Stein (1999) for a useful overview of sexual orientation).

A related problem is that studies that use different definitions of homosexuality use different survey instruments, assumptions related to homosexuality's cause (e.g. biological or genetic, psychological, social, character preference), research settings, and

sampling methods based on those different definitions. This makes comparing base rate studies extremely difficult.

The second major difficulty is that sexual orientation cuts across all social categories, which makes generalizations from research difficult. Another difficulty is that GLB are relatively hidden in society. Thus, it is difficult to ascertain the base rate accurately using self-report methods. As long as discrimination exists, the exact prevalence will be impossible to ascertain (Ryan, Brotman, and Rowe, 2000). Also, as Laumann, Gagnon, Michael, and Michaels (1994) reported, “[E]stimating a single number for the prevalence of homosexuality is a futile exercise because it presupposes assumptions that are patently false: that homosexuality is a uniform attribute across individuals, that it is stable over time, and that it can be uniformly measured.” Stein (1999) therefore suggested that studies should use various estimates of homosexuality’s base rate.

This literature review employed a method of using a low and high estimate for establishing homosexuality’s base rate. **Table 1** lists some estimates from the research literature.

For present purposes, two estimates of homosexuality’s base rate in the Canadian population were used. The low estimate was five percent and the high ten percent. The rationales for choosing these three estimates are as follows:

- Five percent. This estimate is based on a median (n = 48 results; maximum = 37%; minimum = 0.2%) of reviewed studies. Homophobia results in an under-reporting of homosexuality. Therefore, five percent most likely represents a low estimate, but is justifiable based on existing research.
- Ten percent. This is the most commonly cited base rate for homosexuality, based originally on Kinsey, Pomeroy, and Martin’s (1948; 1953) research. Although their studies were flawed, re-examinations of the data reveal that ten percent is still a likely base rate for homosexuality, especially given people’s reticence to be honest about their sexuality in research. It is entirely possible that homosexuality’s base rate is greater than ten percent. However, present research methodologies have not accurately counted the GLB “hidden population.”

Consistent with the five and ten percent estimates used here, Bagley and Tremblay (1997b) also used the five and ten percent estimates for homosexuality’s base rate in the male population (“wholly or predominately homosexual” category). Additionally, Hogg, Strathdee, Craib, O’Shaughnessy, Montaner, and Schechter (1997) used three scenarios for homosexuality’s base rate based on extensive empirical evidence: three, six, and nine percent of the population. Again, these estimates are similar to those used in the present research and encompass both conservative and liberal estimates. For a detailed review of the measurement of sexual orientation, see Gonsiorek, Sell, and Weinrich (1995).

**Table 1. Estimates of the Base Rate of Homosexuality and Bisexuality**

<b>Estimate of Percentage of Population that is Homosexual</b>	<b>Definition of Homosexuality (Sample Description)</b>	<b>Research Study</b>
37.0	Men admitting to at least some overt homosexual experience between adolescence and old age (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
20.3	Adult males having had a homosexual experience to orgasm (data from National Opinion Research Center survey of 1450 males in the United States).	Fay, Turner, Klasser, and Gagnon (1989)
18.6	Males reporting same-sex attraction to or sexual behaviour since age 15 (3381 participants in the United States, France and the United Kingdom).	Sell, Wells, and Wypij (1995)
18.6	Females reporting same-sex attraction to or sexual behaviour since age 15 (1874 participants in the United States, France and the United Kingdom).	Sell, Wells, and Wypij (1995)
17.0	High estimate of predominant same sex orientation (review of Kinsey, Pomeroy and Martin (1948) and Laumann, Gagnon, Michael and Michales (1994) studies adjusting for possible risks involved in self-disclosure).	Gonsiorek, Sell, and Weinrich (1995)
15.3	Males reporting being homosexual to some degree (stratified random sample of 750 males in Calgary).	Bagley and Tremblay (1997a)
13.0	Women admitting to at least some overt homosexual experience between adolescence and old age (5940 white females in the United States).	Kinsey, Pomeroy, and Martin (1948)
10.0	Men who were more or less exclusively homosexual for at least three years (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
9.2	High estimate from a male twin study (161 males in the United States).	Bailey and Pillard (1991)
9.0	Men reporting having had frequent or on going homosexual experiences (cross sectional nationwide survey of American adults aged 18 and over).	Janus and Janus (1993)
7.5	Males reporting same-sex sexual partner in last five years (3685 participants in the United States, France and the United Kingdom).	Sell, Wells, and Wypij (1995)
7.0	High estimate of males having experienced some same sex sexual contact in adulthood (review of five probability surveys from 1970 to 1990 in the United States involving 8,857 participants).	Rogers and Turner (1991)
7.0	Males having a homosexual experience during more than three years of their lives (volunteer survey of 2036 people).	Hunt (1974)
7.0	Preferential, experimental and situational homosexuals (review of 12 large surveys)	Hewitt (1998)
6.9	High estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)
6.0	High estimate of individuals reporting to be homosexual or bisexual since age 18 (probability sample of approximately 1500 people; nationally representative in the United States).	Smith (1991)
5.5	Males reporting homosexual behaviour (review of studies on homosexual behaviour from 1948 to 1991).	Diamond (1993)
5.3	Men reporting sexual activity with a same sex partner since age 18 (national probability surveys with 3941 respondents in the United States between 1989 and 1994).	Binson, Michaels, Stall, Coates, Gagnon, and Catania (1995)

**Table 1 (Cont'd). Estimates of the Base Rate of Homosexuality and Bisexuality**

<b>Estimate of Percentage of Population that is Homosexual</b>	<b>Definition of Homosexuality (Sample Description)</b>	<b>Research Study</b>
5.3	Male respondents who reported having same sex sexual activity (stratified random sample of ~4,300 Grade 8 to 12 students in Vermont).	Safe Schools Coalition of Washington (1999)
5.0	Low estimate of males having experienced some same sex sexual contact in adulthood (review of five probability surveys from 1970 to 1990 in the United States involving 8,857 participants).	Rogers and Turner (1991)
5.0	Low estimate of individuals reporting to be homosexual or bisexual since age 18 (probability sample of approximately 1500 people; nationally representative in the United States).	Smith (1991)
5.0	Women reporting having had frequent or ongoing homosexual experiences (cross sectional nationwide survey of American adults aged 18 and over).	Janus and Janus (1993)
4.5	Respondents who described themselves as GLB (Census study of 8,406 Grade 9 to 12 students in Seattle).	Safe Schools Coalition of Washington (1999)
4.0	Low estimate of predominant same sex orientation (review of Kinsey, Pomeroy and Martin (1948) and Laumann, Gagnon, Michael and Michales (1994) studies adjusting for possible risks involved in self-disclosure).	Gonsiorek, Sell, and Weinrich (1995)
4.0	Men who were exclusively homosexual throughout their lives from adolescence on (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
4.0	Males predominately or exclusively homosexual (white college-educated males).	Gebhard (1972)
4.0	Men reporting a same sex sexual partner in the previous five years (aged 16 to 50 years).	Taylor (1993)
4.0	Respondents who described themselves as GLB and/or had same-gender experience (stratified random sample of 3,982 Grade 9 to 12 students in Massachusetts).	Safe Schools Coalition of Washington (1999)
3.7	Orientation given as bisexual or homosexual (telephone survey of 663 males using a national probability sample in the United States).	Harry (1999)
3.6	Average estimate of females reporting homosexual behaviour (review of studies conducted in the United States from 1948 to 1991).	Diamond (1999)
3.4	Female respondents who reported having same-gender sexual activity (stratified random sample of ~4,300 Grade 8 to 12 students in Vermont).	Safe Schools Coalition of Washington (1999)
3.3	Adult males reporting having had homosexual sex occasionally or fairly often at some point in their adult lives (data from National Opinion Research Center survey of 1,450 males in the United States).	Fay, Turner, Klasser, and Gagnon (1989)
3.0	High estimate of women who were exclusively homosexual throughout their lives from adolescence on (5,940 white females in the United States).	Kinsey, Pomeroy, and Martin (1948)
3.0	Females having a homosexual experience during more than three years of their lives (volunteer survey of 2036 people).	Hunt (1974)
3.0	Women reporting a same-sex sexual partner in the previous five years (aged 16 to 50 years).	Taylor (1993)

**Table 1 (Cont'd). Estimates of the Base Rate of Homosexuality and Bisexuality**

Estimate of Percentage of Population that is Homosexual	Definition of Homosexuality (Sample Description)	Research Study
2.8	Females reporting same-sex sexual partner in the last five years (2027 participants in the United States, France, and the United Kingdom).	Sell, Wells, and Wypij (1995)
2.8	Men reporting some level of homosexual (or bisexual) identity (probability sample of 3,432 men and women in the United States between the ages of 18 and 59).	Laumann, Gagnon, Michael, and Michaels (1994)
2.5	Average estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)
2.3	Males admitting to a same sex experience in the last ten years (3300 men aged 20 to 39 in the United States).	Billy, Tanfer, Grady, and Klepinger (1993)
2.1	Self identified homosexual and bisexual Danish survey respondents (2460 Danish adults)	Ventegodt (1998)
2.0	Self identified gay men (40 Twin adult males in Washington, D.C.).	Hamer, Hu, Magnuson, Hu, and Parrotucci (1993)
1.5	Females predominately or exclusively homosexual (white college-educated females).	Gebhard (1972)
1.4	Women reporting some level of homosexual (or bisexual) identity (random probability sample of 3432 men and women in the United States between the ages of 18 and 59).	Laumann, Gagnon, Michael, and Michaels (1994)
1.3	Men reporting same-sex partner (4066 males).	Pietropinto and Simenauer (1977)
1.1	Males admitting they were exclusively gay (national probability sample of 3321 men aged 20 to 39 in the United States).	Billy, Tanfer, Grady, and Klepinger (1993)
1.1	Respondents describing themselves as bisexual, mostly homosexual or 100% homosexual (stratified random samples of 36,254 Grade 7 to 12 students in Minnesota).	Safe Schools Coalition of Washington (1999)
1.0	Low estimate of women who were exclusively homosexual throughout their lives from adolescence on (5,940 white females in the United States).	Kinsey, Pomeroy, and Martin (1948)
0.2	Low estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)

**Note: Studies differ in conceptual and operational definitions, methodology, and response rates. Divergent estimates of homosexuality's base rate probably result from whether research focused on sexual experience or sexual identity. Additionally, studies estimating base rates assume that: (1) everyone is conscious of his or her true sexual desires; (2) self reports can be trusted; (3) everyone is comfortable admitting them; and (4) everyone is able to fit himself or herself into researchers' categories of sexual orientation. Most GLB individuals will find it difficult to speak about their sexual behaviours and fantasies because of homophobia and repression (Stein, 1999). Because of these factors, the above studies most likely under-report homosexuality's base rate.**

## **HEALTH AND SOCIAL ISSUES OF GAYS, LESBIANS, AND BISEXUALS**

Gays, lesbians, and bisexuals face health risks and social problems not inherent in sexual orientation itself, but rather are due to society's negative responses (O'Hanlan, Lock, Robertson, Cabaj, Schatz, and Nemrow, 1996; Coyle, 1993; Savin-Williams, 2001). Extensive research reveals that there are no differences between GLB and heterosexual people in terms of maturity, neuroticism, psychological adjustment, goal orientation, or self actualization (Bersoff and Ogden, 1991; Dancey, 1990; Freedman, 1971; Gartrell, 1981; Hart, Roback, Tittler, Weitz, Walston, and McKee, 1978; Herek, 1990; Hooker, 1969; Kurdek and Schmitt, 1986; Pagelow, 1980; Peters and Cantrell, 1991; Ross, Paulsen, and Stalstrom, 1988; Siegelman, 1979; Stokes, Kilman, and Wanlass, 1983; Thompson, McCandless, and Strickland, 1971). Yet, there is a large discrepancy between GLB life expectancy and that of heterosexuals. Statistics Canada (2001f) reported that average life expectancy in 1990-1992 was 75 years for Canadian males and 81 years for Canadian females. In a flawed study, Cameron, Cameron, and Playfair (1998) found that the median age of death for homosexuals was less than 50 years. Similar follow-up studies found a median age of death of 42 years (Cameron, Playfair, and Wellum, 1994) and 46 years (Cameron, 2002) for homosexual men. A more rigorous study by Hogg, Strathdee, Craib, O'Shaughnessy, Montaner, and Schechter (1997) found that the remaining life expectancy of 20 year old gay or bisexual (GB) men in Vancouver was 34 to 46.3 years, compared to 54.3 years for non-GLB 20 year old men (this equates to an overall life expectancy of 54 to 66.3 years). Therefore, GLB life expectancy is significantly lower than in the heterosexual population. There is evidence that this decreased life expectancy is due to increased levels of GLB health and social problems.

Research and data in eight major health and social areas were examined for this literature review: (1) suicide; (2) smoking; (3) alcohol abuse; (4) illicit drug use; (5) depression; (6) unemployment; (7) murder; and (8) HIV/AIDS. The additional issue of access to health care and services was also examined even though no mortality analysis is presented. This is because homophobia often results in substandard services from health care providers (e.g. discrimination, misdiagnosis), which exacerbates the severity of GLB health and social problems.

The above issues under consideration were limited to those where there was research or data available, and where a human impact could be estimated in some way. For example, there is evidence that GLB suffer higher incidences of eating disorders (Lee, 2000; Yager, Kurtzman, Landsverk, and Wiesmeier, 1988) and cancer (Ungvarski and Grossman, 1999). However, there is currently insufficient data to make any useful mortality estimates. Similarly, there are many issues related in some way to those discussed here. For example, low self-esteem, shame, anxiety, mood disturbance,

demoralization, and guilt are all likely outcomes of homophobia in GLB. However, they were not examined in detail here because data did not exist on the human impact of those issues.

### *CALCULATION OF HUMAN COSTS ESTIMATES*

This literature review's purpose is to review existing literature on homophobia and its effect on GLB, and to estimate this effect's human impact in Canada. Although approximate numbers are given for several health and social issues, it should be emphasized that these estimates are preliminary as there are many gaps in the research.

Also, many of the health and social issues discussed most likely have reciprocal relationships. To separate the number of premature deaths of each issue as independent of all other issues is likely impossible. For example, it is not clear whether unemployment causes, pre-determines or has any role in substance abuse, or, alternately, whether substance abuse causes, predetermines, or has any role in unemployment. Another example is alcoholism as a risk factor for suicide. Determining how many GLB suicides are due to alcoholism alone, homophobia alone, or a combination of the two may never be known. These two issues are likely interrelated and an exact cause-effect relationship cannot be determined. However, each issue can be separately examined. Because of these issues' interrelationship, and because homophobia is likely not the sole cause of increased GLB health and social problems, a grand total estimate of these issues' human impact can not be presented. Instead, a rough estimate of each individual issue is presented.

With these caveats in mind, the general method of calculating deaths is presented below:

#### *Calculation of Rates*

The relative GLB and heterosexual rates for particular health and social issues were estimated from existing literature (e.g. 25% of all Canadians smoke compared to 40% of GLB). Most commonly, two rates were used for GLB. The first rate was the percentage of the GLB population suffering from a particular problem. This was estimated using the median of several research studies. The second was the GLB rate in relation to a heterosexual control sample. Not all studies reported this information. However, when data was available, the median was used. **Appendix A** presents detailed calculations for each estimate.

#### *Estimation of Total Human Cost*

The total human lives lost in Canada as a result of each issue was estimated.

### *Number of GLB*

The total number of GLB people in Canada was estimated and then subtracted from the total Canadian population. This resulted in a total GLB and total heterosexual Canadian population. Two estimates of homosexuality's base rate (five and ten percent) were used throughout.

### *Number of Sufferers*

Given the estimated rates of the health and social problems, the total number of GLB and heterosexuals suffering from the particular problem was estimated (e.g. 461,700 GLB smoke).

### *Equivalency of Rates*

An assumption was made that, without the existence of homophobia and its deleterious effects, equivalent proportions of GLB and heterosexuals would be susceptible to the reviewed health and social issues.

### *Extra Sufferers*

The total number of "extra" GLB sufferers of a particular health or social problem was estimated. This figure was calculated by multiplying the total number of GLB by the heterosexual rate of the health or social issue then subtracting this number from the actual number of GLB who suffer from the health or social issue.

### *Total Number of Deaths*

The total number of premature deaths due to homophobia was estimated. This number was obtained by multiplying the "extra" GLB sufferers by the overall death rate for each health and social issue.

It is important to note that the present literature review probably uses conservative estimates of homophobia's human cost because limited information is available. For example, many suicides go unreported and many Canadians' sexual orientation remains hidden. Although the current literature review focused on number of deaths, homophobia's human cost could also include the suffering of GLB and their friends and families (Rice, 1993).

It should be kept in mind that some health and social issues lead to death only after

long-term exposure. For example, recent smoking rates were used to calculate current deaths. However, current deaths would most likely be determined by smoking rates from several years, or even decades, ago. Therefore, this literature review is limited to estimates.

## ***SUICIDE***

### *General Population Statistics*

Statistics Canada (2001i) data on suicides and suicide rates indicates that there were 3,681 reported suicides in Canada in 1997, which means that suicide was the 11th leading cause of death (Statistics Canada, 2001e; 2001b). This represents a rate of 0.0123%, or 12.3 deaths per 100,000. Suicides accounted for 1.7% of all deaths in 1997. There were 8,626 deaths by unintentional injuries in 1997 and 1,163 deaths due to neurotic disorders, personality disorders, and other non-psychotic mental disorders. Many of these deaths could plausibly be unreported suicides. Therefore, the 0.0123% rate is probably an underestimate.

### *Gay, Lesbian, and Bisexual Statistics*

Romero (1999) found a strong association between instances of homophobia experienced by gay men and thoughts of suicide. Psychological distress experienced by lesbians predicts suicidality (Morris, Waldo, and Rothblum, 2001). Being GB in a hostile environment was found to be a suicide risk factor in another study (Paul et al, 2002). Additionally, there is extensive research on GLB suicide attempt rates (for a review, see Tremblay (2000)). Remafedi (1999a) reviewed six controlled, population-based surveys in the United States and Canada and found that in all six attempted suicide rates were higher in GLB compared to their heterosexual peers. **Table 2** summarizes the results from individual studies examining GLB attempted suicide rates.

In addition to the above data, one particularly rigorous and methodologically sound study is of special note. In a study of 103 adult male twin pairs, Herrell, Goldberg, True, Ramakrishnan, Lyons, Eisen, and Tsuang (1999) found the suicide attempt rate was 6.5 times higher in twins reporting same-gender sexual orientation compared to twins reporting no same-gender sexual orientation. The higher rate was not explained by mental health, substance abuse, or numerous unmeasured genetic and non-genetic familial factors accounted for in the co-twin control design.

Kourany (1987) and Remafedi, Farrow, and Deisher (1991) also reported that self-injurious acts of homosexual adolescents and adults were more serious and lethal, of limited rescuability, and more often resulted in hospitalization than those of their heterosexual peers. Bagley and Tremblay (1997a) reported that homosexually oriented males form the majority of hospitalizations and probable deaths resulting from suicide attempts.

**Table 2. Percentage of Gays, Lesbians, and Bisexuals Who Attempt Suicide**

Percentage of GLB who Attempted Suicide	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
66.1	n/a	221	Gay, lesbian and bisexual youth; mean age = 18.5 years; youth group attendees in United States and Canada.	Proctor and Groze (1994)
50.0	n/a	37	Mean age = ~ 17.0 years; United States.	Uribe and Harbeck (1992)
42.0	n/a	142	Gay and bisexual males; mean age = 19.2 years; United States youth groups.	D'Augelli and Hersberger (1993)
40.3	n/a	159	Gay and bisexual males; mean age ~ 19 years; United States and Canada youth groups.	Proctor and Groze (1994)
40.0	n/a	5,000	Homosexual men and women.	Jay and Young (1979)
39.0	n/a	138	Gay and bisexual males; mean age = 16.8 years; New York.	Rotheram-Borus, Hunter and Rosario (1994)
35.5	3.3 times	104	Homosexual and bisexual males and females; Massachusetts.	Garofalo et al, (1998)
35.3	n/a	34	Gay, lesbian and bisexual school students; United States.	Jordan, Vaughan, and Woodworth (1997)
34.0	n/a	29	Gay and bisexual males; mean age = 18.3 years; United States.	Remafedi (1987)
32.1	4.5 times	28	Birth cohort study; age = 21 years; New Zealand.	Fergusson, Horwood, and Beautrais (1999)
32.0	n/a	54	Gay, lesbian and bisexual youth; mean age ~ 18.5 years; United States.	Waldo, Hesson-McInnis, and D'Augelli. (1998)
31.3	8.7 times	80	Males with male sex partner in lifetime; age range = 17 to 39 years; United States.	Cochran and Mays (2000a)
31.3	9.2 times	80	Males with male sex partner in lifetime; are range = 17 to 39 years; United States.	Cochran and Mays (2000a)
31.0	n/a	60	Gay and bisexual males; mean age = 20.0 years; United States.	Roesler and Deisher (1972)
31.0	3.4 times	129	Homosexual, bisexual and unsure males and females; mean age = 16.1 years; Massachusetts.	Garofalo et al, (1999)
30.0	n/a	137	Gay and bisexual males; mean age = 19.6 years; United States.	Remafedi, Farrow, and Deisher (1991)
30.0	n/a	90	Gay, lesbian and bisexual youth; mean age ~ 18 years; United States.	Grossman and Kerner (1998)
30.0	n/a	239	Gay and bisexual males; mean age = 19.9 years; United States.	Remafedi (1994)

**Table 2 (Cont'd). Percentage of Gays, Lesbians, and Bisexuals Who Attempted Suicide**

Percentage of GLB who Attempted Suicide	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
30.0	n/a	137	Homosexual respondents.	Remafedi, Farrow, and Deisher (1991)
30.0	n/a	n/a	High estimate of gay and lesbian youth.	Whitcock (1988)
28.8	4 times	53	Gay and bisexual males; age range = 18 to 25 years; Australia.	Nicholas and Howard (1998)
28.1	7 times	~360	Gay and bisexual males; Minnesota.	Remafedi, French, Story, Resnick, and Blum (1998)
27.5	2 times	113	Homosexual and bisexual sexually active males and females; Massachusetts.	Faulkner and Cranston (1998)
26.0	n/a	77	Gay and bisexual males; mean age ~ 23.5 years; Canada.	Magnuson (1992)
25.7	n/a	52	Gay, lesbian and bisexual youth; United States.	Hecht (1998)
25.0	n/a	28	Gays, lesbians and bisexuals; mean age ~ 23.0 years; United States.	Hammelman (1993)
24.4	3 to 4 times	394	Gay and bisexual males and females; mean age = 14.9 years; Minnesota.	Saewyc, Bearinger, Heinz, Blum, and Resnick (1998)
23.6	n/a	229	Gay and bisexual males; mean age = 33.0 years; Australia.	Kelly, Rapheal, Judd, Perdices, Kernutt, Burnett, Dunne, and Burrows (1998)
22.8	n/a	139	Gay and bisexual males; mean age = 36.4 years; Switzerland.	Cochand and Bovet (1998)
21.0	n/a	500	Gay, lesbian and bisexual youth; mean age ~ 17.0 years; New York.	Martin and Hetrick (1988)
21.0	10.5 times	n/a	Black homosexual men.	Bell and Weinberg (1978)
20.0	n/a	108	Gay and bisexual males; mean age = 20.6 years; United States.	Schneider, Farberow, and Kruks (1989)
20.0	n/a	141	Gay and bisexual males; mean age = ~ 17.0 years; Chicago.	Herdt and Boxer (1993)
20.0	n/a	20	Gay, lesbian and bisexual youth; United States.	Dohaney (1995)
20.0	n/a	108	Gay males.	Schneider, Farberow, and Kruks (1989)
20.0	n/a	n/a	Low estimate of gay and lesbian youth.	Whitcock (1988)
19.3	5.4 times	3648	Males with male sex partner in lifetime; are range = 17 to 39 years; United States.	Cochran and Mays (2000a)

**Table 2 (Cont'd). Percentage of Gays, Lesbians, and Bisexuals Who Attempt Suicide**

Percentage of GLB who Attempted Suicide	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
18.4	6 times	683	White and black gay and bisexual males; mean age = 36.0 years; United States.	Harry (1983)
18.0	n/a	1,898	Lesbians; age range = 17 to 80 years; all 50 American states.	Bradford, Ryan, and Rothblum (1994)
15.5	3 times	82	Gay and bisexual, celibate males; mean age = 22.7 years; Canada.	Bagley and Tremblay (1997a)
14.4	5.8 times	575	White, gay and bisexual males; mean age = 36.0 years; United States.	Bell and Weinberg (1978)
12.4	2 times	137	Gay and bisexual males; mean age = 20.4 years; Belgium.	Vinke and van Heeringen (1998)
9.5	13.6 times	575	White, gay and bisexual males; mean age = 36.0 years; United States.	Bell and Weinberg (1978)
6.1	13.9 times	82	Gay and bisexual sexually active males; mean age = 22.7 years; Canada.	Bagley and Tremblay (1997a)

Note: n/a = not available or not reported.

“X Times Heterosexual Control Sample” refers to the GLB sample suicide rate in relation to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to a paucity of information given in the original studies.

Data on GLB completed suicide rates are less extensive than attempted suicide rates. Kroll and Warneke (1995), Gibson (1994), and Remafedi (1994) reported that GLB youth account for 30% of completed youth suicides. Remafedi (1987), Schneider, Farberow, and Kruks (1989), and Remafedi, Farrow, and Deisher (1991) estimated that GLB teenagers account for 20% to 40% of all completed suicides. Bagley and Tremblay (1997a) reviewed twelve North American studies on GB suicide rates and found that, in 1990, it was approximately 31.3%. Preliminary research by Tremblay (1994; 1996) indicated that more than half of male youth suicide victims were homosexually oriented. Tremblay (1995) suggested that up to 50% of male youth suicide deaths might involve homosexually oriented males.

There are several problems associated with estimating the number of GLB who commit suicide (Halpert, 2002; Remafedi, 1999b; Remafedi, French, Story, Resnick, and Blum, 1998; Remafedi, Farrow, and Deisher, 1991):

- Coroners and medical examiners may not be told about a victim’s sexual orientation because family members suppress that information. Therefore, sexual orientation is not reflected in death certificates.

- Some GLB, fearing homophobic attitudes, may not have told anyone about their sexual orientation or about their intention to commit suicide due to a crisis related to sexual orientation.
- Many incidents, such as single vehicle automobile accidents, may be suicides incorrectly interpreted as accidents.
- Suicide victims' sexual orientation is difficult to obtain posthumously.
- Openly GLB individuals are only a subset of the GLB population, and so suicide rate results may not generalize to the entire GLB population.
- Attempted suicide behaviours and completed suicides represent somewhat different phenomena.
- The clustering of variables such as substance abuse, depression, and family dysfunction limits the ability to conclude that homophobia was the suicide's root cause.<sup>3</sup>

Bagley and Tremblay (1997a) concluded that most researchers have not yet acquired the skills needed to discover homosexual orientation after a GLB suicide death. However, Garland and Ziegler (1993), Lewinsohn, Rohde, and Seeley (1993), and Shafii, Carrigan, Whittinghill, and Derick (1985) reported that the best predictor of a completed suicide is a previous suicide attempt. Therefore, the GLB suicide attempt rate can be used as a validation of GLB suicide death estimates.

There are three types of research by which to estimate the GLB suicide rate in Canada. The first is the direct evidence, which indicates that approximately 30% of all suicides are GLB. The second is the attempted suicide rate. Of the 44 research studies reviewed, the median GLB attempted suicide rate was approximately 28% (the mean was also 28%). The third is how much higher the GLB attempted suicide rate was in relation to a heterosexual control sample. Of the 17 studies with such data, the median was 5.8, while the mean was 6.5. Assuming that attempted suicides predict completed suicides, the 28% attempted suicide rate can be used as an estimate of the GLB suicide rate. Even if this number over-estimates the number of completed suicides, under-reporting of suicides, and especially of GLB suicides, would tend to make this estimate more reasonable. Additionally, the 28% estimate is congruent with direct evidence that suggests that 30% of completed suicides are GLB. In sum, two estimates, one relative to the heterosexual population (approximately six times the heterosexual rate) and one independent of the heterosexual population (30% of suicides are GLB) were used to determine GLB suicide rates.

### *Human Impact*

**Table 3** is a summary of the four estimates of the total number of suicides in Canada

related to homophobia (see the **Appendix A** for detailed calculations). The estimates range from 818 to 968 deaths per year.

**Table 3. Homophobia and Suicide: Four Estimates of Annual Deaths**

Estimated Annual Number of Deaths (1997)	Method Used
968	5% base rate; 30% of completed suicides are GLB.
957	5% base rate; GLB suicide rate is 6 times the non-GLB rate.
818	10% base rate; 30% of completed suicides are GLB.
859	10% base rate; GLB suicide rate is 6 times the non-GLB rate.
<i>Range of Estimates = 818 to 968</i>	

**Note:** Base rate = percentage of the population that is GLB.

## ***SMOKING***

### *General Population Statistics*

Health Canada’s (2000a) Canadian Tobacco Use Monitoring Survey indicates that 25% (6.07 million out of a total of 24.3 million) of the 1999 Canadian population over 15 years of age were smokers.<sup>4</sup> Ellison, Mao, and Gibbons (1995) estimated that 46,910 Canadian deaths were attributable to smoking in 2000.

### *Gay, Lesbian, and Bisexual Statistics*

**Table 4** summarizes some research related to GLB smoking rates. Of the twelve studies reviewed, the median and mean GLB smoking rate was 38%. Based on the median of five studies where that information was available, it was estimated that 1.6 times as many GLB smoked as heterosexuals.<sup>5</sup> The Roberts and Sorensen (1999) study was excluded because it was a clear outlier in terms of GLB and heterosexual comparisons.

### *Human Impact*

Single, Robson, Xie, and Rehm (1996) estimated that there were 33,498 tobacco-related deaths in 1992. Health Canada (1999, January) estimated that there were 45,214 deaths attributable to smoking in 1996 (an estimate of 45,000 deaths per year due to smoking was used for 1999). Smoking deaths accounted for 17% of total mortality and 16% of the total years of life lost due to any cause. **Table 5** summarizes the four estimates of the number of deaths attributable to homophobia as related to smoking.

**Table 4. Percentage of Gays, Lesbians and Bisexuals Who Smoke**

Percentage of GLB who Smoke	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
59.3	1.7 times	104	GLB youth reporting smoking cigarettes in last 30 days.	Garofalo et al (1998)
47.8	n/a	2,593	Gay men reporting current smoking in Tucson, Arizona and Portland, Oregon.	Stall, Greenwood, Acree, Pau, and Coates (1999)
45.3	n/a	548	HIV infected GB men in the United States.	Turner et al (2001)
43.0	2.0 times	n/a	High estimate for lesbians reporting smoking cigarettes in the past month.	Lee (2000)
42.7	n/a	489	Lesbians in the Southern United States.	Skinner and Otis (1996)
40.0	n/a	n/a	Average of six studies in gay adult men.	Stall, Greenwood, Acree, Paul, and Coates (1999)
38.0	1.7 times	n/a	Low estimate for lesbians reporting smoking cigarettes in the past month.	Lee (2000)
35.0	1.3 times	n/a	Gay men.	Lee (2000)
34.9	n/a	556	Gay men in the Southern United States.	Skinner and Otis (1996)
30.0	n/a	1,791	National American sample of lesbians indicating they smoked cigarettes daily.	Bradford, Ryan, and Rothblum (1994)
22.9	1.3 times	105	Sexually active GL, Massachusetts high school students.	Faulkner and Cranston (1998)
20.1	-0.77 times	1633	American lesbians.	Roberts and Sorensen (1999)

Note: n/a = not available or not reported.

“X Times Heterosexual Control Sample” refers to the GLB sample suicide rate in relation to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to a paucity of information given in the original studies.

## *ALCOHOL ABUSE*

### *General Population Statistics*

WebMD Canada (1999) reports that 7% of the American population suffers from alcoholism. While approximately 55% of Canadians consume one or more drinks per month (Statistics Canada, 2001a), the 1996-97 National Population Health Survey (Statistics Canada, 1998) found that 2.5% of Canadians reported drinking levels associated with clinical dependence on alcohol. Single, Brewster, MacNeil, Hatcher, and Trainor (1995) reported that 9.2% of adult Canadians reported having drinking problems. Based on liver cirrhosis mortality and per capita alcohol consumption data, the Addiction Research Foundation (2001) estimated that 5% of the adult population

was alcoholic. Adlaf, Ivis, and Smart (1994) found that 5.3% of a survey of Ontario adults met the alcohol dependence criteria. In a large survey, Grant, Harford, Dawson, Chou, Dufour, and Pickering (1994) found that 3% of American adults abused alcohol. Given the results described above, it is estimated that 5% of the population suffers from alcoholism, alcohol abuse, or problem drinking.

**Table 5. Homophobia and Smoking: Four Estimates of Annual Deaths**

Estimated Annual Number of Deaths (1999)	Method Used
1232	5% base rate; GLB smoking rate is 38%; non-GLB smoking rate is 24%.
1314	5% base rate; GLB smoking rate is 1.6 times the non-GLB smoking rate of 24%.
2599	10% base rate; GLB smoking rate is 38%; non-GLB smoking rate is 24%.
2548	10% base rate; GLB smoking rate is 1.6 times the non-GLB smoking rate of 24%.
<i>Range of Estimates = 1232 to 2599</i>	

**Note:** Base rate = percentage of the population that is GLB. See Appendix A for calculations of GLB and non-GLB smoking rates.

*Gay, Lesbian, and Bisexual Statistics*

No studies have found a direct relationship between homosexuality and alcoholism (Small and Leach, 1977), but several have found higher incidences of GLB alcoholism. Some researchers contend that the alienation and isolation that GLB experience as a result of society’s rejection and oppression of homosexuality is the reason for alcoholism’s high incidence (Small and Leach, 1977; Ungvarski and Grossman, 1999; Weinberg and Williams, 1974). Researchers also contend that alcohol related problems lose their intensity when a GLB’s environment is not homophobic. Alderson (2001) cited evidence that not accepting one’s homosexuality, which may be related to homophobia, may be causally related to the high incidence of alcohol abuse in the gay community. Williamson (2000) contended that internalized homophobia in GLB results in less effective coping strategies, such as alcohol abuse. Johnson and Palermo (1985) believed that homosexuals’ minority status is not alcoholism’s primary cause, but rather that individuals’ homophobia in treatment programs is the primary causal factor. This homophobia is manifested through behaviours such as refusal of services, treatment workers’ non-helpful attitudes, and assessing lesbianism as the primary problem, with little attention directed toward alcoholism. This results in ineffective treatment.

**Table 6. Percentage of Gays, Lesbians, and Bisexuals Who Abuse Alcohol**

Percentage of GLB Who Abuse Alcohol	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
59.0	n/a	142	Lesbians reporting use of alcoholic beverages to cope with stress.	Gillow and Davis (1987)
35.0	7 times	n/a	Low estimate of incidence of alcoholism in lesbians from a review of four studies.	Johnson and Palermo (1985)
30.0	1.5 times	n/a	Problem drinking in homosexual population.	Barr, Greenberg, and Dalton (1974)
29.4	n/a	2,497	Male homosexuals in the United States, the Netherlands, and Denmark reporting drinking problems.	Weinberg and Williams (1974)
25.0	5 times	n/a	High estimate of incidence of alcoholism in lesbians from a review of four studies.	Johnson and Palermo (1985)
25.0	n/a	1,852	National American sample of lesbians.	Bradford, Ryan, and Rothblum (1994)
23.0	2.9 times	748	Lesbians classified as having an alcohol problem in a Chicago sample.	McKirnan and Peterson (1989a) and McKirnan and Peterson (1989b)
23.0	1.4 times	2652	Gay men classified as having an alcohol problem in a Chicago sample.	McKirnan and Peterson (1989a and 1989b)
18.7	1.7 times	748	Male homosexuals aged 25 to 54 who exhibited frequent/heavy-drinking patterns.	Stall and Wiley (1988)
13.2	0.94 times	553	Gay male problem drinkers in the Southern United States.	Skinner and Otis (1996)
10.9	9.1 times	105	Sexually active GL, Massachusetts's high school students.	Faulkner and Cranston (1998)
10.6	1.4 times	98	Male homosexuals dependent on alcohol.	Cochran and Mays (2000b)
10.0	1.4 times	1055	Male and female homosexuals classified as problem drinkers in the Southern United States.	Skinner and Otis (1996)
9.0	n/a	561	Lesbians in New Zealand reporting alcohol use 5 to 7 times per week	Welch, Howden-Chapman, and Collings (1998)
8.0	n/a	2172	Urban American men who have sex with men reporting frequent/heavy alcohol use	Stall et al (2001)
7.5	3.2 times	491	Lesbian problem drinkers in the Southern United States.	Skinner and Otis (1996)
7.0	3.2 times	96	Lesbians dependent on alcohol.	Cochran and Mays (2000b)
n/a	1.0 times (equal)	55	Homosexual and bisexual women reporting heavy alcohol consumption.	Bloomfield (1993)

**Note:** Operational definitions of alcohol abuse and homosexuality vary across the studies reviewed.

n/a = not available or not reported.

“X Times Heterosexual Control Sample” refers to the GLB sample suicide rate in relation to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to a paucity of information given in the original studies.

**Table 6** summarizes the estimated incidence of GLB alcohol abuse. Of seventeen studies with such information (excluding the Gillow and Davis (1987) research, which did not measure alcohol abuse per se), the median incidence of GLB alcohol abuse was 16%, while the mean incidence was 18% (17% was used for the estimation calculations). In terms of the GLB rate in relation to the heterosexual rate, the median of the seven studies with such data was 1.7 times. As stated previously, inconsistencies in sampling methods and criteria for alcoholism, and the GLB population’s invisibility, greatly limits the generalizability of the research summarized above.

*Human Impact*

Single, Robson, Xie, and Rehm (1996) examined the human costs of substance abuse in Canada, and found that there were 6,701 deaths due to alcohol consumption in 1992. Gorsky, Schwartz, and Dennis (1988) estimated that alcohol abuse is a factor in more than 10% of all deaths (e.g. traffic accidents, homicide, suicide). Single, Rehm, Robson, and Truong (2000) estimated that there were 6,507 alcohol related deaths in 1995, and that (mis)use of alcohol, tobacco, and illicit drugs accounted for 20% of deaths and 22.2% of years of potential life lost in Canada in 1995.

Because alcohol consumption rates remained stable from 1995 to 2000 (Brewers Association of Canada, 2002), an estimate of 6930 deaths per year was used (adjusted for population change since 1995). **Table 7** presents the estimates of annual alcohol related deaths most likely attributable to homophobia.

**Table 7. Homophobia and Alcohol Abuse: Four Estimates of Annual Deaths**

Estimated Annual Number of Deaths (2000)	Method Used
875	5% base rate; GLB alcohol abuse rate is 17%; non-GLB alcohol abuse rate is 4.4%.
236	5% base rate; GLB alcohol abuse rate is 1.7 times the non-GLB alcohol abuse rate of 4.8%.
1843	10% base rate; GLB alcohol abuse rate is 17%; non-GLB alcohol abuse rate is 3.7%.
457	10% base rate; GLB alcohol abuse rate is 1.7 times the non-GLB alcohol abuse rate of 4.7%.
<i>Range of Estimates = 236 to 1843</i>	

**Note:** Base rate = percentage of the population that is GLB. See Appendix A for calculations of GLB and non-GLB alcohol abuse rates.

## ***ILLICIT DRUG USE***

### *General Population Statistics*

The Canadian Health Network (1999) reported that 7.4% of Canadians used marijuana, 0.7% used cocaine, and 1.1% used LSD, amphetamines, or heroin. Citing data from the Centre for Addiction and Mental Health's monitoring studies, the City of Toronto Drug Prevention Centre (2000) reported that less than 1% of adult Canadians had used crack cocaine or heroin in the past year, 10% had used marijuana in 1999, and 1% had used cocaine in 1998. No satisfactory method exists to estimate the percentage of Canadians who use illicit drugs because there are numerous types of illicit drugs, and individuals use different drugs and in different combinations in different quantities over different amounts of time. Although combining the relative marijuana, cocaine, heroin, and other drug use rates is not ideal, for the present exploratory literature review, 3.5% was used for the illicit drug use rate in Canada. This represents the mean of the research results listed above. It also represents a conservative estimate because it is known that more than this percentage of the population uses marijuana. However, as mentioned previously, drug use overlaps in individuals and marijuana use is most likely the least costly on society.

### *Gay, Lesbian, and Bisexual Statistics*

Research indicates that GLB have increased levels of illicit drug use compared to heterosexuals (Skinner, 1994), most likely as a result of minority stress (Ostrown, 2000). **Table 8** summarizes individual studies of GLB illicit drug use rates.

Studies on illicit drug use vary widely in terms of GLB rates. This is most likely a result of differences in drugs used and study participants' age. Because the percentage of GLB who use illicit drugs varies considerably, the estimation used was derived from the GLB rate compared to the heterosexual rate. Of the sixteen studies with such data, the median was 2.6 times and the mean 4.2 times. Because there were several outliers that unduly influenced the mean, the median rate of 2.6 times was used. This is most likely a conservative estimate. However, given the inability to accurately estimate the GLB or heterosexual rate, it was the most reasonable.

### *Human Impact*

Single, Robson, Xie, and Rehm (1996) estimated that there were 732 illicit drug-related deaths in Canada in 1992. They also estimated that there were 805 deaths in 1995 due to illicit drugs (Single, Rehm, Robson, and Truong, 2000). Adjusting for population changes, the number 857 was used for estimating annual deaths in **Table 9**.

**Table 8. Percentage of Gays, Lesbians, and Bisexuals Who Use Illicit Drugs**

Percentage of Gays, Lesbians or Bisexuals who use Illicit Drugs	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
58.0	n/a	29	Gay and bisexual male youths meeting criteria for substance abuse.	Remafedi (1987)
53.7	1.7 times	104	GLB reporting use of marijuana in last 30 days	Garofalo et al (1998)
36.5	2.5 times	558	Gay men reporting marijuana use in the Southern United States.	Skinner and Otis (1996)
36.1	4.4 times	492	Lesbians reporting marijuana use in the Southern United States.	Skinner and Otis (1996)
35.8	1.6 times	324	GLB high school youth reporting heavy or high-risk drug use in the United States.	Safe Schools Coalition of Washington (1999)
35.0	3.2 times	n/a	High estimate of non-parenteral (ingested) substance abuse in GL	Council on Scientific Affairs (1996)
28.0	2.5 times	n/a	Low estimate of non-parenteral (ingested) substance abuse in GL	Council on Scientific Affairs (1996)
25.3	9.4 times	104	GLB reporting use of cocaine in last 30 days	Garofalo et al (1998)
20.8	6.7 times	105	Sexually active GL Massachusetts high school students reporting using injection drugs at least once.	Faulkner and Cranston (1998)
18.9	n/a	2172	Urban, American men who have sex with men reporting frequent drug use	Stall et al (2001)
14.0	n/a	1,917	Lesbians reporting using marijuana daily or more than once a week	Bradford, Ryan, and Rothblum (1994)
13.3	19 times	105	Sexually active GL Massachusetts high school students reporting using cocaine 10 or more times.	Faulkner and Cranston (1998)
12.4	3.8 times	105	Sexually active GL Massachusetts high school students reporting using marijuana 40 or more times.	Faulkner and Cranston (1998)
11.0	1.2 times	748	GLB in Chicago reporting frequent use of marijuana.	McKiman and Peterson (1989a and 1989b)
9.7	1.5 times	558	Gay men reporting cocaine use in the Southern United States.	Skinner and Otis (1996)
8.0	n/a	561	Lesbians in New Zealand reporting more than weekly use of marijuana	Welch et al (1998).
7.1	2.6 times	492	Lesbians reporting cocaine use in the Southern United States.	Skinner and Otis (1996)
5.7	2.0 times	98	Homosexual men dependent on illicit drugs	Cochran and Mays (2000b)
5.0	3.8 times	96	Homosexual women dependent on illicit drugs	Cochran and Mays (2000b)

**Table 8 (Cont'd). Percentage of Gays, Lesbians, and Bisexuals Who Use Illicit Drugs**

3.0	n/a	1,917	Lesbians reporting using cocaine more than once a week or more than once a month	Bradford, Ryan, and Rothblum (1994)
2.3	3.3 times	2652	GLB in Chicago reporting frequent use of cocaine.	McKiman and Peterson (1989a and 1989b)
2.3	n/a	208	Homosexual men (HIV positive and negative) indicating drug abuse / dependence	Williams et al (1991)
n/a	2.5 times	168	GLBT and heterosexual youth in Seattle	Cochran, Stewart, Ginzler, and Cauce (2002)

**Note:** Studies differ in operational definitions and types of illicit drug use. Also, youth and adult rates most likely differ in the GLB and heterosexual populations.

n/a = not available or not reported.

“X Times Heterosexual Control Sample” refers to the GLB sample suicide rate in relation to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to a paucity of information given in the original studies.

**Table 9. Homophobia and Illicit Drug Use: Two Estimates of Annual Deaths**

Estimated Annual Number of Deaths (2000)	Method Used
64	5% base rate; GLB illicit drug use rate is 2.6 times the non-GLB illicit drug use rate of 3.2%.
74	10% base rate; GLB illicit drug use rate is 2.6 times the non-GLB illicit drug use rate of 3.0%.
<i>Range of Estimates = 64 to 74</i>	

**Note:** Base rate = percentage of the population that is GLB. See Appendix A for calculations of GLB and non-GLB illicit drug rates.

## *DEPRESSION<sup>6</sup>*

### *General Population Statistics*

Naiman (2000) reported that 10% of the Canadian workforce suffers from mental illness, including depression. Statistics Canada (2001h) reported that in 1996-1997 approximately 1.32 million people, or 4.4% of the population, reported feeling depressed. The Mood Disorders Association of Manitoba (2001) found that depression and/or manic-depression (bipolar disorder) occurs in approximately 25% of women and 11% of men in Canada at some point in their lives. Patten (2000) analyzed data from the Canadian National Population Health Survey in 1994-1995 and 1996-1997, and found the following prevalence rates for major depression: males 12 to 24 years old, 5.2%; males 25 to 44

years old, 3.5%; males 45 to 64 years old, 3.5%; females 12 to 24 years old, 9.6%; females 25 to 44 years old, 8.6%; females 45 to 64 years old, 6.3%; and females over 65 years old, 3.1%. Feightner (1994) estimated depression prevalence in the general population to be between 3.5% and 27%, depending on the definition used and the population studied. Given these findings, an estimate of 5% was used as the percentage of the population suffering from depression. The Statistics Canada (2001h) and Patten (2000) studies were given more credence because they used Canadian population data and were based on methodologically sound research methods.

### *Gay, Lesbian, and Bisexual Statistics*

There is no evidence that GLB are any different to heterosexuals in their psychological stability and mental functioning (Ross, 1985). Vincke, De Rycke, and Bolton (1999) found that chronic stress experienced by gay men led to greater levels of depression. Most GL psychological problems are due to coping with the negative reaction if he/she is openly homosexual and coping with the anxieties of keeping sexual orientation hidden or fearing of disclosure if he/she is not openly homosexual. Dempsey (1994) found that GL adolescents were likely to experience greater psychological dysfunction than non-GL peers. D'Augelli (1998) reported on the negative mental health consequences of growing up in a climate of homophobic intolerance. Bell and Weinberg's (1978) study of 1500 men and women in San Francisco found that 56% of gay men (compared to 27% of heterosexual males) and 66% of lesbians (compared to 41% of a heterosexual female control group) reported having consulted a professional about emotional problems at some time in their lives. Morgan (1992) found that 78% of 100 sampled lesbians and 29% of 309 sampled heterosexual women reported having been in psychotherapy at some time in their lives. Matthews et al (2002) found that 58% of their sample of 550 lesbians had been treated for depression (compared to 52% of heterosexual women). Simonsen, Blazina, and Watkins (2000) found that gender role conflict was correlated with depression in a sample of 117 gay men. **Table 10** reviews the research on GLB depression.

The median percentage of GLB suffering from depression from the summarized research was 15.3%. Based on studies that had such information, GLB are 2.15 times more likely to suffer from depression than heterosexuals.

### *Human Impact*

There is substantial evidence that, even when controlling for other factors, major depression is a risk factor for non-suicide mortality (Schulz et al, 2000; Penninx et al, 1999; Schulz et al, 2002; Pulska, Pahkala, Laippala, and Kivela, 1997, 1998a, 1998b, 1999, 2000; Ziegelstein, 2001). Penninx et al (2001) found that major depression increased the risk for cardiac mortality by almost three times. Newman (2003) found

that the mortality rate of individuals suffering from depression was 2.3 times higher than the average rate (although 29% of these deaths were attributed to suicide). Wulsin (2000) cited a robust study that found that depression increased mortality by 24% in the six years after a baseline measure was taken.

Although it is clear that depression increases mortality even when controlling for factors like smoking, physical illness, and alcohol consumption, there was insufficient data to reliably calculate human cost figures for the present literature review.

**Table 10. Percentage of Gays, Lesbians, and Bisexuals Who Suffer From Depression**

Percentage of GLB Suffering from Depression	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
71.4	1.9 times	28	Gay, lesbians and bisexual New Zealanders (aged 14 to 21 years) in a 21-year longitudinal study suffering from major depression.	Ferguson, Horwood, and Beautrais (1999)
37.0	n/a	1,925	National American survey of lesbians reporting having suffered from depression sometime in the past.	Bradford, Ryan, and Rothblum (1994)
30.0	n/a	n/a	National American sample of lesbians reporting having been in therapy for depression.	Sorensen and Roberts (1993)
15.3	2.4 times	78	Men reporting same-sex sexual partners meeting the criteria for major depression.	Cochran and Mays (2000a)
15.0	1.8 times	96	Homosexual women suffering from major depression.	Cochran and Mays (2000b)
13.3	3.0 times	98	Homosexual men suffering from major depression.	Cochran and Mays (2000b)
11.0	n/a	1,925	National American survey of lesbians currently suffering from major depression.	Bradford, Ryan, and Rothblum (1994)

**Note:** The disparity in the Fergusson, Horwood, and Beatrais (1999) study was not associated with any significant differences in social, family, or childhood backgrounds.

n/a = not available or not reported.

“X Times Heterosexual Control Sample” refers to the GLB sample suicide rate in relation to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to a paucity of information given in the original studies.

## *UNEMPLOYMENT*

### *General Population Statistics*

Statistics Canada (2001c; 2001g) data on the Labour Force indicate that 1,089,600 (or 6.81%) out of a total labour force of 15,999,200 were unemployed in 2000.

### *Gay, Lesbian, and Bisexual Statistics*

There is some evidence that GLB have a higher unemployment rate than heterosexuals (Fastfax, 2000). Pagelow (1980) describes the problems incurred by GLB in attaining and maintaining employment (e.g. subject to coercion and blackballing, paranoia, constant anxiety). Bradford, Ryan, and Rothblum (1994) found that 13% of their American sample of 1,917 lesbians had lost their jobs because of anti-gay discrimination. The Glasgow Women's Library (1999) reported that 42% of unemployed GL survey respondents perceived that their unemployment was related to their sexuality, and 20% of respondents stated that they had had to leave employment or had been refused work due to their sexuality or others' homophobia.

Skinner and Otis (1996) found that 3.5% of their sample of 1,067 GLB were unemployed, although no comparison data was reported. Based on data from the 1996 New Zealand census, Byrne (1997) reported that the unemployment rate was 1.32 times higher for lesbians compared to heterosexual women (6.2% versus 4.7%) and 1.38 times higher for gay men compared to heterosexual men (5.5% versus 4.0%). Mutchler and Freeman (1999) found that 25.4% of a Los Angeles GLB sample were unemployed.

Dropping out of high school exacerbates GLB employment problems because education is related to employability. Remafedi (1987) found that 28% of his sample of 29 GB male teenagers had dropped out of high school. Additionally, another study found that the GLB youth high school dropout rate was 28%, compared to 9% for their heterosexual counterparts (Remafedi, 1994). This is primarily due to discrimination (e.g. verbal and physical harassment) of young GLB by peers (Roberts and Sorensen, 1995) and the isolation that many GLB feel (Rivers, 2000).

There was minimal data on the GLB unemployment rate in Canada. Therefore, no estimation was calculated based on GLB unemployment rates.≠

### *Human Impact*

There is evidence that mortality rates among the unemployed are higher than the employed (Iverson, Andersen, Andersen, Christoffersen, and Keiding, 1987; Martikainen, 1990; Morris, Cook, and Shaper, 1994; Moser, Fox, and Jones, 1984). However, because little information exists to estimate the GLB unemployment rate in Canada, no valid estimate could be calculated of the number of premature deaths most likely caused by homophobia.

## ***MURDER***

### *General Population Statistics*

In Canada, there were 554 homicides in 2001, and 546 in 2000 (Statistics Canada, 2002).

### *Gay, Lesbian, and Bisexual Statistics*

Otis and Skinner (1996) reported several studies that show that hate crimes against gay men and lesbians increased substantially from the early 1980s to the early 1990s. Roberts (1995) reported that 11% of all hate crimes are directed against gays and lesbians. Evidence of physical and verbal assaults against GLB is well documented (Herek, Gillis, and Cogan, 1999; Telljohann and Price, 1993; Savin-Williams, 1994; Herek, 1993; Berrill, 1990; Barnes and Ephross, 1994; Glasgow Women's Library, 1999; Lee, 2000; Hunter, 1990; Bradford, Ryan, and Rothblum, 1994; Samis, 1995; Faulkner and Cranston, 1998; Faulkner, 1997; Smith, 1993a; New Brunswick Coalition for Human Right Reform, 1990; Warwick, Aggleton, and Douglas, 2001; Morrow, 2001; Balsam, 2001; D'Augelli and Grossman, 2001). Murder motivated by homophobia in Canada is less well documented. However, anti-gay murder statistics have been reported for Brazil (169 murders in 1999); Minnesota (120 to 180 murders from 1969 to 2002); and New South Wales, Australia (37 murders from 1989 to 1999) (Wockner, 2000; Minnesota Gay Homicide Study, 2000; Mouzos and Thompson, 2000). Cameron, Playfair, and Wellum (1994) found that, based on US obituaries, homosexual men were more frequently murdered than men in general. There was insufficient scientifically based data to estimate the number of anti-GLB murders in Canada.

### *Human Impact*

It is clear that GLB are subject to hate crimes, including significant physical violence. It can be assumed that there are anti-gay murders in Canada. However, there was insignificant evidence to warrant any estimations of the human cost of homicides caused by homophobia.

## ***HIV/AIDS***

### *General Population Statistics*

Health Canada (1999a) reported the HIV and AIDS cases and exposure categories that are shown in **Table 11**. In terms of risky sexual behaviour, Health Canada (1999b) reported that, in 1994, 26% of men and 19% of women always used condoms with non-regular partners. Additionally, in 1997, 27.7% of men and 28.1% of women did not use a condom the last time that they had sexual intercourse with a non-regular partner.

Health Canada (2000b) reported that there were 107 AIDS-related deaths in 1999, down substantially from the 1,422 reported in 1995. However, due to reporting delays and under-reporting for both AIDS cases and deaths in AIDS cases, this estimate may be lower than the actual number of AIDS-related deaths.

### *Gay, Lesbian, and Bisexual Statistics*

Health Canada (1996) reported that GLB youth have a higher risk of HIV infection than the general youth population. As **Table 11** demonstrates, homosexual contact (men who have sex with men) accounted for 52.2% of AIDS cases and 25% of HIV cases in 1997. Although GLB could have constituted a significant proportion of HIV and AIDS cases, this proportion would be small in other exposure categories (e.g. occupational exposure).

There are several reasons for increased HIV and AIDS rates in GLB. First, as was demonstrated earlier, GLB use illicit drugs and abuse alcohol at higher rates than the heterosexual population. Research shows that heavy alcohol and drug users engage in unsafe sex more often, therefore making them at higher risk to contract HIV/AIDS (Ostrow, 2000; Rosenberg et al, 2001).

Second, Meyer, and Dean (1996) and O'Hanlan, Lock, Robertson, Cabaj, Schatz, and Nemrow (1996) reported that GLB with higher internalized homophobia engaged in risky sexual behaviours at a greater rate than GLB with lower internalized homophobia. Additionally, Williamson (2000) reported that GLB with higher internalized homophobia were less affiliated with the gay community and therefore had less access to safer sex information and resources.

Third, Peersman, Sogolow, and Harden (2000) reported that people who live at mainstream society's margins, such as GLB, are more vulnerable to HIV/AIDS infection. Men who have sex with men are especially at an exceedingly high risk for HIV infection (Johnson and Peersman, 2000). HIV has disproportionately affected the gay community, which has led to even greater stigmatization (Ostrow, 2000). Graham, Kirscht, Kessler, and Graham (1998) found that negative life events, depression, and anxiety were predictors of risky sexual behaviours.

Finally, Leserman, Petitto, Golden, Gaynes, Gu, Perkins, Silva, Folds, and Evans (2000) found that stressful life events, depression, and dissatisfaction with social support were associated with increased risk of contracting AIDS and HIV progression. Kelly (2002) found that reducing risky sexual behaviour in GB men hinged partly on positive self-esteem and pride, which can be negatively affected by homophobic attitudes and behaviours.

### *Human Impact<sup>7</sup>*

HIV infection was the 15th leading cause of death in Canada in 1997 (Statistics Canada, 2001e). However, it would not be valid to estimate homophobia's human impact as it relates to HIV/AIDS because there is no way to contrast GLB and heterosexuals. This is because risky sexual behaviour cannot be conclusively linked to homophobia. Unsafe sexual practices were prevalent in both GLB and heterosexual populations when the HIV/AIDS epidemic first appeared. Although homophobia probably contributes to risky

sexual behaviour, and thus increased incidences of HIV/AIDS in the GLB population, any human cost estimates would be futile at this time. Interestingly, heterosexual individuals with a negative attitude toward GLB are more likely to exhibit risky sexual behaviours because they believe HIV/AIDS is exclusively a “gay disease,” suggesting that homophobia may also be costing lives in the non-GLB population (Burkholder, Harlow, and Washkwich, 1999). Fear of homosexual association also prevents some individuals from pursuing sources of information about AIDS or practicing safe sex (Edgar, Freimuth, and Hammond, 1988).

Although homophobia may not be directly linked to the acquisition of HIV/AIDS, Nott and Vedhara (1999) found that stresses faced by homosexual men might play a role in HIV’s progression. Additionally, internalized homophobia has predicted distress levels in HIV-positive men (Wagner, Brondolo, and Rabkin, 1996).

**Table 11. AIDS and HIV Cases in Canada for 1997**

Exposure Category	1,966 Total HIV Cases (%)	632 Total AIDS Cases (%)
No identified risk factor	33.5	3.6
Men who have sex with men	25.0	52.2
Injecting drug use	22.1	15.3
Heterosexual contact	14.5	17.7
Men who have sex with men and injecting drug use	1.6	4.1
Perinatal	1.4	--
Other	1.2	--
Recipient of blood or clotting factor	0.8	2.2
Occupational exposure	--	0.2
No identified risk – heterosexual	--	4.6
Total	100.0	100.0

**Note:** The category “Men who have sex with men” may include individuals who do not self-identify as GB.

***COROLLARY ISSUE: ACCESS TO QUALITY HEALTH CARE AND SERVICES***

An additional issue faced by GLB is the effect of prejudice, discrimination, and inadvertent or purposeful alienation by social and health care communities (O’Hanlan, 1995). Homophobia’s effect in the health care sector is exacerbated because increased GLB health and social problems rates are not treated properly or effectively, which can often lead to premature mortality. GLB have special health needs (Waugh, 1996). Some examples of the additional burdens and issues faced by GLB because of homophobia in health care services are listed below.<sup>8</sup>

- Homophobia in counselors can interfere with counseling and lead to inappropriate choices of treatment modality and goals. It can result in minimizing the importance of a client’s sexual orientation and the negative effects of heterosexism, thereby

attributing homosexual orientation as the pathological underlying cause of the client's problems. This generally reduces substance abuse treatment programs' success (Berkman and Zinberg, 1997; Hall, 1990).

- Gentry (1992), Lee (2000), Jones and Gabriel (1999), Baker (1993), McGarry, Clarke, and Cyr (2000), Kroll and Warneke (1995), Roberts and Sorensen (1995), Savin-Williams (1994), and Shelby (1999) reported that health care providers rarely ask about sexual orientation (i.e. heterosexuality is assumed).
- Many health care professionals are unaware of unique health care issues related to GLB health care (Ungvarski and Grossman, 1999; Lee, 2000; Mitchell, 2000).
- GLB often delay or avoid seeking medical assistance, including routine preventative health care, because of fear of ridicule, abuse, doctor prejudice, discrimination, disclosing sexual orientation to friends and family, exploitation, rejection, neglect, and unconcern (Godin, Naccache, and Pelletier, 2000; Stevens, 1994; Gentry, 1992; Wagner, 1997; Sussman-Skalka, 2001; Stevens and Hall, 1988).
- The fears described above are demonstrated in research by Dardick and Grady (1980), who found that less than 50% of openly homosexual men had told their primary health care provider that they were gay. Johnson and Palermo (1985) found that only 18% of women studied had revealed their sexual orientation to a physician.
- Roberts and Sorensen (1995) and Ryan, Brotman, and Rowe (2000) reviewed several studies and found that health care providers consistently demonstrated negative attitudes and behaviours (e.g. embarrassment, anxiety, pity, disgust, revulsion, hostility, rejection, condescension) and discomfort treating GLB. Lesbians consistently reported fearing that their quality of health care would be affected if they disclosed their sexuality. It was also found that discomfort in both health care providers and patients might lead to a lack of sharing information, delay in care for illnesses, and reluctance to have routine health promotion visits.
- Schatz and O'Hanlan (1994) reported that two-thirds of 700 physicians knew patients who were denied or given substandard care by other physicians because of the former's sexual orientation. Trezza (1994) also reported that homophobia was the largest predictor of stigmatization of persons infected with AIDS in counseling psychologists (although Lawrence et al (1990) did not replicate these findings).
- Nystrom (1997) reported that 25% of 1500 GLB and trans-gendered respondents who had seen a mental health provider in the last 12 months said that they had, at some time in their lives, received "poor or inappropriate mental health services because of [their] sexual orientation."
- Carter et al (1996) found that more homophobic medical students were less willing to treat HIV-positive patients than less homophobic students.

- Stevens and Hall (1991) cited several examples of lesbians' negative experiences in health care settings and subsequent delay in seeking treatment. Stigmatization results in GLB reluctance to seek health care or communicate openly in health care encounters. Stevens (1994) found that 44% of 45 lesbians interviewed did not feel safe or respected enough to continue contact with health care providers.
- Evans, Ferrando, Rabkin, and Fishman (2000) reported that attitudes towards physicians and other health care professionals were associated with critical treatment decisions in HIV-positive men.
- Brogan, Frank, Elon, and Sivanesan (1999) described harassment of lesbians during medical education and medical practice, which may discourage many lesbians from becoming physicians and providing the empathetic care needed by many lesbian patients. The absence of GLB in the health care system also allows prejudice and misinformation to flourish (Shelby, 1999).
- Siminoff et al (1998) found that homophobia in a sample of nurses was negatively related to psychosocial care quality.
- The quality of a relationship with a physician is highly related to overall quality of life and treatment adherence (Heckman et al, 1998).

## **SUMMARY OF HUMAN IMPACT ESTIMATES**

**Table 12** summarizes of the estimates of homophobia's human impact on Canada.

There were five issues for which a human impact analysis was not feasible: depression, unemployment, murder, HIV/AIDS, and access to quality health care and services. There was evidence that GLB suffer higher rates of depression and that depression leads to increased mortality rates, but there was insufficient data to make valid estimations of homophobia's human cost.

Although there was some research indicating that a greater percentage of GLB are unemployed compared to heterosexuals, and that unemployment leads to premature mortality, there was insufficient data to calculate Canada's GLB unemployment rate.

There was clear evidence that GLB are victims of physical violence at a rate much higher than that of the heterosexual population. However, there were limited estimations of the number of anti-homosexual homicides in Canada.

The GB male population has been hit especially hard by the HIV/AIDS epidemic. However, it cannot be assumed that GLB and heterosexual populations would have equivalent rates of infection without homophobia's presence. This is because of the disease's transmission routes, the epidemic's concentration in the GB male community in its early stages, and an inability to separate GLB from the injectable drug user exposure category.

Research clearly demonstrates that homophobia results in substandard health care for GLB, and that GLB do not properly access and use the health care system because of homophobia. This problem intensifies problems faced by GLB and undoubtedly adds substantially to the number of homophobia-related deaths in Canada. However, no human cost estimates were made as insufficient data existed.

**Table 12. Estimations of the Annual Human Impact of Homophobia on Canada**

Health or Social Issue	Year Estimated	Number of Deaths	
		Low Estimate	High Estimate
Suicide	1997	818	968
Smoking	1999	1232	2599
Alcohol Abuse	2000	236	1843
Illicit Drug Use	2000	64	74

## LIMITATIONS

### *LITERATURE REVIEW*

The present literature review has several limitations, which are discussed below.

#### *Exploratory Nature of the Review*

A review connecting homophobia, its impact on GLB health, and the resulting human impact has not been attempted before. As with any exploratory attempt that is not firmly established in the research, there is little precedent or opportunity to learn from previous work.

#### *Human Costs are Estimations Only*

Appraisal of certain health and social issues' economic costs has improved in the last few years (Goeree, O'Brien, Blackhouse, Agro, and Goering, 1999). Additionally, estimates of the number of deaths attributable to certain health and social issues also exist. Both appraisal types are simply estimates because the exact economic and human costs cannot be known. These cost estimates are not precisely determinable because there is considerable unknown information in the area of homophobia and homosexuality and their impact on GLB health and social issues. Also, many health and social issues lead to death only after long-term exposure. For example, recent alcohol abuse rates were used to calculate current deaths. However, current deaths would most likely be determined by alcohol abuse rates several years before the deaths occurred because alcohol abuse has long-term negative consequences. Several mortality estimates were

offered in the present literature review. The approximations and estimates given are meant to raise awareness of the relevant issues, point to future needed research, and give a general sense of homophobia's human cost on Canadian society.

### *Generalizability of Research*

Some of the data and research in the present review have been culled from American and European sources from the past 30 years. The results from these studies are accordingly not directly generalizable to contemporary Canada. However, these studies are similar to results of Canadian studies, and because most results were fairly consistent across time and throughout different geographic areas, they supported the Canadian results. More generally, Canada, the United States, and European countries have much in common, including similar standards of living, GLB-related laws, economic conditions, and health care practices and standards that make generalizing research among these countries relatively sound from a research perspective.

### *Synthesizing the Research*

The present literature review combines studies that vary considerably in their definitions, methodologies, results, and conclusions. For example, dozens of articles related to attempted suicide rates in GLB were reviewed. A median or mean rate was calculated from those studies. However, each study differed in terms of how an "attempted suicide" or "homosexuality" was defined, as well as the sample size from which the data was collected. Combining results across these studies was problematic. However, because the median or mean rate from those studies was used, research that tended to under- and overestimate rates would have balanced each other out. Although "true" rates can probably never be known for the various health and social issues reviewed in this document, the methodology used is the best available alternative.

### *Non-Weighting of Research*

A median or mean estimate for different rates of health and social problems experienced by GLB was used to calculate homophobia's human cost. No extra weighting was given to studies of higher quality (e.g. more methodologically sound, using samples more representative of the population) or studies with larger sample sizes, which could be considered a weakness of the present review. A decision was made to equally weight all individual studies. Therefore, using the median or mean was the appropriate methodology. A benefit of this approach is that the median tends to eliminate outliers in the research.

### *Overgeneralization of Research*

Because there are large gaps in the literature, overgeneralization is another difficulty here. For example, few studies have directly linked homophobia with increased GLB health and social problems. The present review's major assumption is that homophobia is the primary cause of increased incidences of GLB health and social problems. Also, mortality estimates of various health and social issues were usually meant to be applied to the Canadian population as a whole, not specifically to the GLB population. Generalizations based on limited research and applied to specific sub-populations is problematic.

### *Diversity of GLB Populations*

Obtaining separate research that examined homosexual males, homosexual females, bisexual males, and bisexual females was difficult. Although these groups represent distinct and diverse populations with unique issues, the present review treated research exploring these different groups as homogenous. The reason for examining the communities collectively was for brevity and consistency with this review's exploratory nature. This limits the degree of specific conclusions that can be made about homophobia's relative impact on those different groups.

### *Unaccounted Variables*

Related to the generalization problem is that the GLB population (or more accurately the GLB sample used to generalize to the GLB population) studied in much of the research reviewed might have been different than the heterosexual Canadian population in ways that might account for increased GLB health and social issue rates. For example, the studied GLB samples might have been different in terms of socio-economic status than many studies' heterosexual control samples. This, itself, could account for increased GLB health problems. Whether homophobia is partly or wholly responsible for premature GLB deaths is not known at this time.<sup>9</sup>

Even given these real and potential limitations, there are several beneficial outcomes to this review. First, even if skeptics do not accept that homophobia is the principal determinant in increased rates of GLB health and social problems, these increased health and social problems' strong presence in the literature is itself an important finding. Second, this review may be an impetus to conducting further research in the area. Third, efforts aimed at eliminating homophobia, including better access to health care and more appropriate and sensitive health care services for the GLB population, may be taken as a greater priority given its human impact on Canada.

## ***RESEARCH REVIEWED***

Conclusions based on literature reviews are only as good as the availability of quality research in the area. Put another way, the information summarized in this review suffers from the same limitations of the research reviewed. For the sake of brevity, instead of discussing the weaknesses of individual research studies, general limitations are discussed below. The following limitations were observed in some or most of the research reviewed.

### *Small Sample Sizes*

Research that collected data from a relatively small number of GLB subjects reduced the ability to generalize to broader populations and detect differences with heterosexual populations (e.g. Remafedi, 1987). Also, studies that compared homosexual and heterosexual samples, but did not match participants according to race, age, income, location, or education, decreased the ability to conclude that unmeasured, systematic differences between the two groups were not the reason for the observed differences.

### *Respondents Declining to Participate*

Research in which potential participants declined to respond might have biased the results. That is, low response rates to surveys might have resulted in a selection bias, possibly resulting in an under- or over-reporting of the phenomena under study.

### *Clinical Samples*

GLB samples drawn from clinical samples probably do not represent the total GLB population. Also, studies using psychiatric histories as a data source may under-report certain self-destructive behaviours such as suicide attempts. This is because older individuals may not recall or interpret early self-destructive behaviours such as suicide attempts during a psychiatric interview focusing on lifetime symptoms.

### *Under-representation of Certain Groups*

Research conducted on white males, which constituted a large portion of the reviewed research, under-represented ethnic GLB and white lesbians and bisexuals. This under-representation might have biased the results. For example, research has shown that males and females have different timelines for “coming out” (D’Augelli and Hershberger, 1993) and there is a greater condemnatory orientation toward homosexuality in the black community compared to the white community (Ernst, Francis, Nevels, and Lemeh, 1991).

### *Cross-sectional Designs*

Research that was cross-sectional in design could only examine the association between homophobia, sexual orientation, and increased rates of health and social issues. However, no definitive conclusions about causality can be made from cross-sectional designs. Also, cross-sectional data does not allow information about changes over time to be gleaned.

### *Self-report Designs*

Data gathered using self-report techniques does not allow researchers to know whether respondents under- or over-reported health and social issues' existence or frequency. More specifically, sexual orientation data gathered using self-report instruments is problematic. Even when anonymous techniques are employed, social stigma probably prevents many respondents from self-identifying as GLB. It is likely that self-report techniques under-report GLB orientation.

### *Convenience Samples*

Samples drawn from convenience and opportunistic (e.g. snow-ball) samples and non-randomized samples reduce the ability to generalize the results. For example, some researchers who reported elevated alcohol abuse rates drew their samples from bar patrons.

### *Samples from Specific Geographic Areas*

Data gathered from specific geographic areas reduce the generalizability of results to other geographic areas. One reason for this is because communities vary in GLB acceptance.

### *Disclosure of Orientation and Health and Social Problems*

It is unknown whether a willingness to disclose sexual orientation (socially stigmatizing information) is positively associated with a similar willingness to disclose health and social problems. If this relationship exists, it would tend to over-estimate GLB health and social problems.

### *Response Bias*

Research has not been able to uncover whether elevated GLB levels of health and social problems are due to stigmatization and psychosocial stress related to homophobia, or whether they are due to differences in response bias in which there is possibly a lower threshold among GLB for reporting such problems.

### *Consistency of Definitions*

In general, GLB and health and social research lacks consistent conceptual and operational definitions and standardized measures. This is especially true for sexual orientation's definition (e.g. definitions of homosexuality can be based on behaviour, desire, or identity).

### *Differences Among Age Groups*

Different studies focusing on particular age groups (e.g. youth aged 12 to 16 years) had inconsistent definitions of the age groups (e.g. one study defined youth as being under age 24 years). An additional problem is that different age groups may face varying levels of homophobia, stress, and health and social problems. This precludes making strong synthesizing conclusions about those studies' results. In suicide research, it is unknown whether suicide risks peak at adolescence or remain constant throughout the life cycle, making generalizations from youth suicide studies to the adult population (and vice-versa) problematic.

### *Cohort Effects*

Most studies did not attempt to account for any operating cohort effects. That is, there may be greater GLB acceptance over time, which may encourage more openness about sexual orientation at earlier ages.

### *Social Desirability*

Comformity pressures might have resulted in participants under-reporting their sexual orientation, homophobia, or illegal / stigmatized behaviours. Researchers can only make conclusions from those who have already self-identified as GLB in their studies.

### *Unmeasured, Overlapping and Confounding Variables, and Temporal and Causal Order of Variables*

Interpretation of the causal and temporal role of psychological and social stress related to homosexuality and health and social issues (e.g. illicit drug use, depression) is unclear due to possible confounds. For example, does homophobia cause stress that results in substance abuse and ultimately suicide? Or does substance abuse confound the relationship between stress and suicide? Other unanswered questions include: Do higher GLB alcohol abuse rates result from the stress of coping with homophobia? Or do higher GLB alcohol abuse rates result from many GLB feeling that bars are the only safe place to meet and gather, with alcohol abuse an outcome of the amount of time spent in bars? Additionally, increased rates of GLB health problems might be the result of an

unmeasured factor, unrelated to homophobia, such as childhood abuse. Another example is that internalized homophobia overlaps with several other relevant concepts, such as self-esteem (Williamson, 2000). Many studies do not account for the possibility that variables overlap with each other.

### *Real Versus Perceived Homophobia*

Homophobia's negative effects might be caused primarily by inaccurate GLB perceptions, and not as a result of others' actual behaviours (Frable, Wortman, and Joseph, 1997).

## **FURTHER RESEARCH NEEDED**

Numerous indicators suggest that increased incidence of health and social problems found in the GLB population are related to the stigma and shame associated with living in a homophobic society (Ryan, Brotman, and Rowe, 2000), yet there is a shortage of rigorous research exploring this problem directly.

HIV/AIDS is often the focus of GLB health.<sup>10</sup> However, there is a myriad of other health and social issues affecting the GLB population that receive far less attention (Rofes, 2000; Ryan, Brotman, and Rowe, 2000). Many of these health and social issues are related to homophobia's effect (e.g. alcohol abuse, smoking, guilt, shame, depression). Policy makers are slowly beginning to incorporate research on the impact of stigmatization and prejudice on GLB health and mortality (Saunders, 2000), but research needs to be conducted on homophobia's motivations, specific cognitive processes associated with homophobia, specific adverse effects on GLB, these effects' causal direction, differential effects on different subpopulations of GLB, and prevention efforts that are effective in reducing homophobia<sup>11</sup> and its effects on GLB.

## **METHODOLOGICAL IMPROVEMENTS NEEDED**

Concomitant with the research suggested above, several researchers have recommended methodological improvements in the area of homophobia and GLB health and social issues. Some suggestions include:

- Use statistical probability sampling methods (Stein, 1999; Ryan, Brotman, and Rowe, 2000; Sell and Petrulio, 1996) or multiple sampling methods (Skinner and Otis, 1996).
- Obtain samples from multiple recruitment sites if convenience samples are used (Ryan, Brotman, and Rowe, 2000; Sell and Petrulio, 1996).
- Draw subjects from various cultures and sub-cultural groups where sexual desires may be organized differently (Stein, 1999; Coyle and Rafalin, 2000).

- Include separate analyses of homosexual males, homosexual females, bisexual males, and bisexual females as those groups constitute distinct communities. Also, categorizing sexual-minority individuals into clear-cut groups may be an oversimplification of sexuality's complex and dynamic nature (Savin-Williams, 2001; Mallon, 1999; Williams Collins, 1998; Ault, 1996)
- Evaluate subjects' sexual orientations through detailed, longitudinal, sexual histories (Stein, 1999).
- Take greater care not to allow cultural assumptions about sexual desires and their organization to influence subject classification and study result interpretation (Stein, 1999).
- Consider indirect as well as direct theories in deciding how to interpret the data (Stein, 1999).
- Less reliance on self-report data (Stein, 1999).
- Use longitudinal designs that can track changes in health and social issues, behaviours, desires, and identity, as well as response reliability over a period of time and/or across a life span (Stein, 1999; Remafedi, French, Story, Resnick, and Blum, 1998).
- Use standardized and detailed conceptual and operational definitions of homosexuality. Operational definitions should be developed from conceptual definitions (Roberts and Sorensen, 1999; Ryan, Brotman, and Rowe, 2000; Sell and Petruccio, 1996).
- Use appropriate heterosexual comparison groups matched to relevant variables such as income, education, and location (Roberts and Sorensen, 1999).
- Attempt to uncover more of the hidden GLB population in order to find more representative samples (e.g. snowball sampling technique) (Roberts and Sorensen, 1999).
- Create contexts in which GLB feel comfortable sharing their sexual histories and health related behaviours (e.g. interviewing techniques that build rapport) (Stein, 1999).
- Use techniques that involve collaboration with community organizations and establish projects meaningful to GLB (Skinner and Otis, 1996).
- Employ community members as stewards of personal information for obtaining large samples (Skinner and Otis, 1996).
- Take into account different attributes of suburban, rural, and urban GLB (Bagley and Tremblay, 1997a).
- Include questions about sexual orientation in large-scale population surveys because large samples are needed for meaningful sub-population analyses (e.g. GLB sub-population) (Remafedi, 1999a).

## NOTES

- 1 Several sections, such as the one on homophobia, are quite similar to those in the original report. They were included to maintain continuity in the current report. Although most sections are similar to the previous report, they also contain significant updates and new research that has become available in the last few years.
- 2 Ross and Rosser (1996) have developed a scale to measure internalized homophobia.
- 3 Remafedi, Farrow, and Deisher (1991) found that roughly one-third of subjects in their study reported that their suicide attempts had roots in personal issues about their homosexual identity.
- 4 Statistics Canada (2001d) found that 23% of Canadians reported smoking daily in 1998-1999.
- 5 Evidence that GLB are specifically targeted by tobacco companies exacerbates the situation (Goebel, 1994; Washington, 2002).
- 6 Although there is some evidence that GLB have a higher incidence of other mental disorders, such as Generalized Anxiety Disorder and Conduct Disorder, most evidence has centered on major depression. Therefore, only that specific mental disorder was reviewed here.
- 7 Several reviews have found that HIV prevention interventions for GLB youths are effective at reducing HIV transmission and are cost effective compared to society's potential economic and human cost because of increased HIV/AIDS cases (Pinkerton, Holtgrave, DiFranceisco, Stevenson, and Kelly, 1998; Tao and Remafedi, 1998; Grossman, Arbess, Cavacuiti, and Urbshott, 2000).
- 8 See Ryan, Brotman, and Rowe (2000) for an extensive review of this area.
- 9 Some researchers have argued that it is "gay lifestyle" choice that accounts for increased smoking and alcohol abuse rates.
- 10 HIV/AIDS and GLB research is extensive, including: studies on well-being and quality of life of GLB with HIV/AIDS (Siegel, Raveis, and Karus, 1994; Ross and Ryan, 1995; Burgess et al, 1993; Burgess et al, 2000; Carretero et al, 1996; Schonnesson, 2002; Bing et al, 2000; Raphael et al, 2001; Cederfjall et al, 2001; Copfer et al, 1996; Holmes and Shea, 1998; Igreja et al, 2000; Rabkin et al, 1993a and 1993b); GLB physical health implications of HIV/AIDS infection (Keithley

et al, 1992; Billings et al, 2000; Antoni et al, 2002; Pakenham and Rinaldis, 2001; Wagner et al, 2000); risky sexual behaviour in men who have sex with men (Williams, Elwood, and Bowen, 2000); disclosure of sexuality and relation to HIV/AIDS prevention (Kennamer et al, 2000); disclosure of HIV status (Yoshioka and Schustack, 2001); religious beliefs among GLB with variable proximity to AIDS (Bivens et al, 1994-95); psychosocial implications of HIV/AIDS (Rabkin et al, 2000; Kurdek and Siesky, 1990; Evans et al, 1998; Fell et al, 1993; Carstensen and Fredrickson, 1998; Bloom, 1997; Salisbury, 1986; Kalichman et al, 1997); social support of HIV/AIDS infected GLB (Nott, Vedhara, and Power, 1995; Travers and Paoletti, 1999; Waller, 2001; Shernoff, 1990; Lichtenstein et al, 2002; Bennett, Kelaher, and Ross, 1994; Barnes et al, 1993; Kadushin, 1996); the rift between HIV positive and HIV negative gay men (Botnick, 2000); substance abuse and HIV/AIDS (Shernoff and Springer, 1992); sexual dysfunction (Tindall, Forde, Goldstein, Ross, and Cooper, 1994); suicidality of AIDS survivors (Rabkin, Remien, Katoff, and Williams, 1993b); HIV/AIDS education and counseling (Visser and Antoni, 1994); bereavement in gay men whose partners died of AIDS (Folkman, 1997); and HIV/AIDS and GLB sexual abuse (Batholow et al, 1994).

11 For example, see Serdahely and Ziemba (1985) or Herek (1991).

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Appendix A. Calculations For Human Cost Estimations

Table 13. Homophobia and Suicide

Basic Statistics (1997)	Estimated Number of Suicides (1997)	Estimated Annual Costs (1997)
<ul style="list-style-type: none"> <li>• GLB base rate = 5%</li> <li>• Total population = 29,987,200</li> <li>• Non-GLB population = 28,487,840</li> <li>• GLB population = 1,499,360</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Completed suicides = 30% GLB</b></li> <li>• Total suicides in Canada = 3681</li> <li>• Non-GLB suicides = 2577</li> <li>• GLB suicides = 1104</li> </ul>	<ul style="list-style-type: none"> <li>• Only 5% as opposed to 30% of completed suicides should be GLB</li> <li>• Non-GLB suicides constant = 2577</li> <li>• Total suicides if GLB and non-GLB equivalent = 2713</li> <li>• GLB suicides = 136 (instead of 1104 GLB suicides, there should be 136 so difference is 968)</li> <li>• <b>Extra deaths = 968</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>GLB suicide rate 6 times the non-GLB rate</b></li> <li>• Total suicide rate = 0.00012275</li> <li>• Non-GLB suicide rate = 0.00009820</li> <li>• Non-GLB suicides = 2798</li> <li>• GLB suicide rate = 0.00058921</li> <li>• GLB suicides = 883</li> </ul>	<ul style="list-style-type: none"> <li>• GLB and non-GLB suicides rates should be equivalent</li> <li>• Non-GLB suicides constant = 2798</li> <li>• Total suicides if GLB and non-GLB rates equivalent = 2945</li> <li>• GLB suicides = 147 (instead of 1104 GLB suicides, there should be 147, so difference is 957)</li> <li>• <b>Extra deaths = 957</b></li> </ul>
<ul style="list-style-type: none"> <li>• GLB base rate = 10%</li> <li>• Total population = 29,987,200</li> <li>• Non-GLB population = 26,988,480</li> <li>• GLB population = 2,998,720</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Completed suicides = 30% GLB</b></li> <li>• Total suicides in Canada = 3681</li> <li>• Non-GLB suicides = 2577</li> <li>• GLB suicides = 1104</li> </ul>	<ul style="list-style-type: none"> <li>• Only 10% as opposed to 30% of completed suicides should be GLB</li> <li>• Non-GLB suicides constant = 2577</li> <li>• Total suicides if GLB and non-GLB equivalent = 2863</li> <li>• GLB suicides = 286 (instead of 1104 GLB suicides, there should be 286 so difference is 818)</li> <li>• <b>Extra deaths = 818</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>GLB suicide rate 6 times the non-GLB rate</b></li> <li>• Total suicide rate = 0.00012275</li> <li>• Non-GLB suicide rate = 0.00008183</li> <li>• Non-GLB suicides = 2209</li> <li>• GLB suicide rate = 0.00049101</li> <li>• GLB suicides = 1472</li> </ul>	<ul style="list-style-type: none"> <li>• GLB and non-GLB suicides rates should be equivalent</li> <li>• Non-GLB suicides constant = 2209</li> <li>• Total suicides if GLB and non-GLB rates equivalent = 2454</li> <li>• GLB suicides = 245 (instead of 1104 GLB suicides, there should be 245, so difference is 859)</li> <li>• <b>Extra deaths = 859</b></li> </ul>

Note: On the surface, it seems that the estimated number of suicides as related to homophobia should be greater when homosexuality’s base rate is higher. However, this is not the case. The reason that the 5% base rate estimates are greater than the 10% base rate estimates has to do with the method of estimating the number of GLB suicides per year and the calculation of how many GLB suicides there would be if GLB and non-GLB suicide rates were equivalent. One estimate of GLB suicide rates stated that 30% of all suicides are GLB. Without homophobia, GLB would account for either 5% or 10% of suicides based on the 5% and 10% base rates of homosexuality estimates. When calculating how many GLB suicides there would be, then, the 5% base rate estimate results in fewer GLB suicides than the 10% base rate estimate (136 for 5% and 245 for 10%). Therefore, the difference between how many GLB suicides there are estimated to be now (1104) compared to how many there would be without homophobia is greater for the 5% base rate estimate than for the 10% base rate (1104 - 136 = 968 for 5% base rate; 1104 - 245 = 859 for 10% with base rate). Put another way, the more GLB people there are, the greater the percentage of suicides they will account for, and so there will be fewer “extra” suicides because of homophobia.

**Table 14. Homophobia and Smoking**

Basic Statistics (1999)	Estimated Smoking Rates (1999)	Estimated Annual Costs (1999)
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 5%</b></li> <li>• Total adult Canadian population = 24,300,000</li> <li>• Total non-GLB adult population = 23,085,000</li> <li>• Total GLB adult population = 1,215,000</li> <li>• Total smoking related deaths = 45,000</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Total smoking rate = 0.2500</b></li> <li>• Total smokers = 6,075,000</li> <li>• Non-GLB smoking rate = 0.2431</li> <li>• Non-GLB smokers = 5,613,300</li> <li>• GLB smoking rate = 0.3800</li> <li>• GLB smokers = 461,700</li> </ul>	<ul style="list-style-type: none"> <li>• Smoking rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB smokers constant = 5,613,300</li> <li>• Total smokers if GLB and non-GLB rates equivalent = 5,908,667</li> <li>• GLB smokers = 295,367 (instead of 461,700, there should be 295,367, so difference is 166,333)</li> <li>• <b>Extra deaths = 1232 (Without the extra 166,333 GLB smokers, the number of annual deaths would be 43,768)</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>GLB smoking rate 1.6 times the non-GLB rate</b></li> <li>• Total smoking rate = 0.2500</li> <li>• Total smokers = 6,075,000</li> <li>• Non-GLB smoking rate = 0.2427</li> <li>• Non-GLB smokers = 5,602,730</li> <li>• GLB smoking rate = 0.3883</li> <li>• GLB smokers = 472,270</li> </ul>	<ul style="list-style-type: none"> <li>• Smoking rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB smokers constant = 5,602,730</li> <li>• Total smokers if GLB and non-GLB rates equivalent = 5,898,611</li> <li>• GLB smokers = 294,881 (instead of 472,270, there should be 294,881, so difference is 177,389)</li> <li>• <b>Extra deaths = 1314 (Without the extra 177,389 GLB smokers, the number of annual deaths would be 43,686)</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 10%</b></li> <li>• Total adult Canadian population = 24,300,000</li> <li>• Total non-GLB adult population = 21,870,000</li> <li>• Total GLB adult population = 2,430,000</li> <li>• Total smoking related deaths = 45,000</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Total smoking rate = 0.2500</b></li> <li>• Total smokers = 6,075,000</li> <li>• Non-GLB smoking rate = 0.2356</li> <li>• Non-GLB smokers = 5,151,600</li> <li>• GLB smoking rate = 0.3800</li> <li>• GLB smokers = 923,400</li> </ul>	<ul style="list-style-type: none"> <li>• Smoking rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB smokers constant = 5,151,600</li> <li>• Total smokers if GLB and non-GLB rates equivalent = 5,724,108</li> <li>• GLB smokers = 572,508 (instead of 923,400, there should be 572,508, so difference is 350,892)</li> <li>• <b>Extra deaths = 2599 (Without the extra 350,892 GLB smokers, the number of annual deaths would be 42,401)</b></li> </ul>

**Table 15. Homophobia and Alcohol Abuse**

Basic Statistics (2000)	Estimated Alcohol Abuse Rates (2000)	Estimated Annual Costs (2000)
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 5%</b></li> <li>• Total adult Canadian population = 24,879,199</li> <li>• Total non-GLB adult population = 23,635,239</li> <li>• Total GLB adult population = 1,243,960</li> <li>• Total alcohol related deaths = 6930</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Total alcohol abuse rate = 0.05</b></li> <li>• Total alcohol abusers = 1,243,960</li> <li>• Non-GLB alcohol abuse rate = 0.0437</li> <li>• Non-GLB alcohol abusers = 1,032,487</li> <li>• GLB alcohol abuse rate = 0.1700</li> <li>• GLB alcohol abusers = 211,473</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol abuse rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB alcohol abusers constant = 1,032,487</li> <li>• Total alcohol abusers if GLB and non-GLB rates equivalent = 1,086,848</li> <li>• GLB alcohol abusers = 54,361 (instead of 211,473, there should be 54,361, so difference is 157,112)</li> <li>• <b>Extra deaths = 875 (Without the extra 157,112 GLB alcohol abusers, the number of annual deaths would be 6055)</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>GLB alcohol abuse rate 1.7 times the non-GLB rate</b></li> <li>• Total alcohol abuse rate = 0.05</li> <li>• Total alcohol abusers = 1,243,960</li> <li>• Non-GLB alcohol abuse rate = 0.0483</li> <li>• Non-GLB alcohol abusers = 1,141,799</li> <li>• GLB alcohol abuse rate = 0.0821</li> <li>• GLB alcohol abusers = 102,161</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol abuse rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB alcohol abusers constant = 1,141,799</li> <li>• Total alcohol abusers if GLB and non-GLB rates equivalent = 1,201,665</li> <li>• GLB alcohol abusers = 59,866 (instead of 102,161, there should be 59,866, so difference is 42,295)</li> <li>• <b>Extra deaths = 236 (Without the extra 42,295 GLB alcohol abusers, the number of annual deaths would be 6694)</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 10%</b></li> <li>• Total adult Canadian population = 24,879,199</li> <li>• Total non-GLB adult population = 22,391,279</li> <li>• Total GLB adult population = 2,487,920</li> <li>• Total alcohol related deaths = 6930</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Total alcohol abuse rate = 0.05</b></li> <li>• Total alcohol abusers = 1,243,960</li> <li>• Non-GLB alcohol abuse rate = 0.0367</li> <li>• Non-GLB alcohol abusers = 821,014</li> <li>• GLB alcohol abuse rate = 0.1700</li> <li>• GLB alcohol abusers = 422,946</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol abuse rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB alcohol abusers constant = 821,014</li> <li>• Total alcohol abusers if GLB and non-GLB rates equivalent = 913,067</li> <li>• GLB alcohol abusers = 92,053 (instead of 422,946, there should be 92,053, so difference is 330,893)</li> <li>• <b>Extra deaths = 1843 (Without the extra 330,893 GLB alcohol abusers, the number of annual deaths would be 5087)</b></li> </ul>

**Table 16. Homophobia and Illicit Drug Use**

Basic Statistics (2000)	Estimated Alcohol Abuse Rates (2000)	Estimated Annual Costs (2000)
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 5%</b></li> <li>• Total adult Canadian population = 24,879,199</li> <li>• Total non-GLB adult population = 23,635,239</li> <li>• Total GLB adult population = 1,243,960</li> <li>• Total illicit drug related deaths = 857</li> </ul>	<ul style="list-style-type: none"> <li>• <b>GLB illicit drug use rate 2.6 times the non-GLB rate</b></li> <li>• Total illicit drug use rate = 0.035</li> <li>• Total illicit drug users = 870,772</li> <li>• Non-GLB illicit drug use rate = 0.0324</li> <li>• Non-GLB illicit drug users = 765,957</li> <li>• GLB illicit drug use rate = 0.0843</li> <li>• GLB illicit drug users = 104,815</li> </ul>	<ul style="list-style-type: none"> <li>• Illicit drug use rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB illicit drug users constant = 765,957</li> <li>• Total illicit drug users if GLB and non-GLB rates equivalent = 806,261</li> <li>• GLB illicit drug users = 40,304 (instead of 104,815 there should be 40,304, so difference is 64,511)</li> <li>• <b>Extra deaths = 64 (Without the extra 64,511 GLB illicit drug abusers, the number of annual deaths would be 793)</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>GLB base rate = 10%</b></li> <li>• Total adult Canadian population = 24,879,199</li> <li>• Total non-GLB adult population = 22,391,279</li> <li>• Total GLB adult population = 2,487,920</li> <li>• Total illicit drug related deaths = 857</li> </ul>	<ul style="list-style-type: none"> <li>• <b>GLB illicit drug use rate 2.6 times the non-GLB rate</b></li> <li>• Total illicit drug use rate = 0.035</li> <li>• Total illicit drug users = 870,772</li> <li>• Non-GLB illicit drug use rate = 0.0302</li> <li>• Non-GLB illicit drug users = 675,599</li> <li>• GLB illicit drug use rate = 0.0784</li> <li>• GLB illicit drug users = 195,173</li> </ul>	<ul style="list-style-type: none"> <li>• Illicit drug use rates of GLB should be equivalent to non-GLB</li> <li>• Non-GLB illicit drug users constant = 675,599</li> <li>• Total illicit drug users if GLB and non-GLB rates equivalent = 750,666</li> <li>• GLB illicit drug users = 75,067 (instead of 195,173 there should be 75,067, so difference is 120,106)</li> <li>• <b>Extra deaths = 74 (Without the extra 75,067 GLB illicit drug abusers, the number of annual deaths would be 783)</b></li> </ul>

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