

# Living On the Edge

Gay Men, Depression And Risk-Taking Behaviors

By Spencer Cox  
Executive Director

The Medius Institute  
For Gay Men's Health

The Medius Institute is a non-profit organization dedicated to improving the health, well-being, and longevity of gay men.

Special thanks to Founding Sponsor Broadway Cares/Equity Fights AIDS, David Corkery and The Corkery Group, Glaxo-Smithkline, and the Richard E. Lynn and Joe Evall Foundation.

Also thanks to: Lynda Dee, Dr. Alan Downs, Dr. Anthony Gaudio, Dr. Perry Halkitis, Michael Isbell, Michael Joyner, Dr. Robert Kerzner, Jay Laudato, Mark Leidorf, Jon-David Nalley, Catherine McBride, Christopher Murray, David Nimmons, Laura Pinsky, Michele Pronko, David Richwine, Michael Shernoff, John Sirabella, Tom Viola, John Voelcker, Dr. Barbara Warren, Dr. Ron Winchell, and Mark Woodcock.

The Medius Institute for Gay Men's Health. 305 W. 45<sup>th</sup> St. Suite 4I. New York, NY 10036.

Phone: (646) 873-3550. e-mail: [mediusinstitute@gmail.com](mailto:mediusinstitute@gmail.com)

**Table of Contents:**

Executive Summary	1
Introduction	4
Gay Men and Depression	8
An Overview of Depression	10
Depression and Substance Abuse	14
Depression and Sexually Transmitted Diseases	21
Depression and HIV-positive Men	24
Discussion	27
Summary of Recommendations	31

## Executive Summary

The incidence of mood and anxiety disorders, and particularly of depression, dysthymia and generalized anxiety disorder, are substantially higher among gay men than in the population of men as a whole. The most reliable estimates suggest that gay men are about three times more likely than the general population to experience depression.

In some gay men – particularly urban gay men – there seems to be a set of risk-taking behaviors that are highly associated with each other, and with depression. These include sexual risk-taking behaviors, as measured by rates of new syphilis and HIV infections, as well as heavy substance use.

Substance use and associated risky behaviors are generally highly correlated with depression.<sup>1</sup> More than 50 percent of urban gay men report use of recreational drugs in the past six months.<sup>2</sup> Almost 20 percent say they are “frequent” users of powder drugs, including ecstasy, ketamine, and cocaine.<sup>3</sup>

Depression and related disorders, such as dysthymia and generalized anxiety disorder, are also strongly associated with gay men’s sexual risk-taking.<sup>4</sup> However, this association between depression and sexual risk is complex, and affected by a number of important contextual factors, including HIV status of self and of partner, sexual activity and role, relationship to sexual partner, and venue of sexual encounter.<sup>5,6</sup>

---

<sup>1</sup> Office of Applied Studies. (2005). *Results from the 2004 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 05-4062, NSDUH Series H-28). Rockville, MD: Substance Abuse and Mental Health Services Administration.

<sup>2</sup> Stall R, Paul JP et al. Alcohol Use, Drug Use and Alcohol-related Problems Among Men Who Have Sex With Men: The Urban Men’s Health Study. *Addiction*. 96(11). Nov 2001. p. 1589

<sup>3</sup> Stall 2001. *Ibid*.

<sup>4</sup> Koblin BA, Husnick MJ et al. Risk factors for HIV infection among men who have sex with men. *AIDS*. 2006 Mar 21;20(5):731-739.

<sup>5</sup> Martin JI & Knox J. Loneliness and sexual risk behavior in gay men. *Psychol Rep*. 1997 Dec; 81(3 Pt 1): 815-25

<sup>6</sup> Parsons JT, Halkitis PH et al. Correlates of Sexual Risk Behavior Among HIV-Positive Men Who Have Sex With Men. *AIDS Educ Prev*. 2003 Oct;15(5):383-400

The frequency of major depressive disorder was nearly twice as high in HIV-positive subjects as in HIV-negative people.<sup>7</sup> Depression has been associated with increased likelihood of unprotected intercourse in HIV-infected people<sup>8</sup> with demonstrated antiretroviral drug resistance.<sup>9</sup> However, appropriate treatment of depression in HIV-positive people is the exception rather than the norm.<sup>10</sup>

Although the links between drug use, sexual risk and depression are strong, it would be an oversimplification to say that depression “causes” the risky behavior. Instead it appears that, in gay men multiple epidemics, such as depression, drug abuse, violence and HIV, are interact to increase risk for one another: depressed people, for example, are more likely to abuse recreational drugs; drug use contributes to depression and increases rates of behavior that puts the user at risk for HIV; gay men with HIV are more likely both to be depressed and to use drugs. Dr. Ron Stall coined the term “syndemic” to describe these overlapping, mutually reinforcing epidemics. The interactions between these epidemics have potentially important implications for health promotion programs targeting gay men. More effective programs will need to address other contributing concerns, such as depression, and may include components that address a range of interacting health concerns rather than focusing exclusively on single-issue problems. Furthermore, efforts to address “root cause” issues, such as loneliness, may for gay men be the most effective ways to prevent HIV and substance abuse.

For gay men, though, depression and related psychosocial problems seem to play a central role in health, similar to that of obesity in the general population. Just as overweight people have increased risks of cardiovascular disease, diabetes and other serious illnesses, gay men with depressive disorders are at substantially increased risk for a variety of other negative health outcomes, including alcoholism, drug addiction, and HIV infection.

---

<sup>7</sup> Ciesla JA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. *Am J Psychiatry*. 2001 May;158(5):725-30.

<sup>8</sup> Parsons. *Ibid*.

<sup>9</sup> Chin-Hong PV, Deeks SG et al. High-risk sexual behavior in adults with genotypically proven antiretroviral-resistant HIV infection. *J Acquir Immune Defic Syndr*. 2005 Dec 1;40(4):463-71.

<sup>10</sup> Vitiello B, Burnam MA et al. Use of psychotropic medications among HIV-infected patients in the United States. *Am J Psychiatry*. 2003 Mar;160(3):547-54.

## Summary of Recommendations

- 1) Gay men need increased access to comprehensive mental health services.
- 2) Mental health diagnostics and services should be integrated into general medical care for gay men and fully reimbursed by insurers.
- 3) Educational campaigns should be developed to target gay men specifically with information about the symptoms of common mental health issues.
- 4) Mental health education and treatment should be integrated into substance abuse prevention.
- 5) Drug abuse prevention programs should address different patterns of and reasons for use.
- 6) Mental health education and treatment should be integrated into HIV and other STD prevention and treatment efforts.
- 7) Researchers and service providers should work together to identify the particular mental health needs of important subgroups of gay men, such as gay men in mid-life, and develop interventions tailored to their needs.
- 8) Improved mental access to mental health specialists is specifically needed for HIV-positive gay men.
- 9) Service providers should explore programs that identify multiply at-risk social networks, such as circuit party goers, and target them with a programs that address the range of overlapping, interactive risks.
- 10) Health service providers should receive ongoing training regarding the specific issues that confront gay men, and health educators need to be trained to understand the role of mental health care in gay men's overall health.

## Introduction

Since the AIDS epidemic was first identified among gay men in the early 1980s, gay men's health care and advocacy has focused almost exclusively on the prevention and treatment of HIV. Until the development in the mid-1990s of effective treatments for the disease, such a concentration made sense; in some urban areas, the HIV infection rate among gay men was estimated to approach 50 percent, and the impact of AIDS-related illness and death on gay communities cannot be overstated.<sup>1</sup> The Centers for Control and Prevention (CDC) has estimated that by the end of 1999, more than 267,500 men who have sex with men had died of AIDS in the United States.<sup>2</sup>

While rates of AIDS-related illness and death have substantially declined in the developed world over the past decade, we now face other urgent health concerns. The crisis of crystal methamphetamine use and addiction has drawn particular attention. The meth epidemic has impacted some urban gay communities in ways that are comparable to the crack epidemic among African-Americans during the 1980s.

However, as HIV becomes an increasingly manageable disease in the United States, it is important not just to move on to the latest epidemic, but to use this opportunity to create institutions that address the full range of gay men's health needs.

Some critics of current gay men's health practices have noted a "crisis of the month" mentality in which, as new health problems emerge, they become self-justifying means of imposing panic-driven restrictions on gay men's sexual and social practices.<sup>3</sup> This phenomenon may grow from the success of techniques used by early AIDS activists when the epidemic was already a full-blown crisis and the response from existing institutions – governmental, scientific, social and community – was grossly inadequate. Still, the responses to the latest crises have failed to create enduring knowledge and institutions that will provide ongoing support for gay men's health needs.

---

<sup>1</sup> Cf. Shilts R. *And The Band Played On*. Penguin. 1988

<sup>2</sup> Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Supplemental Report*. Vol. 8, No 1. 2001. Includes MSM and MSM/IDU.

<sup>3</sup> Cf. Rofes E. Eric Rofes Speaks. *To Be*. May 2 2002.

This report is an effort to understand how depression serves as a background risk modulator for gay men, contributing to other health emergencies without itself appearing to “erupt” into a crisis. The purpose is not to identify depression as yet another crisis requiring a set of immediate, short-term responses, but to suggest that unmet mental health needs are helping to create this cycle of crises. Longer-term solutions are called for.

While it is beyond the scope of this report to fully understand why depression rates seem to be significantly elevated in gay men, the question needs to be asked. Too often, the medicalization of depression has reduced this illness to simply “an imbalance of brain chemicals” that can often be treated with appropriate medications. But why, then, does depression strike gay men more frequently than straight men?

In a 2002 speech on substance abuse, psychologist Walt Odets argued against the reduction of complex behaviors to simplistic “medical” problems:

Alcohol was the first substance to which a medical model became widely applied. In the medical model's description of alcoholism, the alcoholic is *predisposed* to alcohol abuse for - possibly genetically determined - physiological or neurophysiological reasons. The *disease* is thus the *predisposition* to abuse, the famous "inability to stop after one or two drinks."... As a psychologist who daily listens to gay men explicate their feelings, I am uncomfortable with the medical model's removal of human meanings from substance use. When people do things - particularly impairing, destructive things like "careers" in crystal - it is obvious to me that there is *meaning* in the behavior.<sup>4</sup>

---

<sup>4</sup> Odets W. A Human Model for Substance Use and Abuse. A speech to the Gay Men's Health Summit, Boulder, CO. Jun 2002. Online at [http://www.waltodets.com/Presentations/A\\_Human\\_Model\\_for\\_Substance\\_Us/a\\_human\\_model\\_for\\_substance\\_us.html](http://www.waltodets.com/Presentations/A_Human_Model_for_Substance_Us/a_human_model_for_substance_us.html). Accessed Apr 2006.



Depression too does not, in general, occur spontaneously; it is a response to external events of loss, pain and frustration. It too has a "meaning." And if the overall occurrence of depression is to be lowered, if we are to prevent depression rather than merely treating it, then it will be important for us to understand why it happens and what it means.

Rather than entirely medicalizing depression, we can think of anti-depressant medications as palliative therapies that can effectively prevent or ameliorate some of the most harmful consequences of depression for gay men, but that do not address the fundamental causes of depression. We need to ask: what is the meaning of depression, and why does it happen so frequently to gay men?

It may be, for instance, that gay men develop depression because of the stress and pain associated with the homophobia we encounter in our broader society. It may also be that some gay men suffer developmentally from the need to "come out of the closet" and then to repeat certain key developmental stages in light of their identity as gay men, causing depression. Or perhaps depression in gay men is a function of the failure of the gay community to meet gay men's needs. Some men may be at particular risk for depression because of the historical and social impact of the AIDS epidemic. Recent genetic models for homosexuality could even suggest the possibility of some biological predisposition. But we need to understand why gay men have such high rates of depression rather than simply to accept it as a given. This will require a new commitment to studying and understanding gay men's lives.

Depression certainly can and should be approached through improved and expanded mental health services for gay men. We should demand mental health care from governmental and mainstream health services agencies that is sensitive and responsive to our needs. We should also insist that community health and social service agencies create and sustain high-quality mental health service programs.

However, we also need to address the problems of our own community and the ways in which it fails to meet our needs. In men who engage in the riskiest activities, one of the associations that crops up over and over again is loneliness. Loneliness tends to appear alongside depression, as though the two things were entirely distinct. In practice, depression often goes hand-in-hand with loneliness. To the extent that our communal institutions impede rather than encourage our development of friendships, intimate relationships, families and community, we will have to identify what is broken and either fix or supplement those institutions. We must, in short, engage not just with the illness of depression, but also with its meaning.

In this sense, mental health care, for gay men, should be a topic of concern as much as gay marriage or anti-discrimination laws. We need to demand that depression in gay men be studied and treated not just as an adjunct to other public health problems, but as an important health risk in its own right. We need to demand public health programs and insurance coverage to meet our mental health needs. We need to insist on access to comprehensive mental health services. And we need to confront the institutions, both outside and within the gay community, that fail to support gay men in building happy, healthy lives.

## Gay Men and Depression

Depression is one of the world's leading health challenges. Depressive disorders affect an estimated 9.5 percent of Americans ages 18 and over – about 19 million adults -- in a given year, and major depression is the leading cause of disability in the U.S.<sup>5,6</sup> Although adolescence and youth have typically been associated with the highest risks of depression, recent data suggest a large-scale shift in the period of highest risk of depression from youth to middle-age.<sup>7</sup> Depression is also associated with vast economic costs: in the U.S., for instance, depression costs employers an estimated \$44 billion each year in lost productivity.<sup>8</sup>

Adequate care for depression is infrequent: a 2001 study found that, while 83% of adults with a probable depressive or anxiety disorder saw a health care provider, only 30% received appropriate treatment. Interestingly, neither insurance nor income predicted receipt of appropriate care. However there were substantial differences in the provision of adequate care based on the type of health professional seen: 19% of patients who consulted a general practitioner received appropriate treatment, as compared to 90% of patients who saw a mental health professional.<sup>9</sup>

Depression seems to be particularly prevalent in gay men. Most researchers who have sampled gay men have concluded that the incidence of anxiety and mood disorders, and particularly of depression, dysthymia (mild, chronic depression) and generalized anxiety disorder, occur with substantially greater frequency among gay men than in the population of men as a whole (see Appendix A: The Denominator Problem for discussion of difficulties in estimating incidence in gay men). Most estimates suggest that gay men are about three times more likely than the general population to experience depression, although different estimates vary.

---

<sup>5</sup> National Institutes of Mental Health. *Depression: The Invisible Disease*. 2001 Online at <http://www.nimh.nih.gov/publicat/invisible.cfm>. Accessed Jan 6, 2006.

<sup>6</sup> National Institutes of Mental Health, 2001. *Ibid*.

<sup>7</sup> Hasin DS, Goodwin RD, Stinson FS, Grant BF. Epidemiology of major depressive disorder: results from the National Epidemiologic Survey on Alcoholism and Related Conditions. *Arch Gen Psychiatry*. 2005 Oct;62(10):1097-106.

<sup>8</sup> Stewart WF, Ricci JA et al. Cost of lost productive work time among US workers with depression. *JAMA*. 2003 Jun 18;289(23):3135-44

<sup>9</sup> Young AS, Klap R, Sherbourne CD, Wells KB. The quality of care for depressive and anxiety disorders in the United States. *Arch Gen Psychiatry*. 2001 Jan;58(1):55-61.

In the Gay Urban Men's Health Study, a household-based probability sample of men who have sex with men (MSM) in four major urban areas conducted between 1996 and 1998, the seven-day prevalence of depressive symptoms in MSM was 17.2%, which is nearly twice the rate of current depression found in all people.<sup>10,11</sup> In this study, depression among MSM was associated with a number of factors, including:

- Lack of a domestic partner
- Not identifying as gay, queer or homosexual
- Multiple episodes of antigay violence in the previous five years
- Very high levels of alienation from the gay community
- History of attempted suicide
- History of childhood abuse
- Recent sexual dysfunction.

In turn, depression is clearly linked to a variety of other risk-taking behaviors, including drug use/abuse and unprotected anal intercourse. For gay men, depression seems to play a central role in health, similar to the function of obesity in the general population; just as overweight people have increased risks of cardiovascular disease, diabetes and other serious illnesses, gay men with depressive disorders are at substantially increased risk for a variety of other negative health outcomes, including alcoholism, drug addiction, suicide and HIV infection.

### **Recommendations:**

**Gay men need increased access to comprehensive mental health services.**

**Mental health diagnostics and services should be integrated into general medical care for gay men and fully reimbursed by insurers.**

**Educational campaigns should be developed to target gay men specifically with information about the symptoms of common mental health issues.**

---

<sup>10</sup> Mills TC, Paul J et al. Distress and depression in men who have sex with men: the Urban Men's Health Study. *Am J Psychiatry*. 2004 Feb;161(2):278-85

<sup>11</sup> WebMD. Depression: Major Depression. Online at <http://www.webmd.com/content/article/62/71504.htm>. Accessed on March 29 2006

## An Overview of Depression

### **Depressive Disorders**<sup>12</sup>

A depressive disorder is a syndrome, a group of emotional, behavioral and physical symptoms that often go together, characterized by overwhelming sadness, low self-esteem, loss of pleasure and often difficulty in day-to-day functioning. A depressive disorder is different from ordinary transient sadness in its ability to limit enjoyment and participation in normal daily activities over an extended period of time. There are several depressive disorders that are distinguished by the number, duration and pattern of symptoms.

- *Major Depression*  
Major depression is an intense and persistent change in mood, with feelings of sadness, hopelessness and loss of pleasure that lasts daily for more than two weeks. A major depression is usually accompanied by other symptoms, such as changes in eating and sleeping patterns, difficulty in concentrating, and/or thoughts of suicide (see Appendix B).
- *Dysthymia*  
Dysthymia is a mild, chronic form of depression. Fewer depressive symptoms may be present, but they last for at least two years (see Appendix C). People with dysthymia experience less daily impairment of functioning, but may nonetheless feel irritable, chronically unhappy, and be unable to enjoy their lives. Dysthymia can be life-long, and may include bouts of major depression, anxiety disorder or other mental health concerns.
- *Bipolar Disorder*  
In bipolar disorder, bouts of depression alternate with periods of mania, in which the person may experience elevated mood, overinflated self-esteem, and physical agitation (see Appendix D).

---

<sup>12</sup> Definitions and descriptions from American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR (Text Revision)*. American Psychiatric Publishing. June 2004. Additional discussion from Pinsky L. Depression and HIV. TheBody.com. <http://www.thebody.com/pinf/depression.html>. Accessed online on Mar 13 2006

## **Generalized Anxiety Disorder**

Although it is not a Depressive Disorder, Generalized Anxiety Disorder (GAD) often accompanies depression in gay men.<sup>13</sup> GAD is a kind of chronic worrying, unrelated to specific causes, that is persistent and interferes with daily functioning (see Appendix E).

## **Causes**

Obviously, a depressive episode is usually brought on by environmental or situational factors, such as psychological trauma or loss. However, there may also be genetic components, as people with a family history of depression are more likely to experience depression. Nonetheless, a major depressive episode usually seems to require a painful external event as a “trigger.” Depression can also be caused by other factors, such as physical disease and by certain drugs.

Regardless of the cause, depressive disorders are associated with changes in the key brain functions, particularly in the processing of neurotransmitter chemicals such as serotonin, dopamine and norepinephrine. Most anti-depressant medications work by readjusting these changes (see *Treatment* below).

## **Gender Differences**

Depression is about twice as common in women as in men.<sup>14</sup> Although the clinical features of depression are generally similar in men and women, there may nonetheless be some differences in presentation: during a depressive episode, men may be more likely to become angry, overreactive, and aggressive,<sup>15</sup> while women report more sleep changes, fatigue, anxiety and physical symptoms such as problems with sleeping and eating.<sup>16,17</sup>

---

<sup>13</sup> Cochran SD, Mays VM, Sullivan JG. Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *J Consult Clin Psychol*. 2003 Feb;71(1):53-61.

<sup>14</sup> Office of Applied Studies. 2005. *Ibid*.

<sup>15</sup> Winkler D, Pjrek E et al. Anger Attacks in Depression – Evidence for a Male Depressive Syndrome. *Psychother Psychosom*. 2005;74(5):303-7.

<sup>16</sup> Kornstein SG, Schatzberg AF et al. Gender differences in chronic major and double depression. *J Affect Disord*. 2000 Oct;60(1):1-11.

<sup>17</sup> Carter JD, Joyce PR et al. Gender differences in the presentation of depressed outpatients: a comparison of descriptive variables. *J Affect Disord*. 2000 Dec;61(1-2):59-67.

Men are also more likely to report troubles at work than women, while women describe more impairment of their marriage.<sup>18</sup> Although women attempt suicide during depression more frequently than men, men are substantially more likely to succeed in killing themselves.<sup>19</sup>

Depression in adolescents is associated with gender differences in risk-taking behaviors. For instance, depression in boys is associated with increased risk of condom nonuse during the most recent sexual intercourse, but this is not true of girls.<sup>20</sup>

Among gay men and lesbians, gay men were more likely to experience depression, panic attacks and psychological distress than straight men or lesbians. Lesbians reported more frequent generalized anxiety disorder and drug and alcohol dependency than straight women or gay men.<sup>21,22</sup>

## **Treatments**

Psychotherapy is used in a variety of ways, including short-term and long-term treatment, as a treatment for depression. Because there are significant differences in psychotherapeutic approaches, it is often difficult to standardize these approaches in ways that would allow them to be scientifically studied. However, a recent analysis of more than 130 studies of psychotherapeutic treatment found that psychotherapy is effective for treatment of depression, increasing recovery rate and decreasing depressive symptoms.<sup>23</sup>

---

<sup>18</sup> Kornstein, 2000. *Ibid.*

<sup>19</sup> Knox KS, Caine ED. Establishing priorities for reducing suicide and its antecedents in the United States. *Am J Public Health.* 2005 Nov;95(11):1898-903. Epub 2005 Sep 29.

<sup>20</sup> Shrier LA, Harris SK, Sternberg M, Beardslee WR. Associations of depression, self-esteem, and substance use with sexual risk among adolescents. *Prev Med.* 2001 Sep;33(3):179-89.

<sup>21</sup> Cochran, 2003. *Ibid.*

<sup>22</sup> Cochran SD, Mays VM. Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. *Am J Epidemiol.* 2000 Mar 1;151(5):516-23.

<sup>23</sup> Cuijpers P, Dekker J. Psychological treatment of depression; a systematic review of meta-analyses *Ned Tijdschr Geneeskd.* 2005 Aug 20;149(34):1892-7.

In addition, the use of anti-depressant medications is now the standard of care for treatment of depression. These medications regulate the processing of neurotransmitters, and different classes of drugs affect different neurotransmitters. The main classes of antidepressants have similar efficacy, but newer medications tend to have fewer side effects.

Antidepressant medications have been shown to be effective for treatment of dysthymia and double depression,<sup>24</sup> yet fewer than one-half of patients have full recovery with a single drug. Combining psychotherapy with medication may also improve response rates.<sup>25</sup>

---

<sup>24</sup> Dysthymia co-occurring with a major depression

<sup>25</sup> Kocsis JH. New strategies for treating chronic depression. *J Clin Psychiatry*. 2000;61 Suppl 11:42-5.



## Depression and Substance Abuse

Gay men have a long and complicated relationship to substance abuse. Early studies of alcoholism in gay men, conducted in the 1970s, estimated rates of alcoholism around 30 percent.<sup>26</sup> However, these studies examined populations recruited exclusively or heavily in gay bars. More recent studies, achieving something closer to population-based estimates, have also produced more conservative estimates of the incidence of alcoholism: in the Gay Urban Men's Health study, about 12 percent of participants reported three or more alcohol-related problems and eight percent reported heavy or frequent alcohol use.<sup>27</sup> In a random phone sampling comparing alcohol use patterns in gay men to those of heterosexual men, no significant differences in the average quantity and frequency of alcohol use were observed, although gay and bisexual men were about twice as likely to be heavy drinkers or abstainers from alcohol as heterosexual men.<sup>28</sup>

The association between depression and alcohol use is also strong and bi-directional. The presence of even a few depressive symptoms increases the risk of developing alcoholism, and alcoholism is strongly predictive of depression. In addition, these increases in risk are cumulative: as the number of depressive symptoms increases, so does the risk of alcoholism; conversely, as symptoms of alcoholism increase, so does the risk of depression.<sup>29</sup>

---

<sup>26</sup> Dean L, Meyer I et al. Lesbian, gay, bisexual and transgender health: findings and concerns. *JGLMA*. 4(3). Oct 2000. p. 121

<sup>27</sup> Stall R, Paul JP et al. Alcohol Use, Drug Use and Alcohol-related Problems Among Men Who Have Sex With Men: The Urban Men's Health Study. *Addiction*. 96(11). Nov 2001. p. 1589

<sup>28</sup> Stall R & Wiley J. A comparison of alcohol and drug use patterns of homosexual and heterosexual men: the San Francisco Men's Health Study. *Drug Alcohol Depend*. 1988 Oct;22(1-2):63-73.

<sup>29</sup> A longitudinal study of the order of onset of alcohol dependence and major depression SE. Gilman, HD. Abraham, *Drug and Alcohol Dependence*, 2001, vol. 63, pp. 277--286

Recreational drug use is also frequent among gay men, and studies suggest that, in some gay men's subcultures, there is a pervasive culture of drug use. More than 50 percent of participants in the Gay Urban Mens' Health Study said they used recreational drugs.<sup>30</sup> Almost 20 percent of respondents reported recent "frequent" use of powder drugs (ecstasy, ketamine, cocaine), and 20 percent also reported recent use of multiple powder drugs (presumably there is significant overlap in these groups).<sup>31</sup>

There are also "pockets" of particularly heavy drug use within the overall gay community: among circuit party attendees, drug use is almost universal: 80-95% of attendees report drug use on circuit party weekends, with an average of four different drugs used during the party.<sup>32</sup> More than 70% report "getting high on drugs" as one of their primary reasons for attending a circuit party.<sup>33</sup>

Adolescent and young gay men appear to have particularly high rates of substance use; differences in rates of drug use between heterosexual and homosexual men in the San Francisco Men's Health Study were almost entirely attributable to increased use among young gay men. A study of 18-25 year old gay men in two southern metropolitan areas found about one in three participants reporting use of cocaine and one-third reporting use of hallucinogens.<sup>34</sup>

---

<sup>30</sup> Stall 2001. *Ibid.*

<sup>31</sup> Stall 2001. *Ibid.*

<sup>32</sup> Lee SJ, Galantater M et al. Circuit parties and patterns of drug use in a subset of gay men. *J Addict Dis.* 2003;22;47-60 and Mansbergh G, Colfax GM et al. The circuit party men's health survey: findings and implications for gay and bisexual men. *Am J Public Health.* 2001;91;953-958

<sup>33</sup> Hansberg. 2001. *Ibid.*

<sup>34</sup> Skinner WF & Otis MD. Drug and alcohol use among lesbian and gay people in a southern U.S. sample: epidemiological, comparative, and methodological findings from the Trilogy Project. *J Homosex.* 1996;30(3):59-92.

Substance use and associated risky behaviors are generally highly correlated with depression. In the 2005 National Survey on Drug Use and Health, the rate of illicit drug use in the month prior to the study was nearly twice as high among adults who had experienced a major depression in the past year (14.2 percent) as compared with adults who had not had a past-year depression (7.3 percent).<sup>35</sup> Substance use, in turn, increases the risk of depression by about three times.<sup>36</sup>

Current substance abuse disorder (the DSM-IV diagnostic category for problematic drug use) occurs in HIV+ gay men about as often as in HIV- gay men. However the risk of having a substance abuse disorder at some point in their lives is substantially higher for HIV+ men.<sup>37</sup> Current substance use disorder in HIV+ men is associated with a dramatic increase in depression, distress and diminished quality of life as compared to HIV- men without a substance use disorder.<sup>38</sup>

In drug users, depression is associated both with HIV risk and with ongoing drug use: for instance, greater severity of depression is associated with greater frequency of injection risk behavior in depressed injection drug users, and opiate users suffering from depression were more likely to share injection equipment and to use cocaine.<sup>39,40</sup> Higher depressive symptom scores predict lower likelihood of abstinence after discharge from outpatient substance abuse treatment programs.<sup>41</sup>

---

<sup>35</sup> Office of Applied Studies. 2005. *Ibid*.

<sup>36</sup> Agosti V and Levin FR. The effects of alcohol and drug dependence on the course of depression. *Am J Addict*. 2006 Jan-Feb; 15(1):71-5

<sup>37</sup> Ferrando S, Goggin K et al. Substance use disorders in gay/bisexual men with HIV and AIDS. *Am J Addict*. 1998 Winter; 7(1):51-60

<sup>38</sup> Ferrando. 1998. *Ibid*.

<sup>39</sup> Stein MD, Solomon DA, Herman DS, Anderson BJ, Miller I. Depression severity and drug injection HIV risk behaviors. *Am J Psychiatry*. 2003 Sep;160(9):1659-62.

<sup>40</sup> Wild TC, el-Guebaly N, Fischer B, Brissette S, Brochu S, Bruneau J, Noel L, Rehm J, Tyndall M, Mun P. Comorbid depression among untreated illicit opiate users: results from a multisite Canadian study. *Can J Psychiatry*. 2005 Aug;50(9):512-8.

<sup>41</sup> Dodge R, Sindelar J, Sinha R. The role of depression symptoms in predicting drug abstinence in outpatient substance abuse treatment. *J Subst Abuse Treat*. 2005 Mar;28(2):189-96.

High-risk sexual behavior is not the only form of risk-taking associated with drug use. In 1999, a survey of circuit party attendees found that one in four participants reported having passed out, needing medical care, or being unable to care for themselves in the previous year due to drug overuse. Of those who'd experienced such an episode, the average number of drug overuse episodes in the past year was 2.4 times. Gamma-Hydroxybuterate (GHB), a depressant used as a "club drug," was the most common drug associated with drug overuse episodes, accounting for more than half of the episodes; alcohol and ketamine (a veterinary sedative) were also commonly associated with overuse.<sup>42</sup>

---

<sup>42</sup> Colfax G, Guzman R et al. The Circuit Party Men's Health Survey. HIV Research Section, San Francisco Department of Health. 1999. Accessed online at [http://www.caps.ucsf.edu/capsweb/ppt/Colfaxppt\\_files/frame.htm](http://www.caps.ucsf.edu/capsweb/ppt/Colfaxppt_files/frame.htm) on May 26 2006

*Example: The Methamphetamine Epidemic and STD/HIV Risk*

Of particular concern is the widespread use of crystal methamphetamine, a highly addictive form of speed that has swept through the gay community. In general, methamphetamine use is thought to be 5-10 times more common among urban gay and bisexual men than in the general population.<sup>43</sup> About 20 percent of gay men in San Francisco report some meth use, and about 15 percent of gay men in New York.<sup>44</sup> In Chicago, nearly one in five gay men who reported using meth said they took the drug weekly, which offers some suggestion of the drug's strong addictive power.<sup>45</sup>

As compared to other club drugs, methamphetamine addiction is particularly difficult to treat; methamphetamine users are less likely to complete treatment than other club drug addicts, and report more problems both at admission and after treatment.<sup>46</sup>

---

<sup>43</sup> Shoptaw S. Methamphetamine use in urban gay and bisexual populations. *Top HIV Med.* 2006 May-Jun;14(2):84-7.

<sup>44</sup> HIV/AIDS Surveillance Program. STD/HIV/AIDS Surveillance Report. Chicago Department of Public Health. Summer 2005. Online at [http://egov.cityofchicago.org/webportal/COCWebPortal/COC\\_EDITORIAL/AIDSChicagoSummer05.pdf](http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/AIDSChicagoSummer05.pdf). Accessed Feb 15, 2006

<sup>45</sup> HIV/AIDS Surveillance Program, 2005. *Ibid.*

<sup>46</sup> Maxwell JC & Spence RT. Profiles of Club Drug Users in Treatment. *Subst Use Misuse.* 2005;40(9-10):1409-26.

Use of meth is strongly associated with risky sexual behavior, and with HIV infection.<sup>47,48</sup> Meth users have many more casual sex partners, and more episodes of unprotected receptive anal intercourse.<sup>49</sup> In a recent study from the Los Angeles Gay & Lesbian Center, which offers HIV testing, nearly one-third of recent positive tests in gay men were associated with meth use.<sup>50</sup> Increased levels of risky behavior are associated with both frequent and occasional meth use.<sup>51</sup>

Meth is taken in a number of ways, including snorting, smoking, injecting, swallowing and rectal insertion. Users tend to start as binge users, using for relatively limited periods at a time, but may progress rapidly to chronic use. However, both binge and chronic meth use are associated with increased HIV risks.

---

<sup>47</sup> Buchacz K, McFarland W et al. Amphetamine Use is Associated with Increased HIV Incidence Among Men Who Have Sex With Men in San Francisco. *AIDS*. 2005 Sep 2; 19(13):1423-4.

<sup>48</sup> Peck JA, Shoptaw S et al. HIV-Associated Medical, Behavioral, and Psychiatric Characteristics of Treatment-Seeking, Methamphetamine-Dependent Men Who Have Sex With Men. *J Addict Dis*. 2005; 24(3):115-32

<sup>49</sup> HIV/AIDS Surveillance Program, 2005. *Ibid*.

<sup>50</sup> Amezola De Herrera, Paula. Amphetamine ('meth') Use Trends at the Los Angeles Gay & Lesbian Center's HIV Counseling and Testing Program from 2001 to 2004. Abstract presented at the CDC 2005 National HIV Prevention Conference on Jun 17 2005

<sup>51</sup> Colfax G, Coates TJ et al. Longitudinal patterns of Methamphetamine, Popper (amyl nitrite), and Cocaine use and High-risk Sexual Behavior Among a Cohort of San Francisco Men Who Have Sex with Men. *J Urban Health*. 2005 Mar;82(1 Suppl 1):i62-70. Epub 2005 Feb 28

There are significant regional differences in drug use patterns among gay men.<sup>52</sup> There also seem to be differences in use patterns and risks based on location of use.<sup>53</sup> For instance, different drug use patterns are seen when men use commercial sex establishments as compared to public sex environments (such as “cruising parks”).<sup>54</sup> There are important psychological differences between gay men who “binge” on meth users as compared to “chronic” users.<sup>55</sup> HIV-negative and HIV-positive men report differences in their reasons for using meth.<sup>56</sup> For instance, meth is sometimes used to combat symptoms of depression and HIV, such as chronic fatigue.<sup>57</sup>

These data suggest that different people use different drugs for different reasons in different settings, and that public health programs need to understand and address these differences.<sup>58</sup>

For instance, while meth is sometimes used as a “club drug,” usually in conjunction with ecstasy, ketamine, GHB and cocaine, it is frequently used as an adjunct to sexual activity. As one user described the experience, “The difference between sex with crystal and sex without it is like the difference between Technicolor and black-and-white...Once you have sex with crystal, it’s hard to imagine having it any other way.”<sup>59</sup>

---

<sup>52</sup> Hirshfield S, Remien RH et al. Substance use and high-risk sex among men who have sex with men: a national online study in the USA. *AIDS Care*. 2004 Nov;16(8):1036-47.

<sup>53</sup> Halkitis PN, Green KA et al. Longitudinal investigation of methamphetamine use among gay and bisexual men in New York City: findings from Project BUMPS. *J Urban Health*. 2005 Mar;82(1 Suppl 1):i18-25. Epub 2005 Feb 28

<sup>54</sup> Parsons JT & Halkitis PN. Sexual and drug-using practices of HIV-positive men who frequent public and commercial sex environments. *AIDS Care*. 2002 Dec;14(6):815-26.

<sup>55</sup> Halkitis PN & Shrem MT. Psychological differences between binge and chronic methamphetamine using gay and bisexual men. *Addict Behav*. 2006 Mar;31(3):549-52. Epub 2005 Jun 20.

<sup>56</sup> Halkitis. 2003. *Ibid*.

<sup>57</sup> Shoptaw 2006. *Ibid*.

<sup>58</sup> For a fascinating discussion of this phenomenon, see Green IA & Halkitis Pn. Crystal methamphetamine and sexual sociality in an urban gay subculture: An elective affinity. *Cult Sex Health*. 2006 Jul-Aug;8(4):317-33

<sup>59</sup> Specter M. Higher Risk. *The New Yorker*. May 23, 2005

Dr.s Perry Halkitis and Jeffrey Parsons have done outstanding work in understanding the psychosocial reasons for meth use and other associated risky behaviors. For instance, overall frequency of methamphetamine use is related to avoiding unpleasant emotion, physical discomfort and conflict with others, as well as enjoying pleasant times with others.<sup>60</sup>

The picture that emerges is one in which methamphetamine serves some gay men as a facilitator of social interactions. For men who are already significantly lonely, the benefits of meth-facilitated interactions may make risk avoidance extremely difficult. As Dr. Halkitis summarized his findings, "The implication is that these may be men who are so dependent on this drug to be with other men that when they are with those men they lose all inhibitions."

The specifics of meth use are probably important to users, and understanding why an individual or social group uses meth is important when creating prevention programs.

### **Recommendations**

**Mental health education and treatment should be integrated into substance abuse prevention.**

**Drug abuse prevention programs should address different patterns of and reasons for use.**

---

<sup>60</sup> Halkitis P & Shrem J. Psychological differences between binge and chronic methamphetamine using gay and bisexual men. *Addict Behav.* 2006 Mar;31(3):549-52. Epub 2005 Jun 20



## Depression and Sexually Transmitted Diseases

The relationship between depression and sexual risk-taking is, on the one hand, clearly established, and on the other hand difficult to describe in detail. Clearly depressive disorders, including dysthymia and related negative mood states, are strongly associated with sexual risk-taking in a variety of populations, including gay men.<sup>61,62,63,64,65,66</sup> However, this association between depression and risk-taking is modified by a number of important contextual factors, including HIV status of self and of partner, sexual activity and role, and relationship to sexual partner. For instance, one study of urban gay men found that men who reported high levels of loneliness were more likely to also report unprotected sex with nonprimary partners. Conversely, men who reported unprotected sex with primary partners reported *lower* levels of loneliness.<sup>67</sup>

The shifting association of loneliness to risk based on partner relationships suggest that the same act – unprotected anal intercourse – may have different relationships to mental health state depending on the context. Furthermore, the effects of depression may be mediated by its impact on other factors, such as drug use (people with depression are more likely to use, and the use precipitates the high-risk behavior) and serostatus.

---

<sup>61</sup> Shrier LA, Harris SK, Beardslee WR. Temporal associations between depressive symptoms and self-reported sexually transmitted disease among adolescents. *Arch Pediatr Adolesc Med.* 2002 Jun;156(6):599-606.

<sup>62</sup> Desquilbet L, Deveau C, et al. Increase in at-risk sexual behaviour among HIV-1-infected patients followed in the French PRIMO cohort. *AIDS.* 2002 Nov 22;16(17):2329-33.

<sup>63</sup> Sterk CE, Theall KP et al. The Impact of Emotional Distress on HIV Risk Reduction Among Women. *Subst Use Misuse.* 2006;41(2):157-73.

<sup>64</sup> Stall, 2002. *Ibid.*

<sup>65</sup> Bancroft J, Janssen E, Strong D, Vukadinovic Z.. The relation between mood and sexuality in gay men. *Arch Sex Behav.* 2003 Jun;32(3):231-42.

<sup>66</sup> Koblin BA, Husnick MJ et al. Risk factors for HIV infection among men who have sex with men. *AIDS.* 2006 Mar 21;20(5):731-739.

<sup>67</sup> Martin JI & Knox J. Loneliness and sexual risk behavior in gay men. *Psychol Rep.* 1997 Dec; 81(3 Pt 1): 815-25

Recent data suggest that gay men are often engaging in such “harm reduction” strategies as “serosorting” (choosing partners of the same HIV serostatus with the goal of having unprotected sex).<sup>68,69</sup> While there is some evidence that this strategy may be effective, depression and related problems may undermine its effectiveness: in a group of HIV-positive men who have sex with men, depression was one of five psychosocial variables that reliably distinguished between men who had engaged in high risk sex with partners of unknown serostatus and those who did not. Other variables were potentially related to depressive symptoms included age, avoidant coping, loneliness and impulsivity.<sup>70</sup>

Interestingly, higher rates of unprotected sex may be associated with chronic, low-grade depression than with a major depression.<sup>71</sup> This may be due to the increased likelihood of sexual dysfunction with major depressive disorder.

It is clear from these data that depression and related negative mood states affect rates of unprotected sex, but the relationship is not a straightforward causal one. Rather, depression seems to be one contributing factor in a complex chain of factors and decisions that lead to sexual risk-taking.

This observation is important as we try to develop programs to limit the resurgence of sexually transmitted diseases, including HIV, among gay men who have been saturated with HIV prevention information. In addition to the considerable risk to populations that have traditionally been difficult to reach with HIV prevention information, such as young gay men and gay men of color, recent data suggest that there is also a resurgence of high-risk behavior among men who have traditionally been at the forefront of HIV risk reduction.

---

<sup>68</sup> Parsons JT, Halkitis PN et al. Correlates of sexual risk behaviors among HIV-positive men who have sex with men. *AIDS Educ Prev* 15(5), 383-400, 2003

<sup>69</sup> Murphy D. A good report on AIDS and some credit the web. *New York Times*. Aug 18 2005

<sup>70</sup> Semple SJ, Patterson TL & Grant I. Psychosocial predictors of unprotected anal intercourse in a sample of HIV positive gay men who volunteer for a sexual risk reduction intervention. *AIDS Educ Prev*. 2000 Oct; 12(5):416-30

<sup>71</sup> Rogers G, Curry M, et al. Depressive disorders and unprotected casual anal sex among Australian homosexually active men in primary care. *HIV Med*. 2003 Jul;4(3):271-5

Among urban gay men, syphilis rates have more than tripled since 2000. Nationally, the rise in syphilis rates among gay men has been associated with increased age and with diagnosis in a private doctor's office (as opposed to a public clinic).<sup>72</sup> In New York City, syphilis in gay men was also associated with increased income, and residence in one of the "gay ghettos" along the west side of Manhattan. The syphilis epidemics in other major cities, including Los Angeles, Chicago, San Francisco and Washington, DC follow a similar pattern.<sup>73</sup>

Clearly these populations of men – older, more affluent, more likely to be Caucasian and strongly connected to gay community institutions -- do not lack for information about how to avoid transmitting HIV. Understanding in detail the complex set of psychosocial variables that affect gay men's sexual choices would be helpful. But until then, we can observe the important contribution of depression to risky sexual behavior, and conclude that, at least for some groups of gay men, straightforward information-based prevention services ("a poster, a condom and a brochure") are probably not responsive to actual prevention needs.

## **Recommendation**

**Mental health education and treatment should be integrated into HIV and other STD prevention and treatment efforts.**

**Researchers and service providers should work together to identify the particular mental health needs of important subgroups of gay men, such as gay men in mid-life, and develop interventions tailored to their needs.**

---

<sup>72</sup> National Center for HIV, STD and TB Prevention. *Sexually Transmitted Disease Surveillance: 2004 Supplement*. Centers for Disease Control and Prevention, Department of Health and Human Services. December 2005.

<sup>73</sup> Blank, 2003. *ibid*.

## Depression and HIV-positive Men

Depressive disorders occur with great frequency in HIV-positive people generally. The frequency of major depressive disorder was nearly twice as high in HIV-positive subjects as in HIV-negative people, although no clear relationship was found between HIV status and dysthymia.<sup>74</sup> Rates of depression do not appear to be related to the disease stage of infected individuals, but are strongly related to personality style, having a past psychiatric history and current stressful psychosocial situation. This suggests that, although certain anti-HIV drugs may be associated with depression, there is not a distinct “organic” depression caused directly by HIV.<sup>75,76</sup>

Since the development of effective anti-HIV therapies, overall rates of depression among HIV-positive persons may be declining.<sup>77</sup> However, due to the association between depression and HIV risk in uninfected men, it is to be expected that occurrence of depressive symptoms will remain high.

Despite the amelioration of the consequences of HIV infection, there are a number of other factors that may contribute to depression in HIV-infected men. While the growth of sero-sorting may offer some HIV-positive men a sense of empowerment, to others it may contribute to feelings of separation and stigmatization.<sup>78</sup>

Furthermore, for men who have been infected with HIV for most of their adult lives, there may be practical issues associated with their improved prognosis; men who retired to disability due to illness, for instance, may find reintegration into the work force to be an insurmountable hurdle. Additionally, illness may have made retirement planning and long-term savings impossible, presenting the risk of poverty with aging. These factors may contribute to the risk of depression.

---

<sup>74</sup> Ciesla JA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. *Am J Psychiatry*. 2001 May;158(5):725-30.

<sup>75</sup> Sustiva Package Insert

<sup>76</sup> Judd F, Komiti A. Nature of depression in patients with HIV/AIDS. *Aust N Z J Psychiatry*. 2005 Sep;39(9):826-32.

<sup>77</sup> Alciati A, Starace F, Scaramelli B, Campaniello M, Adriani B, Mellado C, Cargnel A. Has there been a decrease in the prevalence of mood disorders in HIV-seropositive individuals since the introduction of combination therapy? *Eur Psychiatry*. 2001 Dec;16(8):491-6.

<sup>78</sup> Courtenay-Quirk C, Wolitski RJ, Parsons JT, Gomez CA; Seropositive Urban Men's Study Team. Is HIV/AIDS stigma dividing the gay community? Perceptions of HIV-positive men who have sex with men. *AIDS Educ Prev*. 2006 Feb;18(1):56-67.

Depression in HIV-positive men has been associated with the increased likelihood of unprotected receptive anal intercourse.<sup>79</sup> More urgently, depression has been associated with increased likelihood of unprotected intercourse in HIV-infected people with demonstrated antiretroviral drug resistance.<sup>80</sup>

Depression is also associated with faster rates of HIV disease progression. In a group of HIV-infected men and women, both CD4+ cell decline and HIV viral load increase were predicted by depression rates at baseline.<sup>81,82</sup> Some of this effect is related to decreased adherence to medication associated with depression, and treatment adherence has been shown to improve when depression in HIV-infected patients is treated.<sup>83</sup> However there also seems to be an effect of depression on progression of HIV disease that is unrelated to non-adherence.<sup>84,85</sup>

Depression and related psychological states may also be related to some apparent "symptoms" of HIV disease; a recent study found that fatigue in HIV-infected patients was most strongly associated with psychological factors and not with disease stage or with anti-HIV therapy.<sup>86</sup> Depression also has been shown to profoundly affect all aspects of quality of life in HIV-infected patients.<sup>87</sup>

---

<sup>79</sup> Parsons JT, Halkitis PN et al. Correlates of sexual risk behaviors among HIV-positive men who have sex with men. *AIDS Educ Prev.* 2003 Oct; 15(5):383-400

<sup>80</sup> Chin-Hong PV, Deeks SG et al. High-risk sexual behavior in adults with genotypically proven antiretroviral-resistant HIV infection. *J Acquir Immune Defic Syndr.* 2005 Dec 1;40(4):463-71.

<sup>81</sup> Ironson G, O'Cleirigh C et al. Psychosocial factors predict CD4 and viral load change in men and women with human immunodeficiency virus in the era of highly active antiretroviral treatment. *Psychosom Med.* 2005 Nov-Dec;67(6):1013-21.

<sup>82</sup> Sledjeski EM, Delahanty DL, Bogart LM. Incidence and impact of posttraumatic stress disorder and comorbid depression on adherence to HAART and CD4+ counts in people living with HIV. *AIDS Patient Care STDS.* 2005 Nov;19(11):728-36.

<sup>83</sup> Yum LW, Maravi M et al. Antidepressant treatment improves adherence to antiretroviral therapy among depressed HIV-infected patients. *J Acquir Immune Defic Syndr.* 2005 Apr 1;38(4):432-8.

<sup>84</sup> Sledjeski. 2005. *Ibid.*

<sup>85</sup> Bounhik AD, Preau M et al. Depression and clinical progression in HIV-infected drug users treated with highly active antiretroviral therapy. *Antivir Ther.* 2005;10(1):53-61.

<sup>86</sup> Henderson M, Safa F et al. Fatigue among HIV-infected patients in the era of highly active antiretroviral therapy. *HIV Med.* 2005 Sep;6(5):347-52.

<sup>87</sup> Jia H, Uphold CR et al. Health-related quality of life among men with HIV infection: effects of social support, coping, and depression. *AIDS Patient Care STDS.* 2004 Oct;18(10):594-603.

Although anti-depressant medications are effective in treating HIV-associated depression,<sup>88</sup> the drugs are often underutilized. In a large-scale study of HIV positive patients receiving medical care, only 42.3% of persons with a diagnosis of major depression or dysthymia reported receiving an anti-depressant, and 34.3% reported receiving anti-anxiety medication.<sup>89</sup> This suggests the inadequacy of current mental health care for this high-need population.

### Recommendation

**Improved mental access to mental health specialists is specifically needed for HIV-positive gay men.**

---

<sup>88</sup> Himelhoch S, Medoff DR. Efficacy of antidepressant medication among HIV-positive individuals with depression: a systematic review and meta-analysis. *AIDS Patient Care STDS*. 2005 Dec;19(12):813-22.

<sup>89</sup> Vitiello B, Burnam MA et al. Use of psychotropic medications among HIV-infected patients in the United States. *Am J Psychiatry*. 2003 Mar;160(3):547-54.

## Discussion and Recommendations

Gay men are burdened with high levels of psychosocial challenges: the costs of accommodation to a culture that institutionalizes its ambivalence about homosexuality can be measured in elevated risks for addiction, depression, smoking, partner violence and other self-harming activities. Like adolescent girls, gay men are at the center of an intense set of rapidly-changing cultural norms and expectations which not only impact our health and well-being in important and sometimes dangerous ways, but also deeply affect the ways in which we relate to ourselves and others. Understanding the nature of these challenges and the ways in which they make our lives more difficult, is vital if we are going to build programs and institutions that support gay men in living happier and healthier lives.

In some gay men – particularly urban gay men – there seems to be a set of risk-taking behaviors that are highly associated with each other. These include sexual risk-taking behaviors, as measured by rates of new syphilis and HIV infections, as well as heavy substance use – the crystal meth epidemic is only one example of the overall high rate of frequent substance use and polydrug use among gay men. In turn, these risk-taking behaviors are strongly associated with depression. However, the nature of these associations has not been clearly characterized. The psychologist Walt Odets has written:

Epidemiology can talk only of associations, *not causes* and we do not know, as one example, if gay men have unprotected sex because they use crystal; if gay men use crystal to allow themselves otherwise forbidden unprotected sex; or if certain gay men both use crystal and have unprotected sex for other, unknown reasons - depression being one obvious example.<sup>90</sup>

---

<sup>90</sup> Odets, 2002. *Ibid.*

In the complicated field of behavioral research, it is easy to show that different behaviors often go together, but difficult to determine *why* these behaviors are associated. For instance, does depression cause substance abuse? Or the other way around? Or both?

Researchers tend to look at relationships over time to determine causality – basically, we ask “Which comes first?” But often the effects go two or even three ways. In adolescent girls, for example, there are complex relationships among depression, bulimia and substance abuse: depressive symptoms predict risk of bulimia but not substance abuse, and bulimia predicts risks of developing depressive symptoms but not substance abuse. Substance abuse, however, predicts both development of depressive symptoms and bulimia.<sup>91</sup> Similarly, in adults, heavy drinking is a risk factor for depression, and depression is a risk factor for heavy drinking.<sup>92</sup>

One way to understand these complex interactions is through the study of “syndemics.” Dr. Ron Stall, who has been at the forefront of efforts to identify and understand the health challenges facing gay men, coined the term “syndemic” to describe a set of multiple epidemics that overlap and mutually reinforce one another.

In one study, Dr. Stall looked at the convergence of risk associated with four psychosocial health problems, and found very high levels of each among gay men:

- **Childhood sexual abuse**
- **Multiple drug use, defined as current use of 3+ drugs**
- **Depression**
- **Partner Violence**

Then researchers looked at the way in which those problems combined to affect risk of HIV infection and risky sexual behavior. The more of these

---

<sup>91</sup> Stice E, Burton EM, Shaw H. Prospective relations between bulimic pathology, depression, and substance abuse: unpacking comorbidity in adolescent girls. *J Consult Clin Psychol.* 2004 Feb;72(1):62-71.

<sup>92</sup> Tjepkema M. Alcohol and illicit drug dependence. *Health Rep.* 2004;15 Suppl:9-19.



psychosocial health problems the men had, the more likely they were to be infected with HIV and/or to practice high-risk sexual behaviors:

<b>Number of Health Problems and Vulnerability to HIV in Men Who Have Sex With Men<sup>93</sup></b>					
<b># of Health Problems</b>	0 (n=1392)	1 (n=812)	2 (n=341)	3-4 (n=129)	Z Test (p value)
<b>% HIV+</b>	13%	20.9%	27.2%	22.4%	0.001
<b>% w/ Sex Risk</b>	7.1%	11.2%	15.8%	22.5%	0.001

This suggests that these “multiple epidemics” – depression, drug abuse, violence and HIV – are mutually reinforcing: depressed men, for instance are more likely to abuse recreational drugs; drug use contributes to depression and to behavior that puts the user at risk for HIV; gay men with HIV are more likely both to be depressed and to use drugs.<sup>94</sup>

By understanding the mutual reinforcement of this syndemic, we can begin to understand why it is so difficult to develop effective programs targeting only one of the risk behaviors, and can envision the ways in which multiple interventions targeting different problems might combine to be more effective than, for example, an HIV prevention program alone.

With the resurgent interest in addressing gay men’s health, too often new programs have replicated the historical focus on HIV as gay men’s primary health challenge. For instance, many meth programs focus mainly on reducing the risk of HIV among meth users. However, the burden of drug use and depression among gay men is startlingly high, and the associated risks go far beyond HIV. More effective programs will need to address other contributing concerns, such as depression, and may include components that address a range of interacting health concerns rather than focusing exclusively on single-issue problems. Furthermore, efforts to address

<sup>93</sup> Stall R, Mills TC et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *Am J Public Health*. 2003 Jun;93(6):939-42.

<sup>94</sup> Stall. 2002 *Ibid*.

“root cause” issues, such as loneliness, may for gay men be the most effective ways to prevent HIV and substance abuse.

## Recommendations

**Service providers should explore programs that identify multiply at-risk social networks, such as circuit party goers, and target them with a programs that address the range of overlapping, interactive risks.**

**Health service providers should receive ongoing training regarding the specific issues that confront gay men, and health educators need to be trained to understand the role of mental health care in gay men's overall health.**

## Summary of Recommendations

- 1) **Gay men need increased access to comprehensive mental health services.** Given the high prevalence of depression, and its association with high-risk behavior, mental health services should be regarded as a central part of gay men's healthcare.
- 2) **Mental health diagnostics and services should be integrated into general medical care for gay men.** Routine screening to detect mental health concerns common in gay men should be routinely incorporated into gay men's primary care. Appropriate follow-up and specialty care should be available as needed and fully reimbursed.
- 3) **Educational campaigns should be developed to target gay men specifically with information about the symptoms of common mental health issues.** Too often, symptoms of depression and anxiety become normative for gay men, and go unnoticed until clinical dysfunction has become severe. Aggressive education programs are needed to alert gay men to key mental health concerns.
- 4) **Mental health education and treatment should be integrated into substance abuse prevention.** While most addiction treatment involves mental health care, the strong association of substance abuse and depression suggests that mental health care is also an important component of drug abuse prevention efforts.
- 5) **Drug abuse prevention programs should address different patterns of and reasons for use.** People use different drugs for different reasons in different settings: the specifics of meth use are important to users, and public health programs need to understand these differences and to address them in prevention programs.
- 6) **Mental health education and treatment should be integrated into HIV prevention efforts.** The substantial contribution of depression and depressive disorders to gay men's sexual risk-taking suggests that mental health care is crucial for reducing rates of HIV and other STDs.
- 7) **Researchers and service providers should work together to identify the particular mental health needs of important subgroups of gay men, such as gay men in mid-life, and develop interventions tailored to their needs.** For middle-aged gay men who have been saturated with safer sex campaigns throughout their adult lives, information-based prevention services have limited utility, and new program models are needed for prevention of HIV and other sexually transmitted diseases.

## Summary of Recommendations (contd.)

- 8) Improved mental access to mental health specialists is specifically needed for HIV-positive gay men.** Appropriate mental health care is particularly important for HIV-positive men, in whom depression is common. Such appropriate care is clearly linked to mental health specialists. Because depression in HIV-infected men is associated with increased risk of unsafe sex, quality mental health care for positive men may be an important component of HIV prevention efforts as well.
- 9) Service providers should explore programs that identify multiply at-risk social networks, such as circuit party goers, and target them with a programs that address the range of overlapping, interactive risks.** The syndemic model suggests that achieving overall reductions in risk may require programs that address multiple problems at once. Some social networks, such as circuit party attendees, are a risk for a number of negative health outcomes, including drug overdose and addiction, depression and HIV. Ideally, these networks would be targeted with broader wellness programs that address the range of their risks.
- 10) Health service providers should receive ongoing training regarding the specific issues that confront gay men, and health educators need to be trained to understand the role of mental health care in gay men's overall health.** Improved understanding of the interactions between mental health and overall physical health should offer substantial improvements in efforts to aid gay men in building safer, healthier and happier lives.

## APPENDICES:

### Appendix A: The Denominator Problem

To estimate the percentage of gay men who share a certain feature (African-American gay men, for example) or health issue (the percentage of gay men who have experienced depression in the past year), requires an estimate of the overall population of gay men. This leads to "the denominator problem:" different ways of estimating the number of gay men lead to vastly differing denominators, and therefore to vastly different estimates of percentages.

For example, many studies of gay men's health estimate the denominator using the broad term "men who have sex with men" or "MSM" to include men who may not self-identify as gay, but who nonetheless engage in same-sex sexual behaviors. When estimating the incidence of sexually transmitted diseases, for example, this approach makes a certain amount of sense; risk behavior, after all, is risk behavior, regardless of who engages in it. However, prevention strategies for MSM who do not self-identify as gay are likely to be very different from prevention strategies for self-identified gay men, which may limit the utility of this approach in drawing implications from the data.

When estimating incidence of other characteristics or behaviors, though, it may make little sense to lump this group together. Are there reasons to lump together men who have occasional same-sex experiences in exchange for money or drugs with men whose entire lives are spent within the gay community? Where do closeted men, who have frequent sex with other men but who may live outwardly heterosexual identities, fit into the picture? In any given study, the ways in which researchers define and distinguish gay men strongly impacts the overall findings.

In addition, sampling is important to these questions; who is being studied, and how does the study population relate to the broader population? For example, many of the early estimates of HIV or sexually transmitted disease incidence came from data culled from sexually transmitted disease clinics. While these data certainly had value, particularly in assessing trends of infections, the men who sought testing and treatment for STDs were definitionally at risk, and therefore these data could not be generalized to provide incidence estimates across the broader community of gay-identified men, much less of all men who have sex with men.

Similarly, the PULSE study, by the Kansas City Department of Health, sampled men attending a fair on gay pride day. While providing valuable and important data, this sample of men clearly is not generalizable to include many segments of the potential population of gay or non-gay MSM.

The Gay Urban Men's Health Study (GUMHS) attempted to develop a random sampling by conducting phone interviews selected at random from the general population and including specific questions about sexual behavior and identity. While this is probably as close as we can get to a general sample of gay-identified men, it still presents important questions about which men are willing to discuss sexual behavior with a stranger during a phone interview.

To identify these problems is not to lessen the achievement of the researchers who carried out these vital studies, nor to minimize the importance of their findings, but rather to recognize the inherent methodological problems in estimating incidence and trends in health-related concerns and behaviors in relation to the full population of gay and non-gay MSM. Each study attempts to address these concerns in different ways, achieving precision in one area of interest at some cost to overall generalizability. Understanding where precision in findings is lost and gained is important in determining how multiple and sometimes contradictory study findings may be related to each other, giving us some picture of the overall state of gay men's health.

## Appendix B: DSM-IV Diagnostic Criteria for Major Depressive Disorder:

- At least one of the following three abnormal moods which significantly interfered with the person's life:
  - Abnormal depressed mood most of the day, nearly every day, for at least 2 weeks.
  - Abnormal loss of all interest and pleasure most of the day, nearly every day, for at least 2 weeks.
  - If 18 or younger, abnormal irritable mood most of the day, nearly every day, for at least 2 weeks.
  
- At least five of the following symptoms have been present during the same 2 week depressed period.
  - Abnormal depressed mood (or irritable mood if a child or adolescent)
  - Abnormal loss of all interest and pleasure
  - Appetite or weight disturbance, either:
    - Abnormal weight loss (when not dieting) or decrease in appetite.
    - Abnormal weight gain or increase in appetite.
  - Sleep disturbance, either abnormal insomnia or abnormal hypersomnia.
  - Activity disturbance, either abnormal agitation or abnormal slowing (observable by others).
  - Abnormal fatigue or loss of energy.
  - Abnormal self-reproach or inappropriate guilt.
  - Abnormal poor concentration or indecisiveness.
  - Abnormal morbid thoughts of death (not just fear of dying) or suicide.
  
- The symptoms are not due to a mood-incongruent psychosis. There has never been a Manic Episode, a Mixed Episode, or Hypomanic Episode (other diagnostic categories). The symptoms are not due to physical illness, alcohol, medication, or street drugs. The symptoms are not due to normal bereavement.



## Appendix C: DSM-IV Diagnostic Criteria for Dysthymia Disorder:

- Depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation by others, for at least 2 years. Note: In children and adolescents, mood can be irritable and duration must be at least 1 year.
- Presence, while depressed, of two (or more) of the following:
  - poor appetite or overeating
  - insomnia or hypersomnia
  - low energy or fatigue
  - low self-esteem
  - poor concentration or difficulty making decisions
  - feelings of hopelessness
- During the 2-year period (1 year for children or adolescents) of the disturbance, the person has never been without the symptoms in Criteria A and B for more than 2 months at a time.
- No Major Depressive Episode has been present during the first 2 years of the disturbance (1 year for children and adolescents); i.e., the disturbance is not better accounted for by chronic Major Depressive Disorder, or Major Depressive Disorder, In Partial Remission. **Note:** There may have been a previous Major Depressive Episode provided there was a full remission (no significant signs or symptoms for 2 months) before development of the Dysthymic Disorder. In addition, after the initial 2 years (1 year in children or adolescents) of Dysthymic Disorder, there may be superimposed episodes of Major Depressive Disorder, in which case both diagnoses may be given when the criteria are met for a Major Depressive Episode.
- There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode, and criteria have never been met for Cyclothymic Disorder.
- The disturbance does not occur exclusively during the course of a chronic Psychotic Disorder, such as Schizophrenia or Delusional Disorder.

### DSM-IV Diagnostic Criteria for Dysthymia Disorder (contd):

- The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
- The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

#### Appendix D: DSM-IV Diagnostic Criteria for Generalized Anxiety Disorder:

- Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
- The person finds it difficult to control the worry.
- The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). **Note:** Only one item is required in children.
  - Restlessness or feeling keyed up or on edge
  - Being easily fatigued
  - Difficulty concentrating or mind going blank
  - Irritability
  - Muscle tension
  - Sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)
- The focus of the anxiety and worry is not confined to features of another disorder, such as the anxiety or worry is not about having a Panic Attack, being embarrassed in public, being contaminated (as in Obsessive-Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder
- The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning
- The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.