

**Written Testimony on HIV Incidence and Prevention
For
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Submitted to:
Chairman Henry A. Waxman
Committee on Oversight and Government Reform
Congress of the United States
House of Representatives

Respectfully submitted by:
George Ayala, PsyD
Research Public Health Analyst
RTI International
San Francisco Office
114 Sansome Street, Suite 500
San Francisco, CA 94104
Phone: 415.848.1312
Email: gayala@rti.org

Consultant to AIDS Project Los Angeles
The David Geffen Center
611 South Kingsley Drive, 4th Floor
Los Angeles, CA 90005
Phone: 213.201.1600
www.apla.org

Introduction

Chairman Waxman and distinguished members of the Committee on Oversight and Government Reform: thank you for this opportunity to speak with you today on the critical topic of HIV prevention in the United States. My name is George Ayala, and I work as a research psychologist at RTI International and as a Consultant to AIDS Project Los Angeles, where I was the Director of Education and Community-based Research for more than 6 years. I have worked in HIV prevention for 18 years. It is my privilege to be here with you today.

HIV prevention in the United States has been enormously successful and cost efficient despite the public scrutiny and criticism it continues to receive. As has been demonstrated by my esteemed co-panelist Dr. Holtgrave, HIV prevention efforts have resulted in the drop in HIV incidence from its peak of 161,000 infections in 1984. Moreover, the gross cost per HIV infection prevented is well below the estimated lifetime cost of treatment for one person living with AIDS.¹

Several effective HIV prevention programs, largely individual-level behavior modification interventions, have been developed over the first two decades of the HIV/AIDS epidemic. Recent reviews of these interventions have demonstrated that across studies, reductions in HIV risk behavior and improvements in knowledge, attitudes and beliefs about HIV/AIDS were greater for the target populations who received the risk reduction intervention compared with those who did not. This is true for men who have sex with men^{2 3}, heterosexual adults⁴, adolescents⁵, and individuals receiving HIV prevention intervention delivered within drug treatment programs.⁶

In addition, overall reductions in the proportion of individuals engaging in sex without the use of condoms as a result of receiving an HIV prevention intervention range from 26% for men who have sex with men to 29% for heterosexual adults. These rates are comparable to the 30% efficacy rate established as the minimum acceptability standard when testing potential vaccine products.^{7 8}

¹ Holtgrave, D.R. Estimating the effectiveness and efficiency of US HIV prevention efforts using scenario and cost-effectiveness analysis. *AIDS*. 2002;16(17):2347-2349.

² Johnson, W.D., Hedges, L.V., et al. HIV prevention research for men who have sex with men: a systematic review and meta-analysis. *Journal of Acquired Immune Deficiency Syndromes*. 2002, 30:S118 - S129.

³ Johnson, W.D., Diaz, R.M, Flanders, W.D., Goodman, M. Hill, A.N., Holtgrave, D., Malow, R., and McClellan, W.M. 2008. Behavioral interventions to reduce the risk for sexual transmission of HIV among men who have sex with men (Review). The Cochrane Collaboration. John Wiley & Sons, Ltd.

⁴ Neumann, M.S., Johnson, W.D., et al. Review and meta-analysis of HIV prevention intervention research for heterosexual adult population in the U.S. *Journal of Acquired Immune Deficiency Syndromes*. 2002, 30:S106 – S117.

⁵ Johnson, B.T., et al. Interventions to reduce sexual risk for human immunodeficiency virus in adolescents, 1985-2000: a research synthesis. *Archive of Pediatric Adolescent Medicine*. 2003, Vol. 157, 381 – 388.

⁶ Prendergast, M.L., Urada, D., & Podus, D. Meta-analysis of HIV risk reduction interventions within drug abuse treatment programs. *Journal of Consulting and Clinical Psychology*. 2001, Vol. 69, No. 3, 389 – 405.

⁷ Bogard, E. et al. The impact of a partially effective HIV vaccine on a population of intravenous drug users in Bangkok, Thailand: A dynamic model. *Journal of AIDS*, 2002; 29:132.

⁸ Stover, J. et al. The epidemiological impact of an HIV/AIDS vaccine in developing countries. 2002. Working Paper #281 from the World Bank Development Research Group available at: <http://www.policyproject.com/pubs/countryreports/>

So if HIV prevention works, why have HIV incidence rates not continued to drop? In our view, the key to further reducing HIV incidence in the U.S. is in our capacity to more effectively target resources and stay focused on classic prevention principles.

Presently, HIV prevention in the U.S. lacks the resources and comprehensiveness that will significantly drive down HIV incidence rates.^{9 10} In the absence of a clearly articulated, aggressive, and well targeted national HIV prevention plan, the U.S. instead relies on piecemeal initiatives for stepped up HIV testing and treatment.

The key to further reducing HIV incidence in the U.S. lies in how we think about, plan, and implement HIV prevention policy, research and practice. In other health fields with much longer histories, prevention has a more sophisticated shape. For example, smoking prevention programs combine pharmacological interventions, behavior modification, social persuasion techniques (including the use of social marketing to influence community norms), and structural change (like policy reform and legislative initiatives) designed to discourage nicotine use.

Obviously, nicotine addiction and HIV infection and the behavioral and social determinants of each are different and we must exercise caution in comparing the two. But the point of the comparison is compelling and raises important questions about some of the problems with contemporary HIV prevention in the U.S. Consider the following:

- ❑ Pharmacological interventions of HIV disease including anti-retroviral treatment do not cure HIV, are not effective for some, and are not accessible or available to everyone who is HIV infected;
- ❑ Addiction to substances other than nicotine, including alcohol and crystal methamphetamine, is highly stigmatized and in most cases criminalized rather than prevented or treated;
- ❑ HIV prevention programs are not always targeted to populations most at risk – nor are they sustained over long periods of time;
- ❑ Available HIV prevention interventions were primarily tested for efficacy in the late eighties and early nineties on groups heavily affected by HIV/AIDS at that time and may therefore have limited cultural relevance;
- ❑ Most HIV prevention interventions are designed to modify behavior at the individual level (i.e., perceived personal vulnerability, self efficacy, intention, assertiveness and communication skills, condom use, reduction in the number of sex partners) with little regard for the interpersonal, social and cultural determinants of HIV risk;
- ❑ Many HIV prevention interventions are difficult for community-based HIV prevention providers to adapt and therefore adopt because they were tested under research

⁹ Holtgrave, D.R. and Kates, J. HIV incidence and CDC's HIV prevention budget: An exploratory correlational analysis. *American Journal of Preventive Medicine*, Pub ahead of print, 2006 Dec.

¹⁰ Holtgrave, D.R. and Kates, J. HIV incidence and CDC's HIV prevention budget: An exploratory correlational analysis. *Am J Prev Med*, 2007; 32(1):63-67.

conditions that are different from real life settings or tested on populations different from those currently most at risk for HIV infection; and

- When addressing the risk for HIV infection, behavior modification seeks to redress personal deficits without regard for existing individual and collective strengths, competencies, or resources.

While HIV testing and treatment are crucial in our fight against HIV/AIDS, a singular focus on testing and treatment for people living with HIV/AIDS narrows even further an already sparse continuum of prevention strategies. A comprehensive national HIV prevention plan in the U.S. requires culturally relevant, multilevel, combination approaches that are well funded, targeted, coordinated, and sustained over many years.¹¹ The following are specific recommendations for building such a national plan:

Work to eliminate disparities in health access and stigma associated with AIDS, drug use, and homosexuality. Our collective desire to prevent new HIV infections and the urgency that we feel to do so quickly, open the doors to simplistic, overly medicalized and inadequately researched public health responses. This is the case with the current rush to promote circumcision as a prevention strategy and the CDC's almost singular focus on HIV testing and treatment.¹² This emphasis on testing and treatment, although crucial in our work to end HIV/AIDS, significantly narrows the continuum of possible prevention strategies. There is no disputing the potential personal and public health benefits of HIV testing. However, HIV-infected persons draw the greatest benefits from the latest available treatment when they can receive treatments early. Nearly 40% of HIV-infected persons learn of their infection within a year of receiving an AIDS diagnosis.¹³ For Latinos and African Americans, this number can be much higher.¹⁴ ¹⁵ Exacerbating the situation is the fact that African Americans and Latinos are over-represented among those living at or below poverty level and without health insurance.¹⁶ ¹⁷ The personal benefits of knowing one's HIV-status early are lost on those who must overcome the significant barriers to care and treatment and persistent stigma that keep some away from care. *We must work for the eradication of disparities in health care access and social stigma associated HIV/AIDS, drug use or homosexuality.*

Target our HIV prevention efforts to those most at risk for HIV exposure, keeping a steady and respectful focus on the prevention needs of gay and bisexual men, substance users, and women at sexual risk. Mainstream descriptions of the HIV/AIDS epidemic in the U.S. often paint an incomplete and misleading picture about what's going on nationally. These descriptions often start with statements about the disproportionate toll HIV/AIDS is taking in

¹¹ Coates, T.J., Richter, L., and Caceres, C. Behavioral strategies to reduce HIV transmission: how to make them work better. www.theLancet.com, August 6, 2008.

¹² DHHS/CDC Advancing HIV prevention: New strategies for a changing epidemic – U.S. MMWR. 2003; 52(15).

¹³ Neal, J.J., et al. Frequency and predictors of late HIV diagnosis in the U.S., 1994 through 1999 [Abstract 474M]. 9th Conference on Retroviruses and Opportunistic Infections, Seattle, February 24-28, 2002.

¹⁴ Turner, et al. Delayed medical care after diagnosis of persons infected with HIV. Archives of Internal Medicine, 2001; Vol.16.

¹⁵ Supplemental HIV Surveillance Study Project. L.A. County, Department of Health Services, January 2000.

¹⁶ United State Census Bureau, July 2001.

¹⁷ Brodie, M. et al. The 2002 National Survey of Latinos. Pew Hispanic Center/Kaiser Family Foundation, December 2002.

communities of color, especially among African Americans with no mention of the specific sub-groups most at risk, namely gay/bisexual men, drug users, and women at sexual risk. Moreover, funding remains inadequately targeted to these groups. This is especially troubling when we consider, for example, that men who have sex with men continue to make up the majority of new HIV infections and the majority of people living with HIV/AIDS nationally across race and ethnicity. In many places around the country, gay and bisexual men, and especially gay men of color, continue to drive the AIDS epidemic. In fact, in jurisdictions like New York City and Los Angeles County where seroprevalence among Black and Latino men who have sex with men can be as high as 32%, the need for effective HIV prevention programs specifically designed for and targeted to these two groups is especially urgent.^{18 19 20 21 22}

The HIV/AIDS epidemic's affect on women is intricately tied to the lives of these men. In addition, substance abuse continues to be one of the most powerful determinants of HIV risk across populations. Our ability to formulate effective prevention responses requires a more direct discussion about the nature of HIV risk that includes frank, open and non-judgmental conversations about gay/bi men, drug users, and women at sexual risk for HIV. The alternative is that we accept silence and denial about sexuality, drug use, and economic inequality, permitting HIV-related stigma, racism, sexism, homophobia, and poverty to continue to complicate our prevention efforts. *We must keep a steady and respectful focus on the prevention needs of gay/bisexual men, substance users, and women at sexual risk.*

Expand prevention and support services to people living with HIV/AIDS. It is also true that when people know they are infected with HIV, they are significantly more likely to protect their partners from infection than when they are unaware of their infection.^{23 24} Research also tells us that behavior change that occurs as a result of HIV testing is sustainable for up to 18 months at best, making HIV testing as effective as other stand-alone behavioral interventions. Knowledge alone, in this instance knowledge about one's HIV status, is not enough to sustain and support behavior change over time.^{25 26} *Prevention interventions and support services can enhance and reinforce behavioral changes among people with HIV/AIDS that occur as a consequence of testing. At present, these are not well supported.*

¹⁸ Valleroy et al. HIV prevalence and associated risks in young MSM. JAMA, 2000;284:198-204.

¹⁹ Diaz, R. Ayala, G. Social discrimination and health: The case of Latino gay men and HIV risk. 2001. Commissioned Monograph. National Gay and Lesbian Task Force.

²⁰ Centers for Disease Control and Prevention. HIV incidence among young men who have sex with men—seven U.S. cities, 1994-2000. MMWR Morb Mortal Wkly Rep 2001;50(21):440-4.

²¹ Blair JM, Fleming PL, Karon JM. Trends in AIDS incidence and survival among racial/ethnic minority men who have sex with men, United States, 1990-1999. JAIDS, 2002; 31(3):339-47.

²² CDC. Cases of HIV infection and AIDS in the United States and Dependent Areas, 2005. HIV/AIDS Surveillance Supplemental Report 2007;17.

²³ Hays, R.B., et al. Actual versus perceived HIV status, sexual behaviors and predictors of unprotected sex among young gay and bisexual men who identify as HIV-negative, HIV-positive and untested. AIDS, 1997;11:1495-1502.

²⁴ Colfax, G.N., Buchbinder, S.P., Cornelisse, P.G.A., et al. Sexual risk behaviors and implications for secondary HIV transmission during and after HIV seroconversion. AIDS, 2002;16:1529-1535.

²⁵ Helweg-Larsen, M., Collins, B.E. A social psychological perspective on the role of knowledge about AIDS in AIDS prevention. Curr Psychol Sci 1997;6:23-53.

²⁶ Fisher J.D, Fisher W.A. Theoretical approaches to individual-level change in HIV risk behavior. In Peterson & DiClemente (Eds.) Handbook of HIV Prevention. 2000. Kluwer Academic/Plenum Publishers.

Support continued vaccine, pre-exposure prophylaxis and microbicide research.

Accessible HIV treatment and other biomedical interventions including pre-exposure prophylaxis (PrEP) and microbicides hold enormous prevention potential. From a prevention perspective, medical management of HIV disease lowers viral load thereby reducing infectiousness.²⁷ This makes treatment and adherence important components of our overall HIV prevention strategy. Additionally, microbicides and pre-exposure prophylaxis are important options for people who find themselves unable to avert high risk situations or for whom behavioral methods are not an option. *We must strive through sound research to broaden the range of HIV prevention options to include bio-medical prevention strategies. Continued support for vaccine, clinical, and microbicide research is needed.*

Make the prevention and treatment of drug and alcohol addiction central to HIV

prevention efforts. In HIV prevention research, one of the most powerful behavioral predictors of HIV risk behavior is drug and/or alcohol use.^{28 29} The association between crystal methamphetamines and HIV risk behavior is well established.³⁰ Prevention providers and researchers have known this for years. And yet substance abuse prevention and treatment programs are few in number, under-funded, and in some instances, nothing more than court mandated 12-step programs, the quality of which varies from place to place and from meeting to meeting. *We must make the prevention and treatment of addiction central to a more comprehensive national HIV prevention plan.*

Intensify support for comprehensive sexual health education, screening and care.

Behavioral interventions have been shown to significantly reduce the risk for HIV infection for adolescents as well as adults. Interventions designed to achieve condom use among sexually active adolescents were most successful when condoms were provided and information and skills training about their use was offered. Moreover, behavioral interventions reduce the risk for HIV specifically because they increase knowledge about sexual health, skill acquisition, sexual communication, and condom use, and they decrease the onset of sexual intercourse or the number of sexual partners.^{31 32} *Screening and treatment of sexually transmitted diseases for all must go hand-in-hand with comprehensive sexual health education and both must be seen as integral to our HIV prevention efforts.*

Develop programs for both aging adults and young people whose, HIV prevention needs may be different. Decreased visibility of targeted and regularly updated HIV prevention messages in recent years may have reduced the salience of HIV prevention programs for communities most at risk.³³ For example, outdated and over-simplistic prevention messages for

²⁷ Quinn, T.C., Wawer, M.J., Sewankambo, N., et al. Viral load and heterosexual transmission of HIV-type 1. *New England Journal of Medicine*, 2000; 342:921-929.

²⁸ Parsons, J.T. Correlates of sexual HIV transmission risk behaviors among HIV+ MSM. National HIV Prevention Conference. 1999. Abstract No. 181.

²⁹ Strathdee et al. Determinants of sexual risk taking among young HIV- gay and bisexual men, *Journal of AIDS Human Retrovirology*, 1998; 19:61-66.

³⁰ Stall, R., Mills, T.C., Williamson, J., Hart, T., Greenwood, G., Paul, J., et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *American Journal of Public Health*, 2003; 93(6):939-42.

³¹ Johnson, B.T., Carey M.P., Marsh, K.L., Levin, K.D., and Scott-Sheldon, L.A. Interventions to reduce sexual risk for HIV in adolescents. *Archives Pediatric Adolescent Medicine*. 2003;157:381-388.

³² Kirby, D., Short, L., Collins J. 'School-based Programs to Reduce Sexual Risk Behaviors: A Review of Effectiveness.' *Public Health Reports*, 1994; 109:339-360.

³³ Aral, S. Elimination and reintroduction of sexually transmitted disease: lessons to be learned? *American Journal of Public Health*. 1999; 89: 995-997.

gay and bisexual men may explain what is often referred to as “HIV prevention fatigue” or “HIV/AIDS burnout.”³⁴ With changing trends in the epidemic, and more people living longer with HIV, it is important that HIV prevention advocates, practitioners and policy makers not get seduced into forgetting that HIV prevention needs not only evolve, they must also expand. This is because in addition to aging adults who have managed to remain HIV negative, there are newer generations of young people with whom we must now also concern ourselves. Therefore, the *potential audiences for HIV prevention messages must be carefully segmented by age, gender, sexual orientation and race/ethnicity and messages specifically crafted and regularly updated for their respective audiences.*

Ensure that priority be given to expanding social science and intervention research aimed at gay and bisexual men especially men of color. The CDC recommends several evidence-based HIV prevention interventions as part of its Diffusion of Behavioral Interventions (DEBI) initiative.^{35 36} There is however a limited number of interventions available that are specifically designed to address the cofactors of HIV risk for gay and bisexual men of color.^{37 38} In recent public comment (March 26, 2008) to the Presidential Advisory Council on HIV/AIDS regarding the CDC’s newly revised compendium of evidence-based interventions, The AIDS Institute noted that only four (8%) of the compendium’s 49 interventions specifically target gay men, despite the fact that men who have sex with men account for nearly 70% of all new HIV cases. Of those four, only one was specifically designed for and tested with Asian and Pacific Islander gay men. Although this is beginning to receive much needed attention, it remains a serious gap. *We must expand our research efforts with a focus on gay and bisexual men of color as a strategy for expanding available HIV prevention interventions for this disproportionately affected population.*

Support innovative prevention strategies that address both risk behavior and its social, cultural and contextual determinants. The risk for HIV infection is often understood as being connected to some individual trait, characteristic, or deficit. Another way to understand the risk for HIV infection is as a function of interpersonal and socio-cultural contexts. In other words, risk behavior does not happen in a social vacuum. At present, interventions that are endorsed by public health institutions in the U.S. largely focus on modifying individual risk behavior without taking into account the situational, interpersonal, social or cultural determinants of risk. It is important that our interventions address changing risk environments, social/sexual networks and socio-cultural factors that contribute to the heightened risk for HIV transmission.⁴⁰ *We*

³⁴ Odets, W. AIDS education and harm reduction approaches for the 21st century. *AIDS Public Policy Journal*, 1994;9:1-15.

³⁵ HIV/AIDS Prevention Research Synthesis Project. *Compendium of HIV Prevention Interventions With Evidence of Effectiveness*. Atlanta, GA: Centers for Disease Control and Prevention; 1999.

³⁶ Kay, L., Crepaz, N., Lyles, C., et al. Update of the Compendium of HIV Prevention Interventions with Evidence of Effectiveness. In: *National HIV Prevention Conference*. Atlanta, GA; 2003.

³⁷ Mays, V.M., Cochran, S.D., Zamudio, A. HIV prevention research: are we meeting the needs of African American men who have sex with men? *Journal of Black Psychology*, 2004;30:78-103.

³⁸ Lyles, C.M., Kay, L.S., Crepaz, N., Herbst, J.H., Passin, W.F., Kim, A.S., et al. Best-evidence interventions: Findings from a systematic review of HIV Behavioral interventions for US populations at high risk, 2000-2004. *American Journal of Public Health* 2007;97(1):133-143.

³⁹ Millet, G.A., Flores, S.A., Peterson, J.L., and Bakeman, R. Explaining disparities in HIV infection among black and white men who have sex with men: a meta-analysis of HIV risk behaviors. *AIDS*, 2007; 21: 2083-2091.

⁴⁰ Díaz, R. M., Ayala, G, & Bein, E. Sexual risk as an outcome of social oppression: Data from a probability sample of Latino gay men in three US cities. *Cultural Diversity and Ethnic Minority Psychology*, 2004; 10(3), 255–267.

should support prevention research and interventions that address both HIV risk behavior and their social, cultural and contextual determinants.

Explore and disseminate community-sensitive and ethical structural interventions to complement behavior modification programs. There is growing recognition that social, economic, and environmental forces directly affect the risk for HIV transmission. At the structural level, laws and policies that result in a lack of immigrant rights, discrimination against lesbian, gay, bisexual and transgender people, lack of family housing at migrant labor worksites, unregulated commercial sex, criminalization of possession of syringes, and lack of financial support for medical, educational, prevention, and social services can be changed through policy and legislative reform. For example, in 1992, New York State enacted a change in the public health law (Public Health Law 80.135) that carves out an exemption to the penal code regarding criminal possession of syringe equipment. The change in law gives the New York State Commissioner of Health the authority to grant waivers to community-based organizations and government entities to collect and furnish syringes. New York State supports a multi-component syringe access and disposal program that is informed by harm reduction principles, and which is credited for a 50% reduction in HIV transmission among injection drug users, a 75% decrease in the buying or renting of syringes, and a 63% decrease in syringe sharing behaviors.⁴¹ Similar reductions in HIV incidence rates among injection drug users in New York are well documented⁴² and there is evidence to support safer injection facilities.⁴³ Structural-level changes buttress the gains in behavior change made through individually geared prevention interventions. HIV prevention efforts cannot succeed in the long term without addressing, through structural interventions, the social factors that underlie HIV vulnerability.⁴⁴ *We must continue to support and explore community-sensitive structural interventions to complement behavior modification programs as part of a larger, more comprehensive national HIV prevention program.*

Balance the policy of promoting pre-packaged science-based HIV prevention interventions by supporting and researching more localized, indigenous and collaborative HIV prevention strategies. HIV prevention interventions currently being promoted by the CDC -- or the so-called "out-of-the-box," "evidence-based" interventions "scaled-up" for mass distribution -- are not easy to use and therefore reduce the likelihood that they would be adopted by the end-users of the interventions who are community-based health educators and outreach staff. Because these interventions were developed and tested within research conditions that do not mimic real-life conditions, they are often considered prescriptive. These interventions sometimes require unrealistic time commitments from clients and specialized training for the staff implementing them. Prevention providers asked to adopt pre-packaged interventions sometimes feel no ownership over what they are being asked to do. Their ability to introduce their own innovations from insights gained in their work with clients is often limited by overly determined intervention manuals.⁴⁵ It is critical to respect on-the-ground responses to the HIV/AIDS epidemic by protecting local control over how HIV prevention

⁴¹ New York State Department of Health, AIDS Institute. Presentation by Alma R. Candelas, March 2003.

⁴² Des Jarlais, D.C. et al. HIV incidence among injection drug users in New York City, 1992-1997: evidence for a declining epidemic. *American Journal of Public Health*, March 2000, 90(3).

⁴³ Kerr, T., Tyndal, M., Li, K., Montaner, J., and Wood, E. Safer injection facility use and syringe sharing in injection drug users. *Lancet*, 2005; 366:316-318.

⁴⁴ Gupta, R.A., Parkhurst, J.O., Ogden, J.A., Aggleton, P., and Mahal, A. Structural approaches to HIV prevention. www.thelancet.com, August 30, 2008; Vol. 372.

⁴⁵ Ayala, G. Adapting evidence-based HIV prevention interventions. *Focus: A Guide to AIDS Research and Counseling*, 2007; 22(7), 6-7.

strategies are developed, researched, prioritized and implemented. This will ensure that HIV prevention efforts remain responsive, varied, dynamic and innovative. Available HIV prevention and epidemiological science should be used to guide local efforts, not dictate them. We must also ensure that the people setting priorities and designing HIV prevention programs at the local level have access to the best available evidence-based information and technologies possible. Technical assistance and capacity building should be made available when and if requested, and should be tailored to the specific needs of those requesting assistance. *We should strive for collaborative and participatory approaches to formulating effective HIV prevention interventions that are flexible enough to permit creative modifications and withstand organizational change typical for non-profit agencies.*^{46 47} *Such approaches should involve researchers, service providers, and consumers alike.*^{48 49}

Promote HIV prevention programs that build upon and mobilize existing individual and community strengths, competencies and resources. With few exceptions, HIV prevention interventions are problem oriented. They seek to remedy personal deficits rather than to promote or mobilize existing individual and collective competencies, strengths or resiliencies. What makes individuals and communities resilient to HIV is poorly understood and relatively overlooked in the HIV research literatures. There is prevention potential in engaging and mobilizing an individual or community's capacity to know what's best for them when they are given opportunities for self-reflection, social involvement and connectedness through volunteerism and activism.⁵⁰ *Whenever possible, we should promote HIV prevention research and programs that build upon and mobilize existing individual and community assets.*

Conclusion

Although HIV prevention interventions have been shown to be effective, HIV prevention efforts in general have not received the funding needed to make them more comprehensive and widespread. HIV prevention messages are not ubiquitous or sustained, and may not be reaching those at highest risk for infection. This may in part explain current HIV incidence rates. Driving down HIV incidence even further will require that we think differently about HIV prevention policy, research and programs. We must also expand our capacity to imagine new possibilities for HIV prevention work by challenging ourselves to remain creative and open to collaborative approaches in our efforts to end the HIV/AIDS epidemic. We need a comprehensive national HIV prevention plan in the U.S. that clearly calls for culturally relevant, multilevel, combination approaches that are well funded, targeted, coordinated, and sustained over many years.

⁴⁶ Kalichman, S.C. et al. When briefer can be better: Single session approaches to HIV risk reduction interventions. *Interamerican Journal of Psychology*. 2001;Vol.35, No.2:41-58.

⁴⁷ Miller, R. Innovation in HIV prevention: Organizational and intervention characteristics affecting program adoption. *American Journal of Community Psychology*. 2001; Vol.29, No.4.

⁴⁸ Covich, J.R., Parker, C.L., White, V.A. The practice community meets the ivory tower: A health department/academic partnership to improve public health preparedness. *Public Health Reports*, 2005;Supplement 1(120):84-90.

⁴⁹ Oliva, G., Rienks, J., Udoh, I., Dillard-Smith, C. A university and community-based collaboration to build capacity to develop, implement, and evaluate an innovative prevention intervention for an urban African American population. *AIDS Education and Prevention*, 2005;17(4):300-316.

⁵⁰ Zimmerman, M.A, Ramirez-Valles, J. et al. An HIV/AIDS prevention project for Mexican homosexual men: An empowerment approach. *Health Education and Behavior*, 1997; 24(2):177-190.