

# how does HIV prevention work on different levels?

## what are levels?

HIV prevention is not just about changing individual behavior. Many other factors also influence HIV transmission, such as relationships with family and friends, community norms, access to health care and local laws. Working on different levels means addressing all these factors through multiple approaches: individual, couple/family, community, medical and legal.<sup>1</sup>

*HIV prevention programs for injecting drug users (IDUs) in the US have included interventions on many different levels. These programs have incorporated interventions such as: intensive street outreach to educate IDUs, drug treatment, syringe exchange, community-building and empowerment efforts and adherence programs for HIV+ IDUs. Where these efforts are in place, rates of HIV among IDUs have remained stable.<sup>2</sup>*

Prevention efforts addressing multiple levels have reversed HIV epidemics in Uganda and Thailand, and averted an epidemic in Senegal. Senegal, for example, used prevention programs on the individual level (HIV counseling and testing), community level (HIV education in schools, condom promotion among sex workers), medical level (treatment of sexually transmitted diseases [STDs]), and structural/political level (mobilizing religious and political leaders to talk openly about HIV) to maintain one of the lowest rates of HIV infection in Sub-Saharan Africa.<sup>3</sup>

## individual level

Many prevention programs help individuals change risky behavior. Project EXPLORE was a randomized trial of an individually-based counseling intervention for men who have sex with men. EXPLORE recognized that different men experience different individual, interpersonal and situational factors associated with risk. The program tailored the intervention to each man's needs. Ten counseling modules used motivational interviewing to assess risk behavior, enhance sexual communication, understand substance use and recognize triggers to unsafe sex.<sup>4</sup>

*Project RESPECT was a randomized HIV counseling trial conducted at STD clinics in five cities in the US with high HIV seroprevalence. The program evaluated whether interactive counseling is more effective than informational messages in reducing risk behaviors and preventing HIV and other STDs. The program found relatively little difference between 4- and 2-session interactive counseling interventions, but found lower rates of new STDs among the interactive counseling groups compared to groups that only received information. Reported condom use increased in all groups, with significantly greater protection among those in interactive counseling.<sup>5</sup>*

## couple/family level

The Visiting Nurse Service of New York offers comprehensive in-home services to families affected by HIV, substance abuse, sexual abuse and mental illness. The children in these families are at high risk for repeating the histories and behaviors of their parents. The program provides home-based interventions that include play therapy, health and safe sex education, family and individual counseling, relapse prevention for the parent and drug awareness and prevention for the children. Helping children deal with anger and resentment towards their parents lessens the likelihood that their anger will be displaced on themselves, thus repeating the behavior of the parent. Supporting each family member is key to breaking the cycle of dysfunction in these families.<sup>6</sup>

*Interventions that promote safer sexual behaviors for both members of a couple can also be important. Project Connect was a six-session relationship-based intervention for women in a heterosexual relationship. Women attended separately or with their partners. The sessions emphasized communication, negotiation and how gender roles affect relationship dynamics. Project Connect helped decrease risky behaviors for couples receiving the intervention together and for couples where the woman attended alone.<sup>7</sup>*

## Says who?

1. Kelly JA, Kalichman SC. Behavioral research in HIV/AIDS primary and secondary prevention: recent advances and future directions. *Journal of Consulting and Clinical Psychology*. 2002;70:629-639.

2. Vlahov D, Des Jarlais DC, Goosby E, et al. Needle exchange programs for the prevention of human immunodeficiency virus infection: epidemiology and policy. *American Journal of Epidemiology*. 2001;154:S70-77.

3. Valdiserri RO, Ogden LL, McCray E. Accomplishments in HIV prevention science: implications for stemming the epidemic. *Nature Medicine*. 2003;9:881-886.

4. Chesney MA, Koblin BA, Barresi PJ, et al. An individually tailored intervention for HIV prevention: Baseline data from EXPLORE study. *American Journal of Public Health*. 2003;93:933-938.

5. Kamb ML, Fishbein M, Douglas JM Jr, et al. Efficacy of risk-reduction counseling to prevent human immunodeficiency virus and sexually transmitted diseases: a randomized controlled trial. Project RESPECT Study Group. *Journal of the American Medical Association*. 1998;280:1161-1167.

6. Mills R, Samuels KD, Bob-Semple N, et al. Breakin' the cycle: multigenerational dysfunction in families affected with HIV/AIDS. Presented at the 14th International AIDS Conference, Barcelona, Spain. 2002. Abst #ThPeE7828.

## community level

Community-level programs can reach large numbers of people and can therefore be cost-effective. The Mpowerment Project promoted a norm of safer sex among young gay men through a variety of social, outreach and small group activities designed and run by young men themselves. They found that young men engaging in unsafe sex who were unlikely to attend workshops were more likely to be reached through outreach activities such as dances, movie nights, picnics and volleyball games. Rates of unprotected anal intercourse fell from 40% to 31% after the intervention.<sup>8</sup>

*A community-level intervention with ethnically-diverse adolescents living in low-income housing, uses skills training, modeling, peer norm and social reinforcement to reduce sexual risk. Using social events and peer leaders nominated for training and team building, the program attracted neighborhood youth. The peer leaders developed small media prevention messages and planned community-wide events. Workshops for parents were also offered. The community intervention was shown to be more effective in delaying onset of first intercourse than education or skills building only.<sup>9</sup>*

## medical level

In the past few years, various medical approaches have been shown to be effective in HIV prevention.<sup>10</sup> For example, antiretroviral drugs used to treat HIV have also been used to help prevent mother to child transmission (MTCT) of HIV, and to prevent transmission after accidental exposures (post-exposure prophylaxis or PEP). Neither of these approaches completely prevents transmission, but MTCT can reduce the risk of transmission by one half to two-thirds. Similarly, because antiretroviral drugs can greatly reduce the viral load in HIV+ persons, it is possible that widespread use could decrease the sexual transmission of HIV.<sup>3</sup>

*Children's Hospital Los Angeles teamed with community-based prevention organizations to provide an integrated care model for youth with and at high risk for HIV infection. The model offered a general medical clinic for youth and psychosocial services such as counseling and case management. Peer educators also conducted extensive street outreach where high-risk youth congregate. The program developed a computerized referral system for local youth services available on the Internet.<sup>11</sup>*

## policy/legal level

HIV infection is closely linked to and often fueled by structural factors such as poverty, discrimination and lack of power for women. The Center for Young Women's Development is a peer-run organization in San Francisco, CA that promotes self-sufficiency, community safety and youth advocacy among young women aged 14-18 who are involved in the juvenile justice, foster care systems and/or have lived on the streets. The Center provides employment, leadership and training for young women to educate others in their community. Equipped with the knowledge and opportunity to train others, young women are more likely to incorporate these skills into their own lives.<sup>12</sup>

*Political and legislative factors can also hamper HIV prevention. For example, there is currently a ban on federal funding for needle exchange programs in the US. Connecticut addressed the problem of access to clean needles through a program that cost the state nothing and was highly effective. A partial repeal of needle prescription and drug paraphernalia laws resulted in dramatic reductions in needle sharing, and increases in pharmacy purchase of syringes by IDUs. Needle sharing dropped from 52% before the new laws to 31% after implementation, street purchase fell from 74% to 28%, and pharmacy purchase rose from 19% to 78%.<sup>13</sup>*

## what have we learned?

Prevention is more than a single program or intervention. A comprehensive HIV prevention strategy addresses multiple levels to protect as many people at risk for HIV as possible. We should learn from and promote the effectiveness of HIV prevention programs already in place, as well as continue to evaluate these programs.

7. El-Bassel N, Witte SS, Gilbert L, et al. The efficacy of a relationship-based HIV/STD prevention program for heterosexual couples. *American Journal of Public Health*. 2003;93:963-969.

8. Hays RB, Rebchook GM, Kegeles SM. The Mpowerment Project: community-building with young gay and bisexual men to prevent HIV1. *American Journal of Community Psychology*. 2003;31:301-312.

9. Sikkema KJ, Hoffmann RG, Brondino MJ, et al. Outcomes of a community-level intervention among adolescents in inner-city housing developments. Presented at the International Conference on AIDS, Barcelona, Spain. July 2002. Abst# WeOrD1276.

10. Fuchs J, Colfax G. A shot or a pill: exploring biomedical approaches to HIV prevention. *Focus*. 2004;19:1-4.

11. Schneir A, Kipke MD, Melchior LA, et al. Children's Hospital Los Angeles: a model of integrated care for HIV-positive and very high risk youth. *Journal of Adolescent Health*. 1998;23(2Suppl):59-70. Computerized referral system: [www.caars.net](http://www.caars.net)

12. Center for Young Women's Development. [www.cywd.org](http://www.cywd.org)

13. Groseclose SL, Weinstein B, Jones TS, et al. Impact of increased legal access to needles and syringes on practices of injecting-drug users and police officers-Connecticut, 1992-1993. *Journal of Acquired Immune Deficiency Syndromes*. 1995;10:82-89.