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Enhanced HIV Testing, Treatment, and Support for HIV-Infected Substance Users

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Enhanced Human Immunodeficiency Virus (HIV) testing and treatment have been proposed as a strategy to further decrease AIDS-related morbidity and mortality and to reduce HIV transmission.[1] Appropriate use of highly active antiretroviral therapy (HAART) stops viral replication, rendering HIV-1 RNA levels undetectable in plasma and sexual fluids. As a result, continued use of HAART leads to long-term remission of HIV disease and decreased risk of HIV transmission. The latter has been most dramatically illustrated with vertical transmission: use of HAART has virtually eliminated vertical HIV transmission in the developed world. A protective effect of HAART has also been reported in HIV serodiscordant heterosexual couples and in longitudinal population-based studies. More recently, this association has also been substantiated in a longitudinal cohort involving intravenous drug users.[2]

However, despite substantial increase in HAART use since 1996, HIV incidence has not decreased during the past decade in most industrialized countries. In the United States, it is estimated that 55 400 new infections per year have occurred for the past decade.[3] This is in part because at least 20% of HIV-infected individuals are unaware they are infected, and these individuals disproportionately account for new HIV transmissions. To optimize case finding, the Centers for Disease Control and Prevention (CDC) has recommended expanded HIV testing practices, including "opt-out" HIV testing in health care settings to optimize case finding.

Another contributor to the persistent level of new HIV infections relates to the ongoing HIV epidemic among substance users, including users of intravenous and nonintravenous drugs. Substance users have high HIV prevalence rates and high-risk behaviors, and as such remain an active source for new HIV infections. Substance-use treatment and prevention remain largely unrecognized as essential components of comprehensive HIV prevention strategies.

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Treatment for substance use helps engage individuals into testing and entry, adherence, and retention into HAART programs. Similarly, evidence-based prevention and harm-reduction interventions are critical for facilitating access to health care by substance users and for linking them to HIV testing and treatment.[4]

Traditionally, there has been a reluctance to initiate HAART in substance users, driven by the belief that the multiple social, medical, and economic challenges they typically face would make them unable to adhere to HAART, therefore compromising treatment effectiveness and promoting HIV drug resistance.[5] However, recent evidence demonstrates that after adjusting for adherence, drug-injecting substance users and nonusers have comparable 5-year survival when receiving HAART.[6] This highlights the importance of comprehensive treatment programs that address substance use and HIV concurrently, because these combined approaches may improve adherence and outcomes. Also, concerns regarding the emergence of an epidemic of drug-resistant HIV have not materialized, even in jurisdictions that favor aggressive HAART treatment of substance users. [7] Furthermore, comprehensive HAART programs targeting substance users have been found to be associated with substantial decreases in new HIV infections.[2]

The National Institute on Drug Abuse at the National Institutes of Health and the International AIDS Society have organized an interagency consultation to review the state of the art and generate recommendations regarding the management of HIV infection in substance users (http://www.seiservices.com/nida/1014068/index.asp). These recommendations emphasize the urgency of seeking (proactively identifying substance users), testing (annually, per CDC recommendations), treating (using HAART, per current guide-lines), and retaining (through optimal treatment of the substance-use disorder) HIV-infected substance users.

As with other marginalized populations, increased access to HIV testing has been shown to enhance treatment uptake in substance users.[8] However, seeking and testing of substance users should be expanded outside of traditional health care settings, because these services are underutilized by substance users, in part owing to lack of insurance, criminalization, and fear of stigmatization. Substance-use treatment and prevention programs provide a unique opportunity to engage substance users in care and to enhance HIV testing. However, implementation will require policy changes. For example, in the United States less than one-third of treatment programs for substance users currently offer HIV testing and counseling. Also, policies in several countries restrict the roll-out of evidence-based harm-reduction initiatives (eg, needle and syringe exchange programs) and access to evidence-based treatments (eg, methadone and buprenorphine). Moreover, given that less than 17% of the 22.3 million substance users in the United States who require treatment for substance use access a treatment program,[9] alternative sites to enhance seeking and testing need to be explored. In this context, the US criminal justice system is an important target, because substance users are overrepresented among those incarcerated (60% to 70% of those in US jails have a substance-use disorder), and HIV prevalence is also substantially higher among them.[10] Currently there are no standardized practices regarding HIV testing and care across US prison and jail systems. For example, treatment of HIV-infected substance users in the criminal justice system could incorporate discharge planning and medication carryover to ensure continuity of care on reentry into the community.

There is clear evidence regarding the benefits of HAART in reducing morbidity and mortality in substance users. Therefore, HAART should be offered to substance users following existing clinical guidelines. In fact, many substance users will have comorbid conditions (ie, chronic hepatitis C or B infection, HIV nephropathy, or increased cardiovascular risk) that may favor initiation of HAART at higher CD4 levels. Crucial to the

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optimal success of HAART is the need to institute and maintain an evidence-based treatment for the substance-use disorder. A major international concern is that in countries of Eastern Europe and Central Asia, where syringe sharing among users of injected opiates is driving the rapidly expanding HIV epidemic, few of those in need have access to methadone or buprenorphine or access to clean syringes and needles.

Treatment of the substance-use disorder should follow a chronic disease model and should be maintained in parallel to HAART treatment. Ideally these treatments should be integrated, but lack of medical infrastructure in most treatment programs makes this a challenge to implement at present. Engaging and retaining substance users in care pose significant challenges. The best retention rates have been consistently achieved by programs that use a continuity-of-care model and address the complexity of challenges experienced by substance users. These include high rates of psychiatric and infectious comorbid conditions as well as multiple social and economic challenges (homelessness, poverty, food insecurity, lack of medical insurance, incarceration records that jeopardize employment and education loans, and lack of social support). To fully engage substance users into health care, low-threshold services that respond to their immediate needs and serve to facilitate entry into addiction and HIV treatment are in need of expansion.

Moving forward, implementation research should be an essential element of the rollout of seek, test, treat, and retain HIV programs in substance use. This research will be critical in building a knowledge base regarding how to deliver quality interventions efficiently and effectively and how to optimally transfer interventions from one setting or population to another. Seek, test, treat, and retain programs should also involve the collaboration from other ministerial sectors (eg, housing, mental health, food, labor), because economic, legal, and psychiatric concerns in substance users can interfere with adherence to HIV treatment programs.

In summary, available evidence strongly supports the need to rethink the approach to the management of HIV-infected substance users. An aggressive campaign to seek, test, treat, and retain HIV-positive substance users in optimal substance-use treatment and HAART regimens could have a significant effect in decreasing substance use and AIDS-related morbidity and mortality as well as HIV incidence. Immediate policy development is needed to support this strategy and over-come individual and health system barriers to effective integration of substance-use prevention and treatment with HIV programs. Ultimately, the HIV/AIDS epidemic cannot be adequately dealt with locally or internationally without addressing the needs of HIV-infected substance users.

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