

# A comprehensive model for drug abuse and HIV/AIDS health care

## Editorial

Both illicit drug abuse and HIV/AIDS are among the most important health concerns globally. During the past decade, HIV has continued to be a major health challenge among drug abusers.<sup>1</sup> There are a large number of studies on drug abuse among HIV positive patients which have shown injection drug use - either directly or indirectly- is responsible for more than one third of HIV infections.<sup>2</sup>

The National Institute on Drug Abuse (NIDA) reports that from 2005 to 2009, 64 percent of HIV+ people in the U.S. had used an illicit drug, but not necessarily by injection. HIV prevention skills training can lead to reduced sexual risk behavior and more generally sex under the influence of alcohol and drugs among the patients receiving substance abuse treatment.

In addition to substance use and HIV/AIDS, mental health concerns also often complicate prevention and care among this population. Each of these three can mutually affect the other. There is evidence for necessity of removing the barriers for provision of integrated management for HIV/AIDS and drug abuse problems.<sup>3,4</sup> Also there is a substantial body of research which has shown drug abuse problems have co-morbidity with psychiatric disorders<sup>5</sup> and should be managed together. It seems that a better approach would be an integrated approach for all three issues whenever possible.

It is important to understand interacting intricacies of drug abuse and HIV/AIDS. There are studies which have shown alcohol and drug abuse - even in the absence of intravenous drug use- can lead to high risk behaviors and increased chance of HIV transmission.<sup>6,7</sup> On the other hand, HIV/AIDS can promote drug abuse. HIV/AIDS has a bidirectional relationship with mental health problems. It means that HIV/AIDS can lead to psychiatric problems and vice versa.

Both drugs of abuse and HIV/AIDS can affect many physiological and biochemical functions of the body. Therefore, adverse health effects related to drug interactions either from the use of abused substances or the therapeutic agents used for the treatment of these disorders are possible.<sup>8</sup> It has been shown that drug abuse can be a pharmacological and epigenetic<sup>9</sup> barrier for HIV treatment.

Substance abuse treatment can work for HIV prevention. Prevention of pattern changes to injection among non- injection drug users can decrease the chance of HIV transmission. Also drug abuse treatment can promote antiretroviral treatment initiation. IDUs, under substance abuse treatment are more likely to initiate and stay in treatment for their HIV infection.<sup>10</sup> On the other hand the point that some HIV medications such as Efavirenz, Stavudine, Zidovudine, Zalcitabine, and Vinblastine can lead to depression or cognitive dysfunction as their side effects necessitate a comprehensive approach.

Association of psychiatric disorders with alcohol and drug abuse is even a more evidence-based issue and another bidirectional relationship. Drug abusing women are among the fastest growing groups with AIDS. Greater psychiatric problems among female drug

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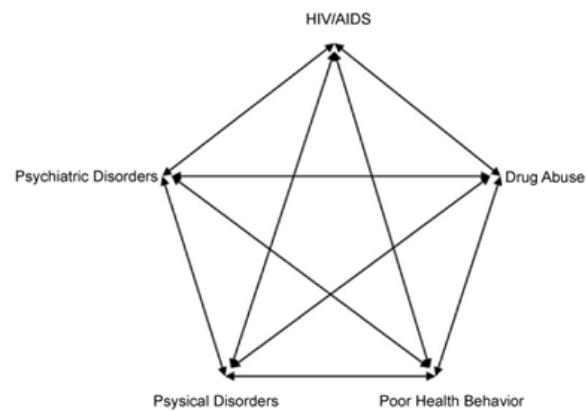
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abusers can bring them more chance for HIV risk behaviors. All these three issues can be a resulting phenomenon from “poor health behavior” and also can lead to this kind of behavior, so poor health behavior would be the fourth factor. Physical disorders are fifth interacting issue, which can has both cause and result of other four. We propose a multidirectional relationship with these last two factors which are poor health behavior and physical disorders (Figure 1).



**Figure 1** Star- Pentagon Model, a comprehensive health model for HIV/AIDS and drug abusers.

## Conclusion

In this model each of five interacting issues is affected by, and also is influencing other four issues. In conclusion we can say any comprehensive public health plan which wants to successfully address drug abuse and HIV/AIDS should seek to integrate care for mental illness and recognize the inter-relationships between these three interacting factors.

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## Conflicts of interest

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