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A comprehensive approach to addiction medicine as an appropriate response to the HIV epidemic among drug users

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ABSTRACT

The services for drug-dependence treatment and care, particularly in low-income countries, should not be fragmented and uncoordinated. A basic package of interventions should be provided in the same place and managed by the same team, with a one-stop-shop approach. The services for substance use disorders should be appealing, accessible, voluntary-based, and science-based. They should also, like efforts to fight other diseases, be included in the community and the public health systems; that is, those who are affected by drug use and those who serve them should not face discrimination. The first-line assistance and the second-line essential elements of the comprehensive package are described in this article. The work of the United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO) to promote science-based and voluntary-based ethical treatment in Asia is also illustrated.

1. Introduction

The United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO) are global leaders in the fight against illicit drug use and dependence. Many parts of East Asia have high prevalence of the use of opioids, amphetamine, and other drugs, as well as high rates of human immunodeficiency virus (HIV) infection. To address drug use and its related disorders, it is necessary to take into account the health, socioeconomic, and security implications of drug use. This article focuses on treatment and describes comprehensive, integrated health-based approaches to drug policies that can reduce demand for illicit substances, relieve suffering, and decrease drug-related harm to individuals, families, communities, and societies.

2. Where are the patients?

A survey of 11 countries in East Asia showed that almost all countries reported provision of various drug-dependence treatment and care services outside of prison settings (e.g., detoxification, maintenance, counseling, peer-support groups, etc.), but less than half indicated high coverage levels of these services in their countries. It has been estimated or reported that there are 1.3 million drug users in Thailand; 154,000 registered drug users in Vietnam; 40,000 problem drug users in Cambodia; and 1,826,000–2,350,000 injection drug users (IDUs) in China; 20% of IDUs being HIV positive and 36.7% of IDU sharing syringes that were associated with methamphetamine use. However, there are only a small number of voluntary-based treatment facilities for drug

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dependence and a small number of patients in these facilities. In other words, there are hundreds of thousands of drug users in need of treatment for drug dependence, but only a few thousand are in treatment. These discrepancies raise the question, where are the drug-dependent patients? Are they in contact with health institutions? Are they offered social protection and recovery opportunities?

Treatment centers are not appealing to those who need them and are not well attended. In many countries, instead of providing treatment or care, officials only want to "clean the streets" of drug users—they are patients whom no one wants. The collective denial involves stigma and discrimination. Large numbers of drug users are in compulsory treatment or detention centers, and those facilities treat drug users using methods that are not based on scientific evidence.

3. The disease is complex, but the response of treatment has been poor

Addiction is a chronic disease that involves a complex pathogenesis. The psychobiological vulnerability includes synaptic function, epigenetic changes [1,2], behavioral attitudes, and mental health disorders. Many factors contribute to vulnerability to the disease, ranging from parental neglect and abuse in childhood, peer pressure, stressful life events, drug availability, to social exclusion or extreme poverty. However, treatment response to this complex disease has been poor. For example, there are few outpatient services and no medications for amphetamine-type stimulant (ATS)-dependent patients. Most methadone clinics treat a limited number of patients and have long waiting lists. During my missions around the world, I have witnessed striking barriers to patients receiving methadone, for example, the requirement to be HIV positive, to have previously failed detoxification, to be registered by the police office, or to be in a residential methadone program for 1 month. Furthermore, it is often observed that among drug treatments, buprenorphine is abused and naltrexone is ignored in many countries.

4. What has to be done?

First-line social assistance, with measures aimed at creating a sustainable livelihood for patients, is the main element that makes drug treatment services appealing to a large number of people. A strong outreach component is also needed, one that possibly uses volunteers (including former drug users), is nonjudgmental and nonconfrontational, and is coordinated with the police. These measures help people to survive. Outreach techniques permit service providers to reach drug-dependent individuals who are not motivated to seek treatment and who live in marginalized conditions. Risk reduction and healthcare interventions, together with hygienic measures, are also essential.

The second-line essential element of the comprehensive package of interventions is the use of appropriate medications. Opiate substitution treatment provided as maintenance therapy has been found to be associated with a reduction in the risk of HIV infection among people who inject drugs. Unfortunately, opioid agonist therapy is not permitted in many countries for ideological reasons and legislative barriers.

There are many studies showing that science-based, ethical, and voluntary-based accessible drug-dependence treatment is cost-effective. For example, a study by Kimber et al [3] has shown that a longer period of substitution treatment is associated with a lower risk of death. Based on a systematic meta-analysis on studies implemented between 1992 and 2009 in China, the United States, Canada, the United Kingdom, Thailand, Austria, Italy, and The Netherlands, it was found that opioid substitution treatment provided as maintenance therapy was associated with a 54% reduction in the risk of HIV infection among people who inject drugs [4]. A study in China (Ni et al, 2012) [5] found that 5678 HIV infections were averted between 2005 and 2010, and the treatment costs saved per dollar increased steadily from 1.21 in 2006 to 8.22 in 2010. In Iran, methadone maintenance has reduced injection from 100% to 16% and syringe sharing from 40% to 45%, as well as improved relationships within families and between partners [6]. Furthermore, Metzger and Zhang [7] showed that drug treatment as HIV prevention has shown reductions in the frequency of drug use, risk behaviors, and HIV infection, and so they suggest the expansion of treatment options such as methadone, buprenorphine/naloxone, and naltrexone. There are now many opportunities for opioid medications. Injectable and implantable sustained-release naltrexone in the treatment of opioid addiction reduces risk behavior for blood-borne diseases such as hepatitis and HIV [8].

Treatment of drug dependence has been demonstrated to improve immune system function, significantly providing protection from infections in general and HIV in particular [9]. Our studies concerning medical supervision and take-home methadone indicate the need for opioid substitution to follow specific rules to be effective with regard to behavioral aspects [10]. Finally, adherence to antiretroviral treatment (ART) has been reported to be significantly enhanced by stable treatment program attendance [11,12].

Treatment of drug dependence also improves psychosocial functioning. Two years of buprenorphine maintenance was associated with reduced heroin use and increased housing and employment [13]. Drug-dependence treatment also reduced criminal activities [14] and preserved immune function [15]. Nevertheless, for those who have comorbid mental health problems, medication for their psychiatric problem is necessary, in addition to treatment for their substance abuse problems. For example, the simultaneous treatment of depression, alcoholism, and drug use can improve HIV treatment adherence [11]. Additional tools, such as self-help group participation contributes to abstinence and psychological well-being [16]. Concomitant mental illness affecting a large portion of drug users has been found to increase the risk of HIV infection and reduce the rate of individuals engaged in risk-reduction behaviors, such as using a needle exchange program, to rates as low as 2%. In fact, scientific evidence suggests that the effects of needle exchange programs can be significantly enhanced through the referral of participants to programs that treat substance use and/or other psychiatric disorders. Our studies of addicted concomitant psychiatric disorders (schizophrenia) showed a significant increase in the

rate of retention in treatment when the psychiatric comorbidity was appropriately considered and specifically treated.

Opioid substitution treatment, needle and syringe programs, and ART applied in combination has been demonstrated to be effective in lowering HIV transmission and prevalence in injecting drug users [17]. Each intervention alone will achieve modest reductions in HIV transmission, which necessitates a combined and comprehensive approach.

Evidence for a strong association between cocaine/methamphetamine use and increased risk of HIV has been repeatedly reported. For this purpose, specific pharmacological therapy should be made available for stimulant users belonging to different subgroups in terms of clinical history and personality traits. Promising medications have been found effective in the treatment of cocaine addiction [18]. In particular, amphetamine and dextroamphetamine, topiramate, disulfiram, and methylphenidate have been suggested to help in the control of compulsory behavior for stimulant addicts [19]. The combination of buprenorphine and naltrexone to reduce cocaine craving has also recently been the subject of experiments.

5. What is needed to start substance abuse treatment?

One can start simple—with a nurse, a counselor, an open door to an office that meets the basic needs of patients (food, clothes, hygienic measures), essential medications, needles and condoms, and educational–job skills training. Healthcare volunteers can be a great resource. In addition to medicine, psychosocial treatment (particularly those less expensive and easy to organize in low-income countries) can reduce risk behaviors and contribute to coping with stress via a significant improvement in their immune system function. A minimal package of psychosocial measures, such as brief intervention, counseling, motivational interviewing, behavioral therapy, self-help groups, and family support, could positively contribute to the response to the HIV epidemic.

6. Conclusions

In the current economy, one should not wait for resources to respond to the needs. Start with the minimal unit for drug-dependence treatment, for example, with a nurse, a counselor, several volunteers to provide food, essential medications, needles, and condoms, and educational or job skills training. These interventions should include not only pharmacological treatment and withdrawal medication, but also basic healthcare, social assistance, and housing, as well as social or job opportunities and skills training. These services should be provided in the same place and managed by the same team, with a one-stop-shop approach. It is critical to have the passion to attract large numbers of patients and create accessible and appealing services. In places that can afford it, it would be ideal to have a one-stop-shop approach that includes detoxification and maintenance medications (methadone, buprenorphine), self-help groups, and all the relevant services, such as mental healthcare, healthcare, dental care, therapies, vocational skill trainings and employment reintegration, social assistance, outreach and home visiting, and overdose prevention. Finally, to move from a moralistic approach to a science-based and compassionate approach, we need the enthusiasm of a new generation of professionals in addiction medicine.

Disclaimer statement

This article does not necessarily reflect United Nations policy, but only the personal view of the authors.

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