HIV Prevention, Treatment, and Care for People Who Inject Drugs

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(See the major article by Liu et al on pages 442–53.)

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Significant advances have been made in recent years in controlling the human immunodeficiency virus (HIV) epidemic. The number of people newly infected with HIV is declining globally [1], whereas antiretroviral therapy (ART) has dramatically decreased HIV-related mortality [2] and is now an accepted preventive intervention in itself [3]. Despite these advances, HIV infections among people who inject drugs continue, with injection drug use driving epidemics in diverse countries such as China, Russia and Pakistan, and increasing concern about the emergence of injection drug use in high HIV prevalence countries such as Kenya [4, 5].

In this issue of the Journal, Liu and colleagues present findings that call attention to the importance of HIV prevention, treatment, and care services for people who inject drugs, and the effectiveness of these services in preventing deaths in this population [6]. The setting for their study was China’s national methadone maintenance program, first established in 2004 in response to evidence that drug injection, primarily heroin, was driving the country’s HIV epidemic. The establishment and extraordinary, unprecedented scale-up of this program—711 clinics in 2011, with more than 300,000 cumulative clients—is a public health triumph for the Chinese government, with evaluations showing reduced illicit drug use and frequency of injection among clients [7]. Here, Liu et al [6] present the first study of mortality among Chinese methadone clients, with 2 key findings: earlier initiation of ART (at CD4+ T-cell counts >300/mm3) among HIV-positive clients was protective against death, and methadone doses >75 mg/day were protective against death for all clients, regardless of HIV status.

That earlier initiation of ART reduced mortality risk is not surprising, but it is a welcome demonstration of the feasibility and effectiveness of ART in the treatment and care of HIV-positive people who inject drugs. It complements the body of evidence demonstrating equivalent virological responses to ART among people who inject drugs and their noninjecting peers, without higher rates of development of antiretroviral resistance [5]. Despite such evidence, however, ART coverage is lower among people who inject drugs than other populations affected by HIV [5]. In 2010, the Reference Group to the United Nations on HIV and Injecting Drug Use reported that, worldwide, only 4% of HIV-positive people who inject drugs were receiving ART [8]. We see some evidence of suboptimal coverage in the Liu et al cohort; 14% of ART-naive HIV-positive clients were actually ART-eligible, and of ART-experienced clients, over half had commenced treatment after their CD4+ T-cell counts fell below 200/mm3 [6]. Poor ART coverage among people who inject drugs has significant implications for broader efforts to control HIV, as epidemics among this population can rapidly transition to self-sustaining generalized epidemics, particularly in developing countries [9]. In this era of “Treatment as Prevention” [10], the urgent need for increased ART coverage and early initiation of treatment among people who inject drugs is clear.

How are we to achieve this? Methadone maintenance and other forms of opioid substitution treatment (OST) are now the standard of care for opioid dependence, with methadone and buprenorphine both included on the World Health Organization List of Essential Medicines [11]. The potential for OST to act as a conduit to ART has been demonstrated, with people who inject drugs who are in OST entering ART more
rapidly than their out-of-treatment peers and showing higher rates of ART adherence [12]. For HIV-negative people who inject drugs, OST halves the risk of HIV seroconversion [13]. As Liu et al [6] show, adequate methadone doses (>75 mg/day) are independently protective against death, an effect possibly mediated by greater treatment retention with higher doses. High coverage of quality OST has the potential to significantly increase the proportion of HIV-positive people who inject drugs on ART, and reduce the risk of infection among HIV-negative people who inject drugs [14].

Unfortunately, as with ART, coverage of OST is poor in many regions of the world. In East and Southeast Asia, it is estimated that there are just 4 OST clients for every 100 people who inject drugs, and in Central Asia, fewer than 1 OST client per 100 people who inject drugs [8]. Russia, home to one of the world’s largest HIV epidemics among people who inject drugs, does not permit OST at all [5, 15]. Liu et al [6] note several barriers to OST at the level of the individual (eg, drug users’ knowledge and beliefs about treatment); however, systemic and structural barriers are perhaps more important determinants of access to, and uptake of, OST. Stigmatization of illicit drug use—by healthcare providers; fees, even within ostensibly free treatment systems; onerous procedures for entering treatment such as requiring multiple clinic visits or documentation of prior drug treatment; erratic supply chains; punitive responses to drug use during treatment; denial of other services and rights once identified as a drug user; and notification of OST clients to police—all discourage treatment entry and retention [5].

The question thus becomes one of how to overcome these systemic and structural barriers to care, many of which apply equally to ART as to OST. The critical importance of government leadership in this task is well illustrated by the Chinese example. China’s first HIV strategic plan, released in 1998, resolved to control the spread of HIV among people who inject drugs through education and law enforcement. As early as 2001, national policy documents acknowledged that these activities had been ineffective and drew on international evidence to support the implementation of pilot methadone maintenance programs. The implementation of the pilot programs was multisectoral, with input from the Ministries of Health and Public Security, as well as experts in HIV and substance use disorders. As evaluations of the pilot programs confirmed international experiences of the effectiveness of methadone maintenance in reducing heroin use and criminal activity, legislation was revised to support the expansion of the treatment program; both the Premier and Vice-Premier spoke publicly about the importance of the program and bringing it to scale [16].

The Chinese methadone maintenance program is not without ongoing challenges, of course. Key among these is that lack of understanding of opioid dependence and its treatment among local police can lead to methadone clients being harassed and detained in detoxification centers without access to methadone or ART. Although 140 000 people were in methadone maintenance treatment at the end of 2011, perhaps 2–3 times that number were detained in detoxification centers [5]. Human resource development and the quality of provided care are also concerns [16, 17]. Importantly, these challenges are not seen as insurmountable or reasons to abandon the methadone program; rather, they are acknowledged and efforts to address them are evaluated, again providing an example to be emulated by other countries.

The Chinese example adds to the large body of evidence supporting the use of ART and OST in the prevention and treatment of HIV among people who inject drugs. The effectiveness of OST in reducing injection drug use, HIV incidence and mortality has been demonstrated in geographically diverse countries with racially and ethnically diverse populations, directly refuting claims that OST is not appropriate for some countries or situations [15]. Here we join our colleagues [18–20] in calling for dramatic increases in ART and OST for people who inject drugs. We have the tools to prevent and treat HIV among people who inject drugs. It is well past time we used them to their potential.

Notes

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