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The urgent need for HIV and hepatitis prevention in drug treatment programs in Hungary

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Abstract

We assess HIV and hepatitis testing and counseling in drug treatment programs in Hungary, a country with low rates of HIV but high rates of HCV among injecting drug users. The official context of drug treatment programs is described, and, using key informants from representative drug treatment programs, the practice of HIV and hepatitis testing and counseling in such programs is assessed. While HIV testing and counseling occurs, testing and counseling for HBV and HCV are rare, especially in outpatient settings; and sexual risk in the drug use context is ineffectively addressed by treatment programs. Drug treatment centers are not adequately addressing the need to provide either HIV or hepatitis prevention services. There is an urgent need for preventing HIV and related infections among drug users by integrating HIV and hepatitis B and C prevention with drug treatment.

Keywords

drug users; drug treatment; testing and counseling; HIV infections; Hepatitis infection; Hungary

Introduction

Drug users are considered a “hidden population” – because they are engaged in activities that are illegal and stigmatized, they are difficult to locate, identify and educate. The spread of HIV in many regions of the world has been linked to an increase in injecting drug use. Moreover, people who inject drugs are also at risk of acquiring hepatitis C virus (HCV) as well as hepatitis B virus (HBV). Those who are non-injecting drug users are both at risk of initiating injecting drug use and, particularly if they are the sex partners of IDUs, of acquiring sexually transmitted HIV as well as other sexually transmitted infections (STIs), such as HBV and syphilis. Testing and counseling is an effective tool to prevent and control the epidemics of HIV, HBV and HCV among both injecting and non-injecting drug users and the spread, especially of HIV and HBV infections, to their sex partners.

As many injecting and non-injecting drug users are also medically underserved, drug treatment programs may be the only opportunity for them to receive HIV and hepatitis testing and

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counseling (Levin, Trumble, Edmunds, Statman, and Petersen 1993; Des Jarlais, Stimson, Hagan, and Friedman 1996). Testing and counseling enables drug users who test negative and are at risk of HIV as well as hepatitis B (HBV) and hepatitis C (HCV) infection to learn about the ways to change their behavior (or maintain low-risk behavior) in order to reduce their chances of getting infected with HIV and hepatitis via unsafe sexual or injecting practices (Center for Disease Control and Prevention 1993). Those drug users who test positive will benefit from being referred to social services, and to receive treatment for HIV and hepatitis infections so that they can have longer and healthier lives. From a public health point of view, HIV and hepatitis infected drug users can be educated about how to change their behaviors in order to reduce the chances of transmitting HIV or hepatitis to uninfected injecting or sex partners, or through perinatal transmission to their children, or to get re-infected (Center for Disease Control and Prevention 1993).

There is an abundance of evidence indicating that drug users participating in drug treatment programs reduce their chances of getting infected with HIV and hepatitis (Metzger, Navaline, and Woody 1998; Drugs used for treatment of narcotic addicts 1998). Longitudinal studies show that longer retention and/or completion of treatment are correlated with reduction in risk behaviors and an increase in protective behaviors in terms of decreased injection and sex risk practices (Magura, Rosenblum, and Rodriguez 1998; Rhoades, Creson, Elk, Schmitz, and Grabowski 1998; McCusker, Willis, Vickers-Lahti, and Lewis 1998). Cross sectional studies comparing risk behaviors of drug users in treatment programs with those out-of-treatment also show that drug users in treatment programs report engaging in less high-risk injecting and sexual behaviors (Longshore, Hsieh, Danila, and Anglin 1993; Stark, Muller, Bienzle, and Guggenmoos-Holzmann 1996). Furthermore, studies examining rates of seroconversion for HIV show that drug users in treatment programs have lower seroconversion rates than drug users who are not in treatment programs; also, patients who stay longer in drug treatment programs have lower seroconversion rates than patients who leave the program or who stay there for a shorter period of time (Moss et al. 1994; Hartel and Schoenbaum 1998).

The effect of reduced seroconversion rates may be due to selection bias, as drug treatment programs may selectively concentrate drug users who are more ready to change their behaviors or who already have changed their behaviors and thus are less likely to get infected. Still, drug treatment programs, potentially, may have a crucial role in providing HIV education and further reduce the risk behaviors of those who participate. Moreover, since there is overlap between the routes of transmission for HIV with the routes of transmission for HBV and HCV, drug treatment programs can also be an important venue for preventing the transmission of these infections (Strauss, Des Jarlais, Astone, and Vassilev 2003).

In Hungary, a Central-Eastern European country, both drug use among young people (Elekes and Paksi 1999a; Elekes and Paksi 1999b; Elekes and Paksi 2001; Kó 2001) and unsafe injecting and sexual practices are at a high level or are increasing (Gyarmathy et al. 2002b). Hungary (population 10.2 million) has 350 registered AIDS cases and 2500 estimated cases of HIV infection, and injecting drug users make up only 0.9% of all reported AIDS cases in Hungary (UNAIDS - World Health Organization 2000). Despite the currently low prevalence of HIV, the prevalence of HCV, a marker for HIV risk behaviors, is about 30% among drug injectors (Table 1.) (European Monitoring Centre for Drugs and Drug Addiction 2002). This high level of HCV infection indicates that many factors are present for a potential widespread HIV epidemic among Hungarian drug injectors. This points to an urgent need for HIV prevention among drug users.

While studies in the US indicate the effectiveness of counseling and testing in achieving risk behavior change in drug abusers or those who receive treatment, no studies have evaluated the effectiveness of counseling and testing procedures in Hungarian drug treatment settings.

Although we have seen that AIDS prevention programs based in the United States may have to be fine-tuned to be effective in different cultures (Gyarmathy et al. 2002a), drug treatment programs may be the only venue where drug users in Hungary can receive AIDS prevention interventions.

Official data indicates that of all injecting drug users in treatment settings in Hungary between 4% and 19% get tested (Table 1) (European Monitoring Centre for Drugs and Drug Addiction 2002). Furthermore, in one of our studies among a sample of young drug users in Budapest, 68% of those who had ever participated in drug treatment programs had ever been tested for HIV, compared to our sample of drug users in New York City, where 85% of non-injecting heroin users and 87% of new injectors who had ever participated in drug treatment programs had ever been tested for HIV (unpublished data). This indicates that testing and counseling in drug treatment settings in Hungary is particularly inadequate. In this paper, we assess HIV and hepatitis testing and counseling in drug treatment programs in Hungary. First, we discuss the operational settings of drug treatment programs in Hungary and the absence of testing and counseling requirements by the Hungarian Government. We then describe a survey that we conducted among key informants with the aim to identify the extent to which the need for HIV and hepatitis testing and counseling is met by current treatment programs. Then we suggest ways in which Hungarian drug treatment facilities can be used for preventing HIV, HBV and HCV infection (and other infectious diseases that drug users are at risk of acquiring) among drug users in treatment programs.

The major source of HCV infection among injecting drug users in Hungary is injecting with contaminated equipment, which is also the major source of infection with HIV among most IDUs internationally. Moreover, the epidemiological patterns, that is, the population distribution and dynamics of HCV transmission also parallel the potential population distribution and dynamics of HIV through risk networks. Thus, infection with HCV can be considered a marker for HIV infections in terms of both risk behaviors and risk networks. Our paper calls attention to the need in Hungary for expanded testing and counseling that emphasizes both injecting and sex risk while HIV infection rates are still low rather than wait for a large-scale HIV epidemic before implementing such measures.

Drug treatment centers in Hungary – settings and requirements for testing and counseling

Drug treatment centers in Hungary – settings

In the year of 2000, there were altogether 228 drug treatment centers in Hungary and they treated 12,049 drug users (Topolánszky 2001). Drug treatment centers may function as outpatient, inpatient, or rehabilitation clinics. *Outpatient care centers* have been in existence since the mid-1980s with the purpose of treating substance abusers. Such centers may be functioning such as 1. drug outpatient clinics, 2. addictology centers, called “Támasz” (Support) clinics, 3. psychiatry clinics, or 4. child and adolescent psychiatric clinics. *Inpatient care centers* may be organized as 1. psychiatric departments, 2. addictology departments, 3. crisis departments, or 4. departments for detoxification (emergency rooms, internal departments). Furthermore, drug users may seek treatment in certain health or social institutions, called *rehabilitation centers*.

In addition to offering treatment, social and legal help to the patients, *drug outpatient clinics* also engage in local prevention activities, such as giving education classes at local schools. Some outpatient addictology clinics treat mainly alcoholics, most both alcoholics and drug abusers, and few have specialized in treating only drug abuse. *Hospital-based clinics* cater for

inpatients, ambulatory patients (emergency overdose cases) and outpatients. *Long-term residential homes* provide long-term treatment and rehabilitation.

Operational requirements for treatment programs

Treatment programs are regulated by the College of Psychiatry (“Pszichiátriai Szakmai Kollégium”) of the Ministry of Health and the Hungarian Medical Doctors' Chamber. Basic requirements for drug treatment organizations and clinics are regulated by the March 30, 1998 ordinance of the Association of Hungarian Drug Therapy Institutes (“MADRISZ”) (Pszichiátriai Szakmai Kollégium 1997; Pszichiátriai Szakmai Kollégium 1998), and they specify general operational rules, minimal operational requirements, diagnostic tests that have to be performed, functional requirements, personnel requirements, and miscellaneous issues. *General operational rules* specify the aims of drug therapy as providing treatment in order to reach abstinence and social stability. The list of *minimal operational requirements* specify office spaces and furniture necessary at a treatment site. There are two types of *diagnostics tests* that are required by regulation: urine tests to test for recent drug use and psycho-diagnostic tests, such as at least one type of personality test and the Addiction Severity Index test. The regulation does not require either testing or counseling for any infectious diseases, such as HIV, HBV, HCV or STDs, nor does it mention any type of informed consent procedure for administering any of the required urine or psychological tests. *Functional requirements* specify eligibility to entering a treatment program and human subjects protocols. *Personnel requirements* specify the number and qualifications of staff at the treatment program.

In the year of 2000, the Hungarian Ministry of Health commissioned the College of Psychiatry to evaluate the operation of drug treatment programs across the country using self-administered, mail-in questionnaires. Open-ended questionnaire items included questions assessing the computer system at the facility (hardware and software); types and sources of finance; types of services and outreach activities; professional qualifications of staff; and perceived general satisfaction about the activity of the facility. A short closed ended section assessed the burnout and job satisfaction of the medical staff. The evaluation questionnaire did not assess testing or counseling issues for infectious diseases such as HIV, HBV, HCV, or STDs at all.

While drug treatment programs in Hungary are well regulated and well run in terms of treating addiction, the aspect of disease prevention is not regulated at all: drug treatment centers in Hungary are not required to perform testing or counseling for infectious diseases that are common among drug users.

Drug treatment centers in Hungary – the practice of testing and counseling

Methods

We conducted a survey of key informants to investigate the practice of HIV and hepatitis testing and counseling in Hungarian drug treatment settings. Key informants were directors or, if unavailable, deputy directors of eight of the largest and most frequently visited drug treatment centers in Hungary: four in Budapest, the capital of Hungary, (Programs A, B, and C, D), and four in the countryside (Programs E, F, G and H). Six of the programs were outpatient programs and two were hospital-based treatment programs.

Of the 228 drug treatment centers that were registered in Hungary, we chose eight programs that were listed as the largest programs with the most registered drug users in the country. These centers accounted for about two thirds of all drug users in treatment in 2001. The centers participating in the survey were distributed in the country in a way that half of them were in the capital, where most drug users reside or use, and the other four were located in four major cities across the country: one was located in the north-west part of the country, one in the south-

west, one in the north-east, and one in the southeast. Furthermore, due to their location, these centers served as the treatment hub for drug users in their respective areas.

Of the programs participating in the survey, Programs A and G were drug-free drug outpatient clinics treating only drug users; Program B was a hospital-based outpatient clinic treating only drug users and also providing methadone treatment; Program C was an outpatient addictology center where not only drug users but also alcohol and other addicts were treated; Program D and H were hospital-based inpatient programs, which functioned both as addictology and as detoxification departments where both drug users and alcohol abusers were treated; Programs E and F were outpatient clinics treating only drug users and also providing methadone treatment.

Participating key informants were asked about testing and counseling practices and protocols. Of the eight key informants whom we approached for information, nobody refused to participate. Each telephone interview lasted between 15-60 minutes.

Data collection

Respondents were first asked to briefly describe their treatment programs. Then we asked whether their treatment program provided *testing*. If the program provided testing, then we inquired about approximately what proportion refused to get tested, about what proportion specifically requested testing, and about what proportion was unaware of the availability of testing at the program, but was interested in getting tested. If the program did not provide testing, we then asked why testing was not provided, and whether treatment participants were referred to free testing facilities in the proximate area, and to their knowledge, what proportion of participants did actually go and get tested at the testing facility. We further inquired about the availability of *counseling* (pre- and post-test counseling if testing was available, and general counseling when testing was unavailable). If counseling was provided, we asked whom the counseling was given by (doctor, nurse, social worker, other), whether there was a specific protocol that they followed, and who the counseling was given to (everybody or only selected individuals). If counseling was not provided, we then asked the reason why it was not available. The availability of *condoms* was also asked. Next, we inquired about their opinion of what they thought the *ideal testing and counseling setting* would be in drug treatment settings in Hungary, *how the ideal setting could be realized*, and *what the barriers are to providing testing and counseling* for all participants in their drug treatment program.

Results

Testing—Testing for HIV, HBV and HCV is not routinely offered at drug treatment programs (Table 2.). Where testing is provided, testing services are inconsistently provided and unregulated. At hospital-based programs, laboratory testing is offered onsite as part of the routine blood testing required for hospital admission, but at outpatient clinics testing may not be readily available. Some outpatient clinics may offer HIV, but not hepatitis testing at times, as part of a research study, but even then, some simply take blood and not notify the patients about their test results. “Due to confidentiality issues, the numeric identifier of the biological samples cannot be connected to the person the sample is taken from. As a result, individuals who get tested as part of research projects conducted at our treatment site, have no way of learning their test results.” (Program A) Drug treatment programs that do not offer testing, provide patients with referrals to either the State Public Health Service (“ÁNTSZ”) laboratory, or the Dermatology Clinic to get tested for HIV or HCV or any STDs. (In Hungary, it is common that Dermatology Clinics offer fee and confidential HIV testing.) Some drug treatment programs mandate their patients to be tested for HIV, HBV and HCV, and, as testing may not be conducted onsite, patients need to return with their official test results to the program in order to get enrolled. Many providers described favorable attitudes of drug users towards

testing, although some patients may need initial encouragement. Many drug users specifically ask to be tested, and very few, if any, refuse: “They are very cooperative about testing, once they understand. You would be surprised how many drug users are aware of infectious diseases.” (Program B) The need to test non-injecting drug users for HIV, HBV, or HCV is often viewed as unnecessary. “We do not test non-injecting drug users at all. Why? They don't inject.” (Program E)

Counseling—Counseling and testing are not necessarily always combined. Like testing services, counseling services are also inconsistently provided and unregulated. Counseling can occur without testing and testing can occur without counseling. In most treatment programs there is at least minimal counseling but no testing. Where available, counseling is provided mostly by doctors, but also by nurses or social workers – there is no designated HIV counselor. Most counseling is directed at people already infected, with the aim of referral to treatment and lifestyle counseling, but primary prevention counseling is also common. Health education brochures and pamphlets are readily available at sites where counseling is provided. None of the sites have any protocol for counseling, it is up to the person giving counseling what information gets delivered to the patient. Still, efforts to prevent sexual transmission are widely neglected. “It would be weird to talk about sex with drug users – they have a drug problem not a sex problem.” (Program E) Furthermore, some staff may feel uncomfortable when talking about sex, thus they avoid it. Some treatment programs do not offer either testing or counseling at all: “We are a drug treatment program and not a doctors' office” (Program C). Two of the programs emphasized that drug treatment services were psychiatry/psychology oriented as opposed to disease oriented, and thus did not feel the need to offer testing or counseling. They felt that their patients would probably not appreciate services other than just help with their drug problem. “These kids are not coming here for midnight mass preaching, if you know what I mean. They come here with an addiction problem, and that's what they need help with.” (Program C) Some providers mentioned the importance of informal counseling and disclosure of infections, particularly HCV, among drug users. Drug use networks are very dense in Hungary, especially in smaller towns, and drug users educate each other about blood borne infections. “For example, they would say: ‘Don't shoot after Géza, he is *hepás* (he has hepatitis).’ They know about hepatitis and they know who has it.” (Program H)

Addressing sex risk – availability of condoms—We found that when counseling is provided at treatment centers, sexual risk in the drug use context is often not addressed adequately. Counseling about sex risk was uncommon, and only few programs offered free condoms to their patients. Some expressed the wish, but was unable to do so due to lack of funding. Others were surprised by the question, and said that they never thought about it. Some did not think it would be necessary to give out condoms, others thought drug users would find it offensive if they were offered condoms. “Our patients are mostly heroin injectors. They do not have very active sex lives, so we do not have condoms.” (Program B) “If I gave them condoms, they would think it was a bad joke, or that I was trying to make a pass at them.” (Program D) “If they think it is important to use condoms, then they can buy condoms at the gas station or at the drug store.” (Program E)

Ideal setting for testing and counseling—Programs who provided referrals to off-site testing understood the need to provide on-site testing and counseling, as they were aware that a large portion of the patients ended up not making it to the testing site. While some thought that having a designated member of the staff to provide counseling would be helpful, others thought that counseling should be part of the treatment process, and thus it should be provided by the primary counselor or doctor. Some expressed concern about providing testing and counseling to all participants, including injecting and non-injecting drug users, and thought that providing a “full service” may be overwhelming for certain patients. “Testing everybody

would be great, but is it cost effective? And does it make sense? Is it worth it testing a marijuana user for all these diseases?" (Program E) Due to limited skills of staff and the potential difficulty of obtaining blood samples from some of their patients, the director of one of the programs suggested that saliva and/or urine sampling may facilitate the implementation of testing services. Some expressed the need for a uniform, official protocol that would specify exactly what issues to address during counseling. "Right now if I want to talk about HIV and hepatitis, the patient says 'I know, I know, stop talking about it', but if we had a protocol from the government, we would *have* to talk about HIV and hepatitis, and they would *have* to listen." (Program D)

Barriers to establish testing and counseling services—The main barriers to offering on-site testing and counseling were lack of funding, staff, office space, and training of the staff. Attitude and understanding the need for prevention was also a major problem. "This is the problem in Hungary: there is no HIV, so why bother with testing? But when we end up having a problem, it will be already too late." (Program E) Many emphasized the lack of a comprehensive protocol as an important issue.

Discussion

Hepatitis infections and epidemics among drug users are markers for injecting and sexual behavioral and network risk factors for HIV infection. It is necessary to address both injecting and sex risk for HIV infection in countries with low HIV rates while the rates are still low rather than to wait for a large-scale epidemic. Our paper points out the urgent need for HIV and hepatitis prevention in drug treatment programs in Hungary, a country with currently low rates of HIV but high rates of HCV among injecting drug users.

Similar to other studies we found that testing in hospital-based clinics is available, but in clinics unaffiliated with hospitals it is sporadic (D'Aunno, Vaughn, and McElroy 1999; Strauss et al. 2003). Anecdotal evidence (Head of Program A, personal communication) suggests that in hospitals, testing is available; however, it depends on the primary physician of the drug using patient whether the patient will be sent to the in-house testing facility or not. Those that offer testing on-site depend on grants, and they may not provide patients with their test results due to misinterpretation of the data protection law. Those who do not provide testing may refer some of their patients to outside laboratories, which results in smaller numbers of patients getting tested. Indeed, in our sample of young drug users in Budapest, 68% of those who had ever participated in drug treatment programs had ever been tested for HIV, compared to 50% of those who had never participated in any drug treatment program (unpublished data). Many drug treatment program providers do not recognize the risk of sexual transmission of infectious diseases, and, because HIV rates are low among even injecting drug users, they ignore the risk of other blood borne infections, such as HCV, which is very prevalent among drug injectors in Hungary. The issue of disease prevention among non-injecting drug users is very neglected.

Not all treatment programs offer counseling. Lack of counseling can be explained by the view of managers of the treatment program: they are narrowly focused on the psychosocial aspect of drug use, and ignore the epidemiological connotations of blood borne and/or sexually transmitted infections. Programs that do offer counseling, however, have no established protocols. Counseling efforts should take advantage of drug users' dense networks and utilize outreach and peer education using key informants and/or leaders of the drug user community to reach drug users with up-to-date information about preventing blood borne and sexually transmitted infections.

An alarming finding was that the issue of sexually transmitted infections in the drug use context is often ignored in the counseling provided by treatment programs – there seem to be a missing

connection between drugs and sex behavior in the Hungarian prevention community. Furthermore, staff at drug treatment centers may be unprepared or even embarrassed to talk about issues related to sex and condom use. While some programs understand the need to distribute condoms among their patients, lack of funding prevents them from doing so.

Barriers to establishing testing and counseling services at treatment sites include small and overloaded staff, lack of training, office space, and money. The attitude of managers may be another problem: many may not recognize the need for testing and counseling (D'Aunno et al. 1999).

One limitation of the study is that no secondary data from drug treatment programs is available to supplement informant interviews. Secondary data would have provided insight into the behavior of those getting tested, including differences between those who accepted testing and those who did not and the differences between those who tested positive versus those who tested negative. Unfortunately, drug treatment programs in Hungary are not set up for collection of any data besides the number of participants, their demographics, and their addiction index, but these data are not available for public use.

Recommendations

Implementing testing and counseling for HIV, HBV, and HCV in drug treatment settings is essential in combating the AIDS epidemic among drug injectors and high-risk non-injecting drug users. In countries where the prevalence of HIV is currently low among drug users, providing testing and counseling in drug treatment settings is a crucial part of the public health response for keeping HIV rates low and to prevent a major HIV epidemic among drug users and their sex partners.

Based on our findings and the ideal settings for testing and counseling described by the directors of the selected drug treatment programs, certain changes may be needed in the way in which treatment programs undertake the prevention of HIV and related hepatitis infections. Government officials and drug treatment providers need to be better informed about the necessity of testing and counseling among both injecting and non-injecting drug users, about the risk of getting infected with blood-borne and sexually transmitted diseases, such as HIV, HBV, HCV, and other STDs. Efforts should be made to make counseling for preventing HIV, HCV and HBV, as well as other sexually transmitted and blood-borne diseases readily available at all drug treatment sites (Drugs used for treatment of narcotic addicts 1998). A uniform manual/protocol describing the protocol should be available for the pre- and post-test counseling, and for saliva and/or urine testing of HIV, hepatitis C and B and STDs that can be quickly and efficiently administered by non-phlebotomist staff (Strauss et al. 2003). Ideally, the testing of samples would be performed at a central laboratory, and this could form the basis of a countrywide surveillance system of blood-borne and sexually transmitted diseases among drug users in Hungary. Drug treatment programs should also train drug users as opinion leaders so that they can interact with their social networks to help diffuse risk reduction information, practices and norms among other drug users and other at-risk populations with whom they have social contact (Neaigus 1998). In addition, government and non-governmental organizations should be involved in promoting HIV prevention as a national public health priority. More detailed research is also needed both among treatment providers and injecting and non-injecting drug users to understand the need, motivation, and barriers to testing and counseling (Riess, Kim, and Downing 2001; Spielberg, Kurth, Gorbach, and Goldbaum 2001), along with the practical issues regarding policy and program changes.

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References

- Center for Disease Control and Prevention. "Technical Guidance on HIV Counseling." MMWR Recomm Rep 1993;42(RR2):11–7. [PubMed: 8382337]
- D'Aunno T, Vaughn TE, McElroy P. "An Institutional Analysis of HIV Prevention Efforts by the Nation's Outpatient Drug Abuse Treatment Units." J Health Soc Behav 1999;40(2):175–92. [PubMed: 10467763]
- Des Jarlais DC, Stimson GV, Hagan H, Friedman SR. "Injection Drug Use and Emerging Blood-Borne Diseases." JAMA 1996;276(13):1034. [PubMed: 8847757]
- Drugs used for treatment of narcotic addicts. "21 CFR §291.505." Federal Register 1998:135.
- Elekes, Zs; Paksi, B. Manuscript; Budapest: 2001. "A Felnőtt Néesség Droghasználata És Alkoholfogyasztása Magyarországon."
- Elekes, Zs; Paksi, B. "Fiatalok Szenvedélyei?! Alkohol- És Drogfogyasztás Valamint Dohányzás a Budapesti Középiskolások Körében." Századvég 1999a;(júlaug):53–73.
- Elekes, Zs; Paksi, B. ÁNTSZ Pest Megyei Intézete. 1999b. "Középiskolások Droghasználata És Alkoholfogyasztása Pest Megyében."
- European Monitoring Centre for Drugs and Drug Addiction. Annual Report on the State of the Drugs Problem in the European Union and Norway 2002 - Supplement. Office for Official Publications of the European Communities; Luxembourg: 2002.
- Gyarmathy VA, Molnar A, McNutt LA, Morse DL, Ujhelyi E, Szamado Sz. "Evaluation of a Comprehensive AIDS Education Curriculum - the Role of Good Educators." J Adol 2002a;(25):495–508.
- Gyarmathy VA, Thomas RP, Mikl J, McNutt LA, Morse DL, DeHovitz J, Ujhelyi E, Szamado S. "Sexual Activity and Condom Use Among Eastern European Adolescents--the Study of Hungarian Adolescent Risk Behaviours." Int J STD AIDS 2002b;13(6):399–405. [PubMed: 12015014]
- Hartel DM, Schoenbaum EE. "Methadone Treatment Protects Against HIV Infection: Two Decades of Experience in the Bronx, New York City." Public Health Rep 1998;113(Suppl 1):107–15. [PubMed: 9722816]
- Kó, J. "A Kábítószerhelyzet Buniügyi Vetülete." In: Topolánszky, Á., editor. Jelentés a Magyarországi Kábítószerhelyzetről. Ifjúsági és Sportminisztérium; Budapest: 2001. p. 50-62.
- Levin SM, Trumble JG, Edmunds M, Statman JM, Petersen RC. "Perspectives on Linkage of Primary Health Care and Substance Abuse Treatment." J Addict Dis 1993;12(2):1–8. [PubMed: 8476936]
- Longshore D, Hsieh S, Danila B, Anglin MD. "Methadone Maintenance and Needle/Syringe Sharing." Int J Addict 1993;28(10):983–96. [PubMed: 8407026]
- Magura S, Rosenblum A, Rodriguez EM. "Changes in HIV Risk Behaviors Among Cocaine-Using Methadone Patients." J Addict Dis 1998;17(4):71–90. [PubMed: 9848033]
- McCusker J, Willis G, Vickers-Lahti M, Lewis B. "Readmissions to Drug Abuse Treatment and HIV Risk Behavior." Am J Drug Alcohol Abuse 1998;24(4):523–40. [PubMed: 9849766]
- Metzger DS, Navaline H, Woody GE. "Drug Abuse Treatment As AIDS Prevention." Public Health Rep 1998;113(Suppl 1):97–106. [PubMed: 9722815]
- Moss AR, Vranizan K, Gorter R, Bacchetti P, Watters J, Osmond D. "HIV Seroconversion in Intravenous Drug Users in San Francisco, 1985- 1990." AIDS 1994;8(2):223–31. [PubMed: 8043227]
- Neaigus A. "The Network Approach and Interventions to Prevent HIV Among Injection Drug Users." Public Health Reports 1998;113(Suppl 1):140–150. [PubMed: 9722819]
- Pszichiátriai Szakmai Kollégium. Budapest: 1997. "A Droghambulanciák Szakmai Minimumfeltételei."
- Pszichiátriai Szakmai Kollégium. Budapest: 1998. "A Drográpiás Intézetek Szakmai Minimumfeltételei."

- Rhoades HM, Creson D, Elk R, Schmitz J, Grabowski J. "Retention, HIV Risk, and Illicit Drug Use During Treatment: Methadone Dose and Visit Frequency." *Am J Public Health* 1998;88(1):34–9. [PubMed: 9584030]
- Riess TH, Kim C, Downing M. "Motives for HIV Testing Among Drug Users: an Analysis of Gender Differences." *AIDS Educ Prev* 2001;13(6):509–23. [PubMed: 11791783]
- Spielberg F, Kurth A, Gorbach PM, Goldbaum G. "Moving From Apprehension to Action: HIV Counseling and Testing Preferences in Three at-Risk Populations." *AIDS Educ Prev* 2001;13(6): 524–40. [PubMed: 11791784]
- Stark K, Muller R, Bienzle U, Guggenmoos-Holzmann I. "Methadone Maintenance Treatment and HIV Risk-Taking Behaviour Among Injecting Drug Users in Berlin." *J Epidemiol Community Health* 1996;50(5):534–7. [PubMed: 8944860]
- Strauss SM, Des Jarlais DC, Astone J, Vassilev ZP. "On-Site HIV Testing in Residential Drug Treatment Units: Results of a Nationwide Survey." *Public Health Rep* 2003;118(1):37–43. [PubMed: 12604763]
- Topolánszky, Á., editor. GYISM; Budapest: 2001. "Jelentés a Magyarországi Kábítószerhelyzetről." UNAIDS - World Health Organization. 2000. "Hungary."

Table 1

Total number of IDUs in treatment settings in Hungary, the total number of IDUs tested, number and percent of HCV, acute HBV and HIV infections. Adopted from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) "2002 Annual report on the state of the drugs problem in the European Union and Norway" supplement.

Year	Total number of IDU-s	Total number of IDU-s tested	HCV positive N (%)	HBsAg positive N (%)	HIV positive N (%)
1997	1809	323	50 (16%)	8 (2.4%)	0 (0%)
1999	3127	121	34 (28%)	3 (2.4%)	0 (0%)
2001	3272	315	95 (30%)	11(3.4%)	0 (0%)
2002	About 3200	607	188(31%)	24 (4.0%)	2 (0.3%)

Table 2

Testing, counseling, availability of counseling protocol, assessing sex risk, and referral service offered by the programs participating in the survey

Center	Testing	Counseling	Counseling protocol	Addressing sex risk	Condoms available	Referral
A	Sometimes and only for injectors. If associated with research projects, but no results given to clients tested.	Very minimal if any, if injecting or sex risk comes up during the Addiction Severity Index questionnaire.	No.	No. Does not feel it is necessary among opiate users.	Yes.	Yes.
B*	Yes. Sent to testing within the hospital.	Yes. Given by doctors, social workers, therapists, any staff. If the client self-reports having HCV.	No.	Sometimes.	No.	Yes.
C	No. Does not feel it should be part of a treatment program.	No. Feels that clients are not interested.	No.	No. Feels that clients would not take it seriously.	No.	Yes.
D*\$	Yes, as part of routine blood work procedure for hospital admission. Sometimes clients don't even know they get tested for HIV/HCV.	No. Feels that clients don't have the need for being counseled.	No.	No. Feels that clients would feel offended.	No.	Yes.
E	Sometimes and only for injectors. If they get grant money for testing.	If the client self-reports having HCV.	No.	If client self-reports prostitution. Feels that it would be awkward for others.	No.	Yes.
F	No, due to lack of resources (money, staff, space). When applying to the methadone program, clients have to provide recent test results.	Only if injectors. Given by doctors, social workers, therapists, any staff. If the client self-reports having HCV.	No.	No. Does not feel it is necessary among opiate users.	No.	Yes.
G	No, due to lack of	Yes. Given by doctors,	No.	Sometimes.	Yes.	Yes.

Center	Testing	Counseling	Counseling protocol	Addressing sex risk	Condoms available	Referral
H*§	resources (money, staff, space). Yes. Sent to testing within the hospital.	social workers, therapists, any staff. Sometimes. Given by doctors, if they want to.	No.	Sometimes.	No.	Yes.

* = hospital-based treatment program

§ = inpatient program