

U.S.-Russia Binational Workshop Drug Abuse and Infectious Disease Prevention Strategies

May 24-27, 1999
St. Petersburg, Russia

NIDA INVEST

INTERNATIONAL PROGRAM OF THE NATIONAL INSTITUTE ON DRUG ABUSE

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Preface

The steady increase in collaborative efforts by the U.S. National Institute on Drug Abuse (NIDA) and Russian research institutions demonstrates how the Institute implements its goals regarding international cooperation to (1) foster international communication about local and international drug abuse issues, (2) help build research infrastructures around the world by participating in capacity-building, and (3) foster research collaboration between U.S. scientists and their colleagues in other countries. This last goal is crucial, because we have learned that international collaborations work best when both countries are true partners in the research process.

Through a series of targeted binational meetings, scientific exchanges, research fellowships, and research collaborations, the United States and Russia have established mechanisms to address the twin epidemics of drug abuse and drug-related infectious diseases. In our continuing efforts to develop science-based policies and prevention and treatment guidelines, this unique binational workshop, *Drug Abuse and Infectious Disease Prevention Strategies*, takes U.S.-Russian collaboration even further, encouraging lively discussion and debate on the issues. By working with their Russian colleagues, U.S. researchers benefit from the opportunity to document the effects of prevention and treatment interventions established as an HIV/AIDS and drug abuse epidemic emerges. In turn, Russian policymakers, health care professionals, and community organizations gain access to the latest U.S. research and treatment practices. I commend the meeting organizers and participants for their dedication to joint U.S.-Russian collaboration, and look forward to learning about the results of their efforts.

Alan I. Leshner, Ph.D.

Director, National Institute on Drug Abuse

U.S.-Russia Binational Workshop

Dear Friends:

I am sincerely glad to welcome the participants of the Russia-United States bilateral meeting, Drug Abuse and Infectious Disease Prevention Strategies, to the City of St. Petersburg.

The leading experts of the United States and Russia have come here to discuss the approaches to one of the most serious problems of humankind, to share experiences, and to plan future cooperation in the struggle against drug addiction.

The increase in the rate of drug use, especially by youth, is of growing concern to society. Addiction results not only in individual disease but also in law infringements related to addiction, and in epidemics of such serious diseases as HIV infection, hepatitis, tuberculosis, and sexually transmitted diseases. Under these circumstances, the cooperation between health professionals, municipal and federal authorities, public organizations, and mass media is extremely important, and the development of a comprehensive strategy to prevent drug addiction and related problems is absolutely necessary.

This bilateral meeting is conducted within the framework of intergovernmental agreements and will no doubt be of mutual benefit to both countries.

On behalf of the government of St. Petersburg, I hope for fruitful work and wish participants success.

The Governor of St. Petersburg



V.A. Yakovlev

Acknowledgments

The National Institute on Drug Abuse gratefully acknowledges the support, advice, encouragement, and assistance of the individuals and institutions whose contributions make these U.S.-Russia binational meetings so productive, particularly Dr. Nicolai Yaitsky, Rector, Pavlov Medical University; my fellow meeting coordinator, Dr. Edwin E. Zvartau, Professor, Institute of Pharmacology, Pavlov Medical University; and our colleagues on the U.S.-Russian Organizing Committee: Drs. Irina P. Anokhina, Alexander Y. Grinenko, Yury D. Ignatov, Nikolay N. Ivanets, Evgeny M. Krupitsky, Aza G. Rachmanova, Alexey P. Skripkov, and Elena V. Verbitskaya from Russia and Drs. Peter J. Delany, Paul A. Gaist, Richard H. Needle, and Elizabeth B. Robertson from the United States.

Special thanks are due to the meeting presenters and participants, whose professionalism and motivation combined to foster lively discussions and create a basis for successful cooperation both binationally and among Russian participants from different fields. The U.S. Department of State provided financial support and professional encouragement.

M. Patricia Needle, Ph.D.
Director, International Program
National Institute on Drug Abuse

Meeting Highlights

Executive Summary

For four days in May, NIDA officials and grantees joined with almost 100 Russian participants for an intensive workshop on drug abuse prevention interventions, focusing on families, schools, and communities as well as infectious disease prevention among high-risk and drug-using populations. The unique workshop featured multidisciplinary working groups of drug abuse researchers, treatment providers, community organizers, health care professionals, policymakers, law enforcement officials, educators, youth leaders, and media representatives who concentrated on three areas: (1) drug abuse prevention, (2) drug abuse treatment, and (3) community prevention intervention strategies for drug-using populations.

The *U.S.-Russia Binational Workshop on Drug Abuse and Infectious Disease Prevention Strategies* was held May 24 to 27, 1999, in St. Petersburg. The binational organizing committee was co-chaired by Dr. Edwin E. Zvartau, Professor, Institute of Pharmacology, Pavlov Medical University, and Dr. M. Patricia Needle, Director, NIDA International Program, Office of Science Policy and Communications. Funding for the workshop was provided by NIDA and the U.S. Department of State. Each working group developed recommendations and action steps.

Plenary sessions featured U.S. and Russian presentations about the global and national aspects of drug abuse and infectious diseases, prevention and treatment strategies, and the role of public health systems in health promotion and disease prevention. Opening the scientific plenary sessions, Dr. Don Des Jarlais, Beth Israel Medical Center, New York, presented an overview of global efforts to prevent drug-related HIV and other infectious diseases. He reported that effective HIV prevention includes a comprehensive plan that provides drug abuse treatment, needle exchange programs, medical care, and social services to drug users. Dr. Zvartau summarized NIDA-supported neuroscience research that defines drug abuse as a chronic, relapsing illness characterized by compulsive drug seeking and use; identifies risk factors for progression to addiction; and documents molecular, cellular, structural, and functional changes in the brain attributed to drug abuse. Dr. Peter J. Delany, Acting Deputy Director, NIDA Division of Epidemiology, Services and Prevention Research, reviewed prevailing U.S. approaches to drug abuse treatment and discussed the factors associated with relapse, such as poor coping skills, inadequate treatment, medical or psychiatric problems, or contact with drug-using peers. Professor Irina P. Anokhina, Deputy Director, Research Institute on Addictions, Moscow, reported on Russian research indicating that genetic or neurochemical malfunctions of the mesolimbic system may lead to a predisposition to addiction. Reviewing 20 years of NIDA research on drug abuse prevention, Dr. Elizabeth B. Robertson, Chief, Prevention Research Branch, NIDA Division of Epidemiology and Prevention Research, discussed principles that can guide development of family-, school-, or community-based drug abuse prevention programs for the general population, high-risk groups, or individuals using drugs. She added that effective programs address risk and protective factors as well as cultural, situational, and developmental contexts. Dr. Richard H. Needle, Senior Adviser, NIDA Center for AIDS and Other Medical Consequences of Drug Abuse, reported on more than a decade of NIDA-supported scientific research that documents the effectiveness of community-based interventions in preventing HIV infection, particularly outreach for out-of-treatment drug users, needle and syringe exchange programs, and drug abuse treatment.

In a plenary session devoted to public health programs as an approach to HIV prevention, Dr. Paul A. Gaist, U.S. National Institutes of Health (NIH) Office of AIDS Research, described how public health

programs that complement clinical medical treatment programs effectively promote health and prevent diseases. Dr. Boris M. Taitz, Vice Chairman, St. Petersburg Government Public Health Committee, described a joint government/nongovernmental organization program that combines syringe and needle exchanges, hepatitis B vaccinations, and drug abuse treatment to prevent the transmission of hepatitis and HIV among drug users in St. Petersburg. In his presentation, Dr. A.A. Yakovlev, Medical Director, Botkin Municipal Infectious Hospital, St. Petersburg, estimated that as many as 80 percent of injection drug users (IDUs) in St. Petersburg were infected with hepatitis. He added that more than 90 percent of IDUs report sharing needles or syringes despite understanding the risk of developing hepatitis or HIV infection.

Multidisciplinary Working Groups

Following the plenary session each day, participants met in three interactive working groups: (1) drug abuse prevention, (2) drug abuse treatment, and (3) community-based prevention intervention strategies for drug-using populations. The working group on drug abuse prevention was facilitated by Dr. Robertson and Dr. Olga Stakelberg, Assistant Professor, Department of Narcology, Medical Academy of Postgraduate Education. Dr. Kevin Haggerty, University of Washington; Dr. Lynn McDonald, University of Wisconsin, Madison; and Dr. Mary Jane Rotheram, University of California, Los Angeles, led discussions and presentations about drug abuse prevention as a strategy to limit infectious disease transmission, family- and school-based prevention programs, and structuring prevention programs for the general population and high-risk groups. In an interactive session with local parents and children, Dr. McDonald demonstrated a family-based prevention program.

Dr. Delany and Dr. Evgeny M. Krupitsky, Laboratory Director, Leningrad Regional Narcological Dispensary, facilitated the working group on drug abuse treatment. Within that group, Dr. James A. Hall, University of Iowa; Dr. George Woody, Philadelphia Veterans Affairs Medical Center; and Dr. Carolyn Yahne, University of New Mexico, led discussions and activities about drug abuse treatment as an infectious disease prevention strategy. They explored the relative merits of inpatient and outpatient treatments and approaches to aftercare, relapse prevention, and case management. The treatment group also discussed community prevention intervention strategies, such as HIV testing and counseling, as important components of drug abuse treatment.

Dr. Richard H. Needle and Dr. Nikolay G. Neznanov, Chair, Department of Psychiatry and Narcology, Pavlov Medical University, facilitated the working group on community-based prevention intervention strategies for drug-using populations. They coordinated the discussions led by Dr. Sherry Deren, National Development and Research Institute, Inc.; Dr. Des Jarlais; and Dr. Holly Hagan, Seattle-King County Health Department, about community-based outreach, HIV testing and counseling programs as risk-reduction interventions, and needle exchange programs.

The Russian Situation

Several Russian plenary speakers updated participants on the most recent data about drug abuse and infectious diseases in Russia. Dr. Alexander Ya. Grinenko, Chairman, Leningrad Region Public Health Committee, and representatives from the Research Institute on Addictions, Moscow, reported that drug abuse is increasing in Russia, particularly among young people. Use of heroin, cocaine, and amphetamines is increasing, they added, along with dramatic increases in the prevalence of hepatitis and HIV infections. Dr. Gela Lezhava, Director, Georgian National Institute on Addiction, and Dr. Victor Chtenguelov, Research Director, Ukrainian Research Institute of Social and Judicial Psychiatry, reported similar patterns of increases in drug abuse, hepatitis, and HIV infections in their countries.

Mikhail I. Narkevich, Director, Infectious Disease Prevention, Russian Ministry of Health, reported on Russian national HIV prevention programs.

Dr. Leonid Shpilenia, Chief, City Narcological Dispensary, St. Petersburg, reported on drug abuse prevention efforts that created a citywide interdepartmental working committee, a drug rehabilitation department, special services for children and teenagers, a 24-hour crisis center, and additional staff positions for psychologists and social workers at the drug treatment center. Dr. Krupitsky reported on pharmacotherapies to treat heroin addiction, which in Russia include naloxone for detoxification, clonidine or antidepressants and calcium channel blockers for withdrawal syndrome, and naltrexone or selective serotonin reuptake inhibitors after the symptoms of withdrawal syndrome are in remission. Dr. Aza G. Rakhmanova, Director, Infectious Diseases Department, Academy of Postgraduate Studies, St. Petersburg, discussed an HIV prevention program that trains former drug users as community outreach workers to deliver information, condoms, and sterile injection materials to current IDUs.

Other Russian presenters included Drs. Elena Aravijskaya and Zoja Kostina, Pavlov Medical University; Alexey P. Skripkov, St. Petersburg Department of Administration; Georgij Zazulin, St. Petersburg Ministry of Internal Affairs Drug Control Department; Tatiana Slavina, Leningrad Regional Dispensary of Narcology; Olga Tyusova, The Vozvrashenie Foundation; Grigory V. Latyshev, St. Petersburg Drug Abuse Prevention Center; and Alexey Zadorozhny, St. Petersburg Association of Social Program Development.

Meeting Objectives

NIDA and Russian research institutions have been collaborating on basic and applied research on drug abuse and infectious diseases for more than 10 years. Significant advances in our cooperation began with a 1996 formal Exchange of Letters between NIH, NIDA, and Pavlov Medical University, executed under the umbrella agreement between the United States and Russia. NIDA and Pavlov Medical University have cooperated on a series of targeted binational meetings, exchange of scientists, research fellowships, and research collaborations focusing on the twin epidemics of drug abuse and infectious diseases. The initial agreement between the two institutions has moved forward, on the Russian side, to become a regional consortium of academic and medical institutions in St. Petersburg and the Leningrad Region, including outreach to a multicity network in Russia for work on prevention of infectious disease and drug abuse. Participants in a 1998 bilateral workshop on HIV prevention science recommended that further research collaboration on drug abuse and infectious diseases concentrate in three areas:

- C **Research**, especially focusing on groups at high risk for infectious diseases through abuse of drugs.
- C **Program Development**, especially effective, community-based prevention interventions and expansion of drug abuse treatment.
- C **Information Exchange**, especially facilitating translation and dissemination of research information and practical manuals on prevention and treatment for dissemination to policymakers, health care professionals, and researchers.

Recommendations

Following the plenary session each day, participants met in three interactive working groups: (1) drug abuse prevention, (2) drug abuse treatment, and (3) community-based prevention intervention strategies for drug-using populations. In a two-hour concurrent session, each working group developed recommendations for research agendas and next steps. Participants particularly liked the format of the binational meeting, saying that the diversity of the Russian participants would allow for more interaction

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and cooperation among groups that had traditionally worked independently to address the issues of drug abuse and drug-related infectious diseases. Virtually everyone praised the additional time allowed for small-group discussions and individual interactions. Participants reported that this meeting would help them develop comprehensive drug abuse prevention and treatment programs, and they urged that future meetings follow the same format and involve many of the same participants in order to foster development of strong professional contacts. Specific recommendations from each group follow.

Working Group on Drug Abuse Prevention

- C Establish a prevention consortium of researchers, policymakers, and practitioners that meets monthly for colloquia on various topics.
- C Convene a workshop on evaluation strategies for existing programs.
- C Translate, develop, adapt, and test a set of outcome measures for substance abuse prevention programs, and make them widely available through the Internet, books, and pamphlets.
- C Secure a policy mandate to formulate a municipal strategy for St. Petersburg.
- C Present training workshops for prevention practitioners.

Working Group on Drug Abuse Treatment

- C Create manuals that identify existing drug abuse treatment approaches and educate patients and professionals.
- C Identify, adapt, and develop for implementation new pharmacological and psychosocial treatments to meet existing treatment and service gaps. These treatments will need to be evaluated for effectiveness and modified where appropriate. Of particular interest is the development of basic counseling approaches that may be used by both professionally trained practitioners and recovering persons; case management services that help coordinate care and reduce overlap in service use; and outreach and motivational techniques that help engage high-risk drug users who do not seek treatment.
- C Conduct research on the differential use of professionals and paraprofessionals, including peers who are recovering, which encourages cost-effective strategies for treating drug abusers and their families.
- C Hold regular meetings between U.S. and Russian experts and colleagues to maintain the momentum of the joint efforts.
- C To the extent possible, continue to involve current participants in future binational meetings to foster strong professional relationships.
- C Establish a coordinating mechanism, such as a web site or listserv, within each nation and binationally to foster interaction, information exchange, and feedback among participants.
- C Develop a network to create opportunities for collaboration among researchers and between researchers and practitioners.
- C Increase information on research funding opportunities.

Working Group on Community-Based Prevention Intervention Strategies for Drug-Using Populations

- C Establish a comprehensive approach for HIV and hepatitis prevention that includes outreach, education, HIV testing, and provision of safe injection materials.

- C Monitor the outcome of these risk-reduction efforts and prepare reports for drug control agencies, health committees, and nongovernmental organizations.
- C Build the capacity to conduct more outreach efforts in different environments, including rural areas.
- C Include in epidemiological assessments IDUs who do not seek medical care.
- C Use respected professionals, such as teachers, scientists, and students as well as former drug users, to disseminate information from local sources and from existing international research on prevention.
- C Plan a followup meeting to provide training on how to improve epidemiology research methods, manage prevention programs, and design interventions.
- C Work with respected international organizations, such as the World Health Organization, to document recommended approaches for addressing drug use before criminal intervention.
- C Develop pilot programs for innovative, community-based prevention interventions.

Abstracts

FEATURES OF THE HIV INFECTION EPIDEMIC IN ST. PETERSBURG

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In the past several years, a trend of continuous increase in the prevalence of the human immunodeficiency virus (HIV) infection has been observed in Eastern European countries; this increase is related mostly to injection drug use. The HIV epidemic among drug addicts is characterized by extremely rapid development. HIV entered the community of Russian drug addicts in 1996. Between April 1996 and now, intensive growth in the number of people infected with HIV has been observed in the Kaliningrad (Koenigsberg) region, and 76 percent of the total number of these individuals are injection drug users (IDUs). The infection rate in the region increased 25 times in 2 years. The unfavorable trends in HIV infection are also observed in the Nizhnii Novgorod, Krasnodarsky Krai, Moscow, Tver, and Sverdlovsk regions.

The development of epidemics of HIV infection in St. Petersburg is similar to that in the other Russian areas, but the involvement of IDUs in the epidemic process has a lower rate than in the other areas.

From 1987 until the beginning of 1999, 381 cases of HIV infection were identified in St. Petersburg; among them were 258 inhabitants of St. Petersburg, 45 foreign citizens, and 78 people from other regions of Russia and the Commonwealth of Independent States (CIS).

During 1997 and 1998, 167 cases of HIV infection were identified in St. Petersburg, which is 3.9 times more than in 1996; 121 were from St. Petersburg, 39 were from the other regions of Russia and the CIS, and 7 were citizens of Africa and the Near East. Two individuals had developed acquired immunodeficiency syndrome (AIDS). During this period, AIDS was diagnosed in 39 patients; 26 died of AIDS, and 5 died of other causes.

Among all the patients identified during 12 years, 70 percent were men; the male/female ratio is 2.3:1. HIV infection was diagnosed mostly in people ages 20 to 40 (82 percent of cases); the average age was 29 years.

Until 1997 the main route of HIV infection in St. Petersburg was sexual (most frequently through homosexual contact).

In 1996 the first cases of HIV infection were identified in IDUs; the proportion of HIV infection in IDUs increased dramatically to 47.2 percent in 1997 and to 50 percent in 1998.

From 1996 through 1998, 103 HIV-positive persons were identified who were infected by injection drug use (7 in 1996, 50 in 1997, and 46 in 1998). In addition, the increase in the incidence of people using psychoactive substances in 1997 was similar to that in people from other regions of Russia and the CIS. The average duration of drug use was 5 years.

When studying the routes of HIV transmission, we analyzed 2 groups of infected individuals—the first group was 7 IDUs, and the second was 16 heterosexuals who did not use drugs. We concluded that with the sexual route of transmission, the HIV seroconversion can take years, whereas among IDUs relying on a common source of drugs, the seroconversion is almost immediate. The combination of the sexual and parenteral route of transmission dramatically increases the risk of infection.

The creation of a large source of infection among IDUs suggests the future spread of infection in the heterosexual community will be by sexual and vertical routes. The analysis of the formation and development of HIV infection allowed the conclusion that sources of infection are formed in the drug-using community at a much higher rate than in the heterosexual community. The formation of a large

source of infection in IDUs will lead to an increase in the incidence of HIV infection in the heterosexual community; the incidence then will increase as a result of vertical transmission.

GENETICS OF DRUG ADDICTION: THE PROSPECT FOR DEVELOPING BIOLOGICAL METHODS OF PREVENTION

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Sociopsychological methods for prevention of drug addiction are still important, as is shown by the experience of many countries, but they are not very effective. Recent observations have demonstrated that blood relatives of drug addicts often suffer from depression, various mental disorders, alcoholism, and suicidal behavior. At the premorbid state, drug-dependent persons exhibit behavior disturbances, emotional instability, hyperexcitability, and psychic infantilism. Many young people experiment with drugs when they are easily available, but only some individuals develop addiction.

These facts suggest that there is a cohort of subjects who have a biological predisposition toward drug addiction, which is probably genetically determined. These subjects need special preventive treatment, including the use of biological and pharmacological therapies. Markers should be found that could determine the biological predisposition for psychoactive substance (PAS) addiction.

Experimental and clinicobiochemical studies have demonstrated that both inbred rats sensitive to PAS and patients with alcohol and opiate addictions who have family histories of these diseases exhibit marked peculiarities in the dopamine (DA) neurotransmitter system functions. Some neurochemical indices might be proposed as markers of predisposition toward psychoactive substance abuse.

Molecular-genetic studies of D₂ and D₄ dopamine receptor genes (DR D₂ and DR D₄) in alcoholics and people who are addicted to drugs have also shown certain changes in gene structure. Interestingly, the high rate in the occurrence of DR D₄ 7 repeat alleles, which we observed in alcoholic patients with family histories of alcoholism, was found in people who are addicted to cocaine and opiates as well.

The data available permit us to postulate the identity of the main genetic and neurochemical mechanisms underlying predisposition toward various PAS addictions. No doubt these alterations are polygenic: their various combinations lead to deficient functioning of the mesolimbic DA neurotransmission, particularly within the brain's "reward system." Further studies on these mechanisms will be the basis for elaborating specific practical recommendations for biological prevention of drug addictions.

THE COURSE OF HEPATITIS C INFECTION IN INJECTION DRUG USERS

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Injection drug users are at high risk of viral hepatitis transmitted parenterally. High prevalence (up to 80 percent) of infection with hepatitis C (HCV) among IDUs was shown.

We observed 150 young (14 to 32 years old) IDUs with viral hepatitis who had abused mainly impure drugs or heroin systematically or episodically; the duration of the drug abuse was from several months to 10 years (1 to 3 years in most cases).

The study included routine clinical and laboratory examination; screening for hepatitis B (HBV), HCV, and Cytomegalovirus (CMV) serological markers; and ultrasonography.

In 75 percent of the patients, hepatitis was diagnosed at the first examination.

HCV-monoinfection in this group of patients was comparatively rare—only 13 percent. We observed 20 patients 18.7±2.5 years old with HCV. Eight of the patients indicated episodic drug abuse (heroin); in other cases injection drug use was likely. The hepatitis in nine patients was asymptomatic: there was no jaundice, and ALT activity in serum was three to five times the normal level. Eleven patients were mildly symptomatic: they developed short-term, mild jaundice (serum bilirubin 67.8±36.9 μmol/l) and had up to 20 times increased serum ALT activity.

Most IDUs had HBV and HCV serological markers. In patients who developed acute HBV combined with HCV infection, the disease was more severe. In 20 percent of the patients, toxic liver damage as well as drug use influenced the clinical course of the disease. In five cases of mixed HBV and HCV infection, CMV reactivation was detected.

We therefore concluded that hepatitis C was often associated with HBV infection and, in some cases, with CMV infection. HCV infection was asymptomatic or only mildly symptomatic, but its course was progressive. Chronic drug use by IDUs affected or changed the course of the disease, as did coinfection with different viruses.

MORBIDITY RATES OF SYPHILIS AMONG DRUG ABUSERS—WHAT IS THE REAL SITUATION?

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The morbidity rates of syphilis as well as other sexually transmitted diseases (STDs) are still rather high in Russia. Moreover, the increase in the number of persons infected has been identified in the majority of the regions. The immediate problem is to study the reasons for such outbreaks. Drug abuse is known to be one of the prominent factors in the transmission of venereal disease. The total number of drug abusers among the individuals with acquired syphilis is reported in St. Petersburg monthly. In 1995 there were 305 persons with syphilis who used drugs; in 1996, 247; in 1997, 338; and in 1998, 304. During the first 4 months of 1999, 67 drug users with syphilis were identified. Within the past 5 years drug abusers constituted 2 to 4 percent of the patients with syphilis. These official figures differ significantly from those for the whole of Russia. Thus, the relative number of drug abusers among persons with syphilis in Russia was 5 to 7 percent from 1995 to 1998. We can speculate that the epidemic situation is slightly more favorable in our city. However, it is well known that the majority of drug abusers do not tend to visit official STD specialists in hospitals or outpatient departments. Thus, the official statistical data often do not reflect the real morbidity rates. With the help of certain nongovernmental organizations, such as Vozvrashenie and Vrachy mira, laboratory tests for syphilis have been carried out among 1,569 drug abusers during the past 2 years. The tests identified 147 individuals who demonstrated various forms of acquired syphilis (49 males and 98 females). The significant predominance of females versus males among the individuals infected was connected with their sexual behavior: 32 percent of females experienced numerous sexual contacts in exchange for drugs and did not use any barrier methods of STD prevention.

Finally, current information about the real situation of morbidity of syphilis and other STDs among drug abusers should be based on both official statistical data and on the information from nongovernmental organizations.

THE EXPERIENCE OF THE BUS OF PREVENTION FOR DRUG ADDICTS OF ST. PETERSBURG IN PREVENTING TRANSMISSION OF BLOOD-BORNE INFECTIONS

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The rapid growth of the number of drug users in the past years has been recorded by different state and nongovernment establishments. There are hundreds of thousands of drug users reported in the city. The comparison of these figures with the number of drug users officially registered by the municipal addiction treatment service provides evidence that the majority of active drug users ignore addiction treatment in specialized hospitals. Changes in the use of psychoactive substances demand changing the methods of working with drug users and their environment. It is necessary to establish contacts with drug users to influence their behavior and to prevent HIV transmission. Outreach work is one of methods used to reach these goals.

The program "The Bus of Prevention for Drug Addicts of St. Petersburg" (the Bus), based on outreach ideology, was launched on January 20, 1997. The Bus has fixed parking places in areas with high concentrations of drug use. Bus visitors exchange syringes and needles and receive alcohol pads, condoms, water for injections, and literature on infectious diseases. They can be tested for HIV, hepatitis B and C, and syphilis, and they receive medical and psychological help. The service is anonymous and free. People with addictions can be sent for inpatient treatment of viral HBV, HCV, and STDs.

The goals of the program are to:

- Reduce the risk of spreading drug-related infections and slow down the development of HIV infection and viral hepatitis epidemics among individuals who are addicted
- Carry out prevention and information work among IDUs in St. Petersburg
- Investigate and observe the transmission of infectious diseases among drug users and other high-risk groups.

During 1997 and 1998, 7,452 drug users used the Bus. The total number of visits was 113,557; 2,064 blood samples were taken; 140 people were vaccinated for hepatitis B; 1,726 medical consultations were provided; 880 people visited the psychologist; and several thousand anonymous questionnaires were completed.

The collected data make obvious the dangerous epidemiological situation among street drug users: 10 percent of them are infected with syphilis, 62 percent have HBV, and 80 percent have HCV. There are certain differences in the transmission of infection depending on the substance abused, routes of drug administration, and sex of a drug user. Only four cases of HIV infection have been registered, which demonstrates a favorable result for prevention work.

During 2 years of work, the social, psychological, and demographic statuses of street drug users have been investigated; an attempt has been made to monitor the epidemiological situation in this environment; and trusting contact with drug-dependent persons has been established, which helps to influence their behavior and to prevent HIV transmission. It would be expedient to develop a network of syringe exchange and outpatient counseling centers in St. Petersburg.

**SOME SOCIAL AND BEHAVIORAL CHARACTERISTICS OF PEOPLE INFECTED WITH HIV
VIA SEXUAL OR INJECTION ROUTES OF HIV TRANSMISSION**

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The situation with the HIV infection reflects the current trends in Russia, that is, the inclusion of injection drug users in the epidemiological process. At the moment there are a little bit more than 400 cases of HIV infection registered in St. Petersburg; in about 50 percent of cases, the virus was transmitted by injection of psychoactive substances. At the same time, the sexual route of HIV transmission is also important for St. Petersburg, and 42.6 percent of all newly identified cases of HIV infection in 1998 resulted from the sexual route. In 7.4 percent of cases the route of infection transmission was not identified.

Taking into consideration the features of the epidemiological situation in St. Petersburg, it was extremely important to investigate some social and behavioral characteristics of the people who were infected with HIV by different routes.

By analyzing the HIV-positive patients registered by the Municipal Center for AIDS Prevention and Control the following trends were identified:

- For IDUs (n=60), the age range of HIV-positive individuals was 16 to 38 years (younger than 19: 9; 20 to 29: 45; 30 to 38: 6). The mean age was 23.4 years.
- For people infected with HIV by the sexual route (n=45), the age range was 20 to 59 (20 to 29: 9; 30 to 39: 25; 40 to 49: 9; older than 50: 2). The mean age was 35.0 years.

Ninety percent of HIV-positive IDUs are younger than 22 years old, whereas only 20 percent of those who became infected as a result of sexual transmission are younger than 22. All the differences are statistically significant.

The age difference predetermined the significant difference in the level of education; thus, in the group of IDUs there were 11.4 percent with primary and uncompleted secondary education, 81.8 percent with secondary education, and 6.8 percent with higher and uncompleted higher education. In the group of people infected by sexual transmission, these figures were approximately 13.7 percent, 44.9 percent and 42.4 percent, respectively.

Of those infected via injection drug use, 36.6 percent were unemployed; 27.8 percent of those infected via sexual transmission were unemployed. The difference is not statistically significant.

The age difference is definitely responsible for the differences in marital status. In the group of HIV-positive IDUs, only 16.0 percent were married; in the group with sexual route of transmission, 26.8 percent were married. Moreover, in the group with the sexual route of transmission, the rate of divorce was 2 times higher (29.3 versus 14 percent in the group of drug addicts).

The sexual preferences and habits in the groups being studied were as follows:

- In the group of men infected by the sexual route, the proportion of homosexual men was high (21 of 34). Of 43 male IDUs, only 1 reported homosexual activity.
- People with multiple sexual partners (four or more during the year) made up 64 percent in the group of drug users and 70 percent in the group with the sexual route of transmission.
- Eighty-six percent of drug users and 70 percent of the people with the sexual route of HIV transmission did *not* use condoms.

These data lead to the conclusion that in St. Petersburg the most important routes of HIV transmission are sexual and injection drug use. The study revealed some social differences in the groups

being studied, but it did not identify any difference in sexual behavior. In general, both groups can be considered high-risk groups.

TUBERCULOSIS AND DRUG ADDICTION

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The epidemiological situation with tuberculosis began to deteriorate in 1990 and 1991, and it is still deteriorating. In 1991 the incidence of tuberculosis was the highest—34.0 per 100,000 population. Since 1995 it further increased to 54.7, in 1997 it was already 73.9 per 100,000. Tuberculosis mortality increased two times during these years (1990—8.0 per 100,000; 1997—16.7 per 100,000).

People who abuse drugs and those with toxicomania are the main contributors to the worsening of the situation. The most susceptible group is people younger than 30. The increase in the drug addiction rate is a serious predictor of the infectious diseases that usually accompany drug addiction, including pulmonary tuberculosis.

In recent years the doctors who specialize in tuberculosis (phthysiatricians) often see drug addiction as a concurrent pathology. These patients are being followed to document their condition, the course of the disease, the effectiveness of treatment, and preventive measures. Unfortunately, it is extremely difficult to implement antituberculosis interventions in this group of patients.

According to the data obtained on 37 drug abusers who received treatment in tuberculosis hospitals and clinics of the city, the main route of infection is exogenous (aerosol). The most common form of tuberculosis is primary tuberculosis in which lung tissue is destroyed, BK is present in the sputum, and thoracic and intoxication syndromes prevail.

The treatment of these patients is complicated by their psychological liability. The best results can be achieved by teamwork between the phthysiatrician and narcologist. Our department has determined that the ethiological treatment should include group A and B medicines administered in combination with nonsteroid anti-inflammatory drugs, antioxidants, antihypoxic agents, and adaptogens. Prevention programs should be conducted in accordance with the World Health Organization (WHO) Program on Drug Addiction and Toxicomania.

TREATMENT, REHABILITATION, AND READAPTATION OF TEENAGERS SUFFERING FROM ALCOHOLISM AND DRUG ADDICTION

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Drug addiction and alcoholism in teenagers are extremely important problems in St. Petersburg. Unfortunately, the existing system of narcological care in our country is not adequately tailored to the needs of this group of patients. The absence of specialized institutions makes it difficult to provide separate therapy for patients with early stages of alcoholism and drug addiction and for those in advanced stages of the diseases. The limited number of drug rehabilitation experts is noticeable. The existing treatment methods do not consider the specific subculture values and personalities of teenagers.

To address these problems, the specialized clinic ANTI NARCON developed a complex, three-step treatment and social rehabilitation program for teenagers. It differs from similar programs used by other

public organizations by mandating an active role for the doctor/psychotherapist, which allows the addition of psychotherapeutic methods specially tailored for the management of alcoholism and drug addiction to the conventional therapeutic and rehabilitation technologies used by therapeutic communities. This strategy makes the treatment and rehabilitation process much more dynamic and efficient by focusing on the end result.

The main goal of the program is to provide high-level medical and psychotherapeutic care to teenagers dependent on alcohol or psychoactive and addictive substances as well as to their family members to establish effective social rehabilitation interventions.

The ideology of the program is that addiction is the disease of a whole personality. Removal of the chemical dependency just removes the symptom; it does not solve the problem.

The treatment interventions are conducted in three stages:

- **Detoxification:** The main goal of this stage is the pharmacological correction of withdrawal syndrome and other symptoms of physical dependence, correction of the somatic and psychological state of the patient, and overcoming of the compulsive craving for alcohol or drug use.
- **Removal of obsessive psychological craving for a drug:** The main goal of this stage is the reduction of obsessive symptoms through symptom-centered and personality-centered psychotherapy (NLP techniques, stress-psychotherapy, and group and individual psychotherapy).
- **Psychotherapeutic, psychocorrection, and rehabilitation work:** The main goal of this stage is to solve the difficult intrapsychic neurotic conflict of the person who uses drugs and to develop with the patient the constructive, more mature variants of psychological defense that will provide psychological comfort and internal happiness without psychoactive substances.

Treatment focuses on the third stage, which involves two steps. The first step is conducted in a closed microcommunity and the second in an open microcommunity. The work in both microcommunities is based on the principles of environmental therapy and therapeutic communities.

The program tasks include:

- Removing physical alcohol and drug craving
- Removing psychological alcohol and drug craving
- Correcting the motivational sphere of the interpersonal relationships in different areas of life
- Correcting the voluntary sphere through focusing on the emotionally important goal and the urgent need to achieve this goal (motivational component of the voluntary sphere)
- Correcting self-consciousness, reflection, and independent functioning
- Involving patients in a cultural activity continuum different from their subculture norms
- Improving patients' abilities to provide psychological support for themselves and others in difficult situations
- Forming socially acceptable psychological defense skills
- Creating conditions that draw on the reserve abilities of the personality to achieve individual goals
- Forming self-confidence and trust in the patients
- Developing patients' behavioral and labor skills required by a potential employer
- Discovering the creative potential of the personality
- Discovering the spiritual potential of the personality.

**ORGANIZATION AND CONDUCT OF DRUG-RELATED LAW INFRINGEMENT PREVENTION
INTERVENTIONS BY INTERNAL AFFAIRS AGENCIES**

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Prevention of drug-related law infringements is one branch of activity by internal affairs agencies that is accomplished by interventions directed toward identifying and removing, within the frameworks of the agencies' legal power, the causes and conditions contributing to criminal activity and administrative infringements; ensuring preventive observation of the persons prone to drug-related law infringements; and controlling the legal manufacture, storage, transportation, and use of drugs.

The causes and conditions contributing to drug-related crimes are identified based on an analysis of the crimes committed in a specific region during a given period. The identified causes and conditions are removed directly by the internal affairs agencies or, at their request, by the relevant departments, organizations, institutions, and local executive bodies. To prevent drug-related crimes and other illegal activities, internal affairs agencies conduct the following interventions:

- Influencing social opinion by informing the public about the dangers associated with illegal drug trafficking and drug use, regularly conducting public meetings, and making statements in the mass media that discourage such activity. (Antidrug propaganda should not release details about the methods used to manufacture illegal drugs or the locations of illegal drug markets, both of which could stimulate drug use.)
- Involving the community, mass media, public associations, religious organizations, and charitable and other foundations in prevention efforts addressing drug addiction and related problems, such as HIV/AIDS and other infectious diseases.
- Conducting complex prevention interventions to prevent and end drug-related infringements.
- Organizing regular inspections to enforce the rules governing the manufacture, registration, storage, and transportation of medicines and guarding medical shipments.
- Conducting background checks on people whose jobs provide access to drugs.
- Identifying drugged drivers (if necessary, in collaboration with the health care institutions) and taking the appropriate legal measures.
- Identifying the people who commit drug-related crimes and taking the appropriate legal measures, such as:
 - Controlling drug users who commit crimes and are registered with internal affairs agencies and medical institutions
 - In accordance with current legislation, taking appropriate actions against people who engage minors in drug-using activity
 - In accordance with current legislation, taking appropriate measures against those who organize and maintain drug markets
 - Controlling legal penalties for drug-related crimes.
- Identifying suspects through routine prevention, operation, and inquiry among the following:
 - Those incarcerated primarily for drug-related crimes or crimes committed while under the influence of drugs
 - Those sentenced to compulsory labor or conditionally sentenced primarily for drug-related crimes or crimes committed while under the influence of drugs

- Those set free from legal responsibility for drug-related crimes or crimes committed while under the influence of drugs
- Those penalized for drug-related infractions
- Those ordered by a court to undergo compulsory treatment for drug addiction
- Those providing illegal medical services or self-management using folk-medicine remedies that have narcotic effects
- Those belonging to high-risk groups, such as hippies, punks, prostitutes, or homosexual men.
- Identifying all those who require preventive interventions designed to end infringements related to illegal drug circulation, including:
 - Closing drug trafficking routes and sources of illegal drug distribution
 - Neutralizing criminal plans before crimes are committed
 - Separating manufacturers and sellers of drugs
 - Controlling the manufacturing, processing, storing, and distribution of medicines containing drugs and precursor chemicals and equipment used in illicit drug manufacturing
 - Conducting interventions in response to requests from the public and to requests for information from officials about drug-related crimes to catch the criminals red-handed and disclose the crime
 - Collecting, summarizing, and using the information about subjects who commit crimes to ensure control of their behavior
 - Identifying drug users who commit crimes and taking appropriate legal measures to encourage these subjects to refrain from drug use and criminal activity
 - Identifying and exposing drug dealers, especially those who recruit others (including minors) to drug use and drug-related crimes.
- Detaining people to prevent their escaping questioning or avoiding prosecution for drug-related crimes.

AN OVERVIEW OF TREATMENT APPROACHES IN THE UNITED STATES

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This presentation provides a brief overview of drug abuse and addiction as a biological process that has multiple risk factors and social and behavioral consequences. Information on the prevailing approaches to treating drug abuse and addiction will be presented using data from the Drug Abuse Treatment Outcome Study. This information includes data on program focus, goals, services delivered, and staff that deliver those services. In addition, the presentation will offer data on treatment outcomes for drug use; criminal behavior; psychological, employment, and HIV status; and cost benefits from different treatment modalities.

RELAPSE TO DRUG USE DURING TREATMENT

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Relapse in the United States is understood to be both a common problem among recovering drug abusers and addicts and a common symptom of these disorders. Research indicates that relapse can be triggered commonly by poor coping skills that result from inadequate treatment, medical or psychiatric problems, or contact with drug-using peers. If the goal of treatment is to help the patient become a functioning individual, then treatment professionals must focus on reducing drug use and on improving the individual's capacity to function in the family, work, and social environments.

COMMUNITY-BASED OUTREACH AS HIV PREVENTION

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Outreach is a strategy for providing health-related services to individuals in their own communities, where they live or spend time. It has many advantages, including the capability of reaching individuals in a variety of locations who may not have access to institution-based services. In addition, outreach methods and messages can be adapted to different communities and individuals.

Early in the HIV/AIDS epidemic among drug users in the United States, it became clear that community-based outreach efforts were needed to bring HIV-prevention messages and tools (for example, bleach or condoms) to "hard-to-reach" injection drug users and other high-risk drug users, many of whom were not in drug treatment. To be most effective, outreach staff found they had to be knowledgeable about the communities in which they worked and able to build trust with drug users. In addition to providing information about HIV prevention, the activities of some outreach workers also include reinforcing positive behavior change, providing referrals for service needs, and recruiting for more enhanced intervention efforts.

NIDA has supported multisite outreach-based HIV-prevention research efforts since 1987. Evaluation studies of these projects indicate that they have been successful in reducing injection-related risk behaviors (for example, frequency of injection or sharing of syringes), reducing sex-related risk behaviors (for example, increasing condom use), and reducing HIV seroconversions.

Based on these research findings, outreach has been identified as an effective strategy for reducing HIV risk behaviors. Further research is needed on the specific components of outreach, on which are most effective, and on the most effective combinations of outreach with other HIV prevention strategies.

This presentation describes community-based outreach, provides a brief history of its development (particularly in terms of HIV-prevention efforts), and summarizes the research findings. Principles to follow with regard to recruiting outreach staff and activities engaged in by outreach workers will be discussed. The session will end with a discussion of issues to consider when initiating outreach activities.

**PREVENTION OF DRUG ABUSE AND DRUG-RELATED HIV AND OTHER INFECTIOUS DISEASE:
NATIONAL AND GLOBAL ASPECTS**

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HIV is spreading among IDUs in an increasing number of countries throughout the world. Once the virus is introduced into a local population of IDUs, there is potential for extremely rapid local transmission, with prevalence rising to 40 percent or higher within a period of a few years. There are also many examples of successful HIV prevention efforts for IDUs, both in terms of effective individual- and community-level programs. Providing sterile injection equipment to IDUs is a key component of effective HIV prevention. This requires understanding local drug-injecting practices, developing trusting relationships between health workers and drug users, and providing sufficient supplies of the injection equipment. Programs to provide sterile injection equipment are best implemented within the context of a comprehensive program, including providing drug abuse treatment, medical treatment, and social services to drug users.

**THE ROLE OF MEDICAL PERSONNEL IN PREVENTING TRANSMISSION OF PARENTERAL
INFECTIONS AMONG DRUG USERS**

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In light of the increase of HIV infection and viral hepatitis, a new approach is necessary to provide medical assistance for people who use drugs.

Physicians, psychologists, and nurses are the connection between the drug users who seek help and those who are out of treatment. We must note that the second group is much larger. In the course of therapeutic help, medical personnel have the opportunity to gain the trust of drug users to educate them about HIV infection and viral hepatitis prevention.

Counseling before and after an HIV test plays an important role in preventing these diseases. The counselor should be able to appreciate and to help change the patient's risk behavior.

Many narcologists and nurses are not informed enough about HIV and fear being infected in the course of their professional duties. The overwhelming majority of narcologists and nurses are sure that drug users must be tested for HIV despite the drug users' wishes. Nearly 70 percent of respondents blamed drug users for their being HIV positive.

This study shows that the opposition by medical personnel to some harm reduction programs results partially from official policy and public opinion and partially from underestimates of the current HIV situation even by the medical profession.

THE ROLE OF PUBLIC HEALTH IN HEALTH PROMOTION AND DISEASE PREVENTION

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Issue

The application of public health principles in preventing transmission of HIV and other infectious diseases in drug-using populations has been shown to be effective in many communities and settings around the world. This presentation will provide several conceptual frameworks that are focused on the role of public health and the application of public health principles in health promotion and disease prevention.

Principles

Specific principles and approaches will be presented in detail, but several of the overarching themes of the presentation include the following:

- Public health is a multilevel, multisectorial effort focused on the health of groups and populations, but it often results in better health and disease prevention in the individual.
- The practice of public health, when done well, is effective generally in health promotion and disease prevention and is effective specifically in preventing HIV and other infectious diseases in drug-using populations.
- Public health and clinical medicine are complementary and have enormous potential in prevention efforts when they are brought together and coordinated in a collaborative partnership.
- Health care providers, public health specialists, researchers, community representatives, and policymakers all have a role in addressing the health needs of our communities and, through the application of public health principles, can effectively promote health and prevent disease at both the local and national levels.

DRUG POLICY IN THE CONTEMPORARY WORLD

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Drug consumption is an eternal problem. Some people desire to change the way they feel by using alcohol, coffee, tea, tobacco, and other drugs. But the consequences of using alcohol or other drugs are unpleasant and sometimes dangerous for society. Different societies in different times react differently to the consumption and consequences of alcohol and other drugs.

There are three main types of official policy on drug use: prohibition, permission (or the abolition of prohibition), and indifference. Mixed types of policy have also existed. For example, contemporary governments usually choose one of three main types of policy: *repressive* or "war on drugs" (Russia, United States); *liberal* or "harm reduction" (the Netherlands, Switzerland, England, Australia); *restrictive*, including limiting the general population's access to information about drugs; prohibiting drug use; requiring compulsory treatment for all drug users; and fostering cooperation among health care providers, social groups, police, and nongovernmental organizations (Sweden).

Demand for drugs gives birth to drug markets. Prohibition of drugs gives birth to black market narcobusiness with enormous profits. Absolute prohibition of drugs is profitable only for mafia-like organizations.

Regional study is important for developing a reasonable regional drug policy. Unfortunately, the progressive international movement from "war on drugs" to "harm reduction" is absent in Russia. The contemporary negative consequences of social changes are important for drug treatment also. On the one hand, drug use increases because many people, particularly young people, have no work and no prospects. (Registered rate per 100,000 population of drug and strong-action-substance users increased from 35.3 in 1990 to 148.9 in 1997; registered drug-related crimes increased from 12,553 in 1988 to 198,127 in 1998; convictions for drug-related crimes increased from 5,107 in 1989 to 65,266 in 1997—and these are only official data.) On the other hand, there is a policy of repression. The drug treatment system is getting worse (see Yakov Gilinskiy and Vladimir Zobnev. *The Drug Treatment in Russia: Past and Present, Problems and Prospects*. In: Harald Klingemann and Geoffrey Hunt, Editors, *Drug Treatment Systems in an International Perspective. Drugs, Demons, and Delinquents*. Thousand Oaks, CA: Sage Publications, 1998).

ADDICTIVE BEHAVIOR AND SEXUALLY TRANSMITTED DISEASES AMONG ADOLESCENTS IN ST. PETERSBURG

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The aim of the study was to find out the connection between the sexual activity, risk of venereal diseases, and alcohol and drug use among adolescents. A total of 202 pupils from all the 10th-grade classes of 4 schools in one of St. Petersburg's regions were included in the investigation conducted by the St. Petersburg Central Dermatovenereological Department, University of Uvascula, and Institute of Sociology. The investigation was a mutual Russian-Finnish Educational Program. The confidence level for all the statistical data presented below was 5 percent.

Males were 45.5 percent of those studied. The age of respondents ranged from 16 to 18: 45.0 percent were age 16; 36.2 percent were 17; and 11.9 percent were 18. Among those in the study, 52.0 percent had sexual experience (41.7 to 79.2 percent, depending on age). Less than one-third of the persons experienced their first sexual contact without using alcohol and other drugs. Adolescents reported that 18.3 percent had their first sexual contact during mild alcohol intoxication. At the same time, in 2.5 percent of the cases, sexual contact took place during severe alcohol intoxication. More often, however, in 3.5 percent of cases first sexual intercourse was associated with the sexual partner's severe alcohol intoxication. As much as 2.5 percent of the individuals reported that their first sexual contact was associated with slight drug intoxication. In the majority of the cases sexual activity was not connected with the sexual partner's drug intoxication.

The older the adolescent, the more often the first sexual contact took place while intoxicated with alcohol. In the study sample, 15.2 percent experienced homosexual contacts, the majority at age 17. Alcohol and other drug intoxication was reported more often during homosexual than heterosexual intercourse: In 11.5 percent of the cases homosexual contact was accompanied by mild alcohol intoxication, and in 1.0 percent of the cases it was associated with slight drug intoxication.

Previous STDs were registered in 6.0 percent of respondents (in 1.0 percent, numerous STDs). The majority of individuals under study reported that they were infected during alcohol intoxication. The regular use of condoms was mentioned by only 15.8 percent of adolescents. Of interest is that the

frequency of condom use gradually decreases with age. At the same time, the frequency of STDs increases with age.

The character and source of the information concerning sexual relations that a child received could explain this: 74.8 percent identified the conversations with peers of the same sex as the most important source of information, 55.9 percent from TV programs, and 52.0 percent from newspapers and magazines. The role of social institutions, such as the family and school, has been found to be of less significance (27.5 percent and 28.7 percent, respectively). At the same time, as much as 42.6 percent of adolescents reported episodes of sexual harassment, including 3.0 percent of those from adult members of the family, and rape (13.4 percent). The member of the family or close friend of the child used a condom in such situations only.

The data show the low effectiveness of medical and social control of STDs and alcohol and other drug abuse among adolescents in the city.

DRUG ADDICTION IN THE RUSSIAN FEDERATION

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Drug abuse and illegal drug circulation in Russia have deteriorated continuously and dramatically. The prevalence of drug addiction is increasing, endangering the health of the Russian people, and threatening the economy, order, and safety of the state. The number of children and teenagers who start to use psychoactive substances increases each year. The youth subculture is linked with drug use.

In recent years significant changes have taken place in the structure, clinical picture, and course of drug addiction and toxic substances abuse. In the 1980s and early 1990s the use of homemade opium surrogates prevailed; these were prepared by processing plants. Other "self-made" substances, such as ephedrone and so-called pervitine ("screw") were also popular. Since the middle of the 1990s, drugs such as heroin, methadone, cocaine, and amphetamines appeared in the drug markets. The abuse of medicines with addictive properties, such as ketamine (callipsole), sodium oxybutirate, and tramal also became widespread. Among patients currently being admitted to hospitals, those addicted to heroin predominate. The dramatic increase in the incidence of hepatitis B, hepatitis C, and HIV infection, which has been observed in recent years, is also directly related to increases in the prevalence of drug use.

At the same time, despite the growing threat to the state and society that results from the increase in the illegal drug trade, Russia still does not have the resources to reverse the situation. In 1998 the transition of the narcological service to the modern medical social model of specialized care began. Some difficulties occurred related to the insufficient financing and the lack of adequately trained specialists—pediatric narcologists, psychotherapists, medical psychologists, and social workers.

The narcological service has two important tasks: The first is reorganizing the hospitals and improving outpatient facilities; the second is developing a network of day-care centers. Because there are insufficient rehabilitation institutions, the effectiveness of drug abuse treatment still remains low; after discharge from the hospital, the patients return to the same environment and soon resume using drugs.

The present situation and increasing prevalence of drug abuse and addiction require immediate implementation of a complex of legislation, prevention interventions and efficient treatment, and rehabilitation techniques for people with drug addictions.

**THE ROLE OF INFECTIOUS AND NARCOLOGICAL SERVICES AND PUBLIC ORGANIZATIONS IN
THE PREVENTION OF PARENTERAL INFECTION IN DRUG ADDICTS**

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In our country injection drug use plays the main role in the transmission of HIV infection and other diseases contracted parenterally. The high rate of infection of drug-dependent individuals with hepatitis B and hepatitis C (60 to 80 percent) results in serious social consequences and economic problems. During only 1 year the number of those who contracted HCV increased by 14 percent. The rate of hepatitis C transmission is a reliable indicator of the high-risk behavior associated with injection drug use among new drug users. The rate of infection depends directly on the duration of drug use. In 1997 the S.P. Botkin Infectious Hospital N 30 treated 4,991 patients with acute and chronic viral hepatitis.

A 34-percent increase has been seen in the number of patients with chronic viral hepatitis during the year. In 1997 chronic viral hepatitis was diagnosed for the first time in 446 patients (33.3 percent); in 23.6 percent mixed infections were identified: B+C (71.2 percent), B+C+D, C+B, or C+D. The concurrent diagnosis of drug addiction was made in 592 patients (16.3 percent), viral hepatitis C in 232 patients (33.4 percent), viral hepatitis B in 216 patients (22.6 percent), viral hepatitis A in 232 patients (15.3 percent), and not-verified hepatitis in 13.9 percent.

The epidemiological study run within the framework of the program "The Bus of Prevention for Drug Addicts of St. Petersburg" provides information on the incidence of parenteral and STDs in so-called high-risk groups: 1,448 drug abusers were tested for syphilis, HBV, HCV, and HIV infection. The male-to-female percentage ratio in the study group was 69.6:30.4. HIV infection was identified in three cases; syphilis was found in 165 cases, among them 45 men (28 percent) and 120 women (72 percent). The markers of HBV were detected in 977 drug-dependent individuals (81 percent); in 1,208 people the antibodies to HCV were found (81 percent); and mixed infection with the viruses of hepatitis B and C was detected in 46.8 percent of cases. The proportion of the patients younger than 18 years was 14 percent (246 persons); 26 percent had been using drugs for less than 1 year, and 21 percent had been using drugs for 1 to 2 years.

In St. Petersburg a model was designed and developed to treat drug addiction and hepatitis and to experience working with this category of patients. The study revealed that the infectious hospital uses a low-threshold approach to treat drug-dependent patients and that this approach improves contact with drug-dependent individuals who try to avoid observation in the narcological service. Organization of the specialized department in the infectious hospital encourages drug abusers to seek treatment and promotes abstinence among those who use drugs episodically. The need to create specialized departments to treat concurrent infectious and narcological diseases is now recognized by both the narcologists and infectionists.

Throughout the world public organizations, therapeutic societies, and organizations for self-care and mutual care actively work on the problems of drug abuse and addiction. The governmental and public organizations cooperate to achieve their common goal. For the first time in our city the public foundation "Coming Back" is working in partnership with the S.P. Botkin Infectious Hospital N 30. Coming Back is running The Bus of Prevention for Drug Addicts of St. Petersburg, the goals of which are as follows:

- Developing medical and social care and conducting prevention interventions and education programs among injection drug users in St. Petersburg

- Organizing a system of psychological care for drug abusers based on preexisting medical institutions in collaboration with experts from the municipal health care institutions
- Implementing risk-reduction programs aimed at slowing the AIDS and hepatitis epidemics among drug-using populations.

This program includes syringe exchanges; medical care; psychological support for drug users; statistical data about drug dependence; the conduct of special social demographic and behavioral surveys in specific groups of drug users; voluntary and anonymous testing for AIDS, HBV, and HCV; HBV vaccinations for noninfected drug abusers; outpatient counseling centers at existing medical institutions and where drug users congregate; and the organization of seminars, conferences, and other interventions.

Because drug use begins in teenage years, care for the teenager will be effective only with active participation of the family. To improve the quality of work with teenagers who use drugs, we cooperate with the public organization Azaria. This organization, consisting of the parents of drug abusers, has been working in St. Petersburg for 5 years. It is involved with the development of the widely available system of care for drug-dependent people and their families. In the S.P. Botkin Infectious Hospital N 30 parents can receive counseling from specialists and psychologists and can attend classes for psychological support and psychological codependence.

PHARMACOLOGICAL REHABILITATION OF ALCOHOLICS AND DRUG USERS

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Pharmacological rehabilitation is a method used in the management of drug users during the period of remission to prevent relapse. To some degree it is similar to antirelapse treatment; however, it has some specific features.

Alcoholics, in addition to having the common signs of alcoholism, are characterized by the development of alcoholic anosognosia (the lack of critical attitude about their own illness and denying that they are ill) and also by the decrease of higher brain functions: cognitive functions, memory, and attention. Anosognosia is to some extent related to decline of intelligence. Therefore, pharmacological substances (such as nootropic agents, psychoenergizers, or vasoactive agents) that activate higher brain functions help achieve good results in treatment. These medications are indicated for patients after they recover from a critical condition (detoxification or emotional stabilization) and are administered in rather short courses (3 to 4 weeks); then the treatment is tailored to the needs of each specific patient (for example, a patient recovering from brain trauma will benefit from the combination of vasoactive and nootropic agents), and repeated courses are prescribed if necessary.

The pharmacological rehabilitation of drug abusers includes three important aspects: First, it is used as the palliative replacement therapy for patients in critical condition, for example, in the case of heroin abuse, when administration of medicines having lower addictive potential and lower euphoric effect is required. Such an example would be using methadone maintenance treatment to rehabilitate heroin addicts. Second, pharmacological rehabilitation means prolonged use of pathogenetical support treatment with opiate receptor blockers, in particular naltrexone. Third, as in the case of alcoholism, pharmacological rehabilitation means administration of the medications that improve cognitive function, for example, nootropic agents, psychoenergizers, and adaptogens. The correct choice of the

rehabilitation program allows increased efficiency of medical interventions and ensures the rapid social adaptation of the patient.

HIV COUNSELING AND TESTING FOR DRUG USERS NOT IN TREATMENT

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The objective is to discuss the background and rationale for HIV counseling and testing (HIV C&T) for drug users in a drug treatment program. A further objective is to review ethical issues and describe evidence-based standards of providing HIV C&T.

There is consistent evidence that HIV C&T for drug users is associated with decreased risk behavior, lower HIV prevalence, and lower incidence of STDs. Drug users who know they are HIV-positive are more likely to use condoms and less likely to pass on their used injection equipment. Drug treatment may be an ideal location for reinforcement of HIV risk reduction, but it also presents special ethical questions and the need for linkages to additional services.

There are ethical issues involved in HIV C&T. Drug users' participation in HIV C&T depends on the belief that they will not suffer discrimination or public disclosure of the results. Mandatory testing may have a deleterious effect on the willingness to participate in other prevention activities; thus, voluntary programs providing confidential or anonymous testing are more likely to be successful. Reducing fear and increasing awareness of HIV among drug treatment staff are essential. Laws protecting the confidentiality of records and concerning the consequences for breaches of confidentiality and discrimination help prevent violation of ethical standards.

Pretest counseling should tailor the message to the characteristics of the participant and should also include a focus on future risk-reduction plans, reinforcement of risk reduction, problemsolving, and skill-building. It should screen for homicidal or suicidal thoughts and risk of violence if participants disclose their test results to others.

Posttest counseling should inform participants of their test results, reinforce the risk-reduction plan, make referrals to other services, and initiate partner notification.

HIV C&T in the drug treatment setting provides an opportunity for ongoing contact and reinforcement of counseling messages. However, repeat testing recognizes ongoing risk behavior and raises questions of possible return to drug use. Offering testing can create the need for a case-management strategy and support groups for HIV-positive individuals. A mechanism for referral to medical management, screening for other infections, and harm-reduction services must also be developed.

HIV C&T has become a standard component of HIV education and prevention for drug users in the United States, Europe, and elsewhere. HIV-positive drug users are particularly likely to reduce their risk of transmitting the virus to others. Earning the trust of drug users by protecting them against public disclosure of test results and by making confidential and anonymous testing available will improve drug users' participation in other public health programs. Public education to reduce fear of HIV seroconversion will also encourage HIV C&T among drug users.

RISK AND PROTECTIVE FOCUSED PREVENTION: A SCIENCE-BASED APPROACH

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Prevention research has grown from an idea to a science. The question explored here is how to use the science of prevention to inform planning and implementation of prevention strategies to reduce teenage drug abuse.

Prevention science is based on malleable risk and protective factors that predict disease or disorders. Prevention interventions are targeted at identified predictors of the disorder or problem. Prevention science has been advanced by the National Academy of Science's Institute of Medicine and has been adopted by the National Institute of Mental Health, Centers for Disease Control and Prevention, and Office of Juvenile Justice and Delinquency Prevention, and NIDA.

The idea of reducing known predictors and enhancing known protective factors to prevent health problems is fundamental to prevention science. Drug abuse prevention can be approached in this way. This article presents the major breakthroughs in the development of the research base for substance abuse prevention science in the past 20 years. Longitudinal studies have found that factors associated with neighborhoods and communities, family and school experiences, and peer groups as well as factors in the individual increase the probability of teenage drug abuse. The evidence is also clear that building protective factors and strengthening assets can help reduce the prevalence of substance use among young people. These protective factors include individual characteristics, development of a strong bond with a positive influence, and the presence of healthy beliefs and clear standards against drug use behavior. Furthermore, critical principles for prevention are identified. These include:

- Focusing on enhancing protective factors and reducing known risk factors
- Addressing protective and risk factors at appropriate developmental stages
- Intervening early before the behavior stabilizes
- Including those at greatest risk
- Targeting individuals exposed to high levels of risk
- Targeting community areas exposed to high levels of risk
- Integrating a comprehensive plan to address priority risks with multiple strategies in the family, school, and community
- Addressing the racial, cultural, and economic diversity of the community.

This article describes how communities can take control of their own strategies for ensuring healthy development of their children. Prevention must be owned and operated by the community if it is to work. Profiles of protection and risks vary in different communities. That means different actions may be required in different communities to prevent substance abuse.

The growing menu of research supports prevention interventions that effectively reduce risk and enhance protection. It is possible now to implement outcome-focused prevention. Systems can be designed for risk-reduction and protective factor enhancement to achieve specified prevention outcomes. Communities with effective prevention strategies assess levels of risk and protection in their communities and target the weak areas with programs that have been shown to be effective.

CASE MANAGEMENT: OPTIONS FOR DRUG TREATMENT

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Case management has been used as a supplemental intervention with clients in drug abuse treatment. Because clients have problems in other life areas (for example, the criminal justice system, physical health, mental health, family and friends, or economic problems), case managers can extend treatment beyond either residential or outpatient programs. Clients can then be connected to needed services, and case managers can provide brief counseling as needed. Different models of case management are available, and even these models can be described according to their goals and activities. Basically, case managers provide the following services: (1) assessment of problems, (2) planning treatment with other services, (3) linking clients to these services, (4) coordinating services, (5) monitoring services, and (6) advocating for the client. In this presentation, the basic goals, activities, and models of case management will be presented, and several issues about the feasibility of case management in Russia will be discussed.

ASSESSMENT OF THE EPIDEMIOLOGY OF DRUG USE IN RUSSIA

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The past decade was characterized by the deterioration of the situation with drug use in our country. Analyzing the main statistical indices of drug addiction allowed us to identify the existing trends in drug abuse and addiction prevalence. In recent years significant changes took place in the structure of patients who sought medical care for diseases related to alcohol and drug use. Although most were patients suffering from alcoholism, addiction to other drugs is growing more rapidly.

The increase in drug addiction morbidity began in 1987, and by 1991 this index was already 21.2 per 100,000 population. This index continued to grow, and in the past 8 years (1991 through 1998) it increased 5.2 times. By the beginning of 1999, the medical institutions of Russia had registered 159,999 patients diagnosed with drug addiction, which is 109.6 per 100,000. To the fullest extent the tendency of increasing prevalence of drug addiction is reflected by the number of new cases; that is, patients who received medical care for the first time in their lives. In 1991 the incidence of drug addiction in Russia was 3.9 per 100,000. The increase in the incidence began in 1993. In 1998 the incidence of drug addiction was 35.4 per 100,000; that is, it increased 9 times in 8 years. The annual rate of increase has slowed in recent years; in 1998 it was 25 percent (compared with 37 percent in 1997).

It should be stressed that the incidence of drug addiction differs significantly in different regions of Russia. The problems of providing medical and social care to the patients with toxicomania are less significant because for a long period in Russia there was almost no increase in the number of cases of nonnarcotic substance abuse, and the slight increase in the incidence of toxicomania was observed only recently.

One of the most important problems today is the involvement of young people in the use of psychoactive substances. In the past decade all specialists dealing with problems of youth and teenagers report an increase in the incidence of drug addiction and toxicomania in these age groups. Beginning in 1991, the number of teenagers who were diagnosed for the first time with drug addiction

increased almost 15 times. In the past 8 years the number of teenagers abusing drugs increased almost six times. The incidence of toxicomania in teenagers is also increasing. In 1991 the number of teenagers first diagnosed with toxicomania was 12.5 per 100,000 teenagers; in 1998 it was 20.8. Analysis of the dynamics of governmental statistical indices that characterize the narcological situation among teenagers in Russia suggests that a further increase in the incidence and morbidity of drug addiction and toxicomania is coming. Special epidemiological studies confirm the unfavorable situation in Russia in terms of drug addiction.

SOCIAL, DEMOGRAPHICAL, AND CLINICAL FEATURES OF EPHEDRONE DEPENDENCE AND THEIR RELATIONSHIP TO SECONDARY AND TERTIARY PREVENTION

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Ephedrone overuse began approximately in the mid-1980s and reached its peak by the early 1990s. Despite some stabilization in the increase in ephedrone use, it is still an important problem.

There were 107 patients diagnosed with ephedrone addiction registered in 4 narcological clinics in St. Petersburg. The patients were divided into four groups. Those addicted to ephedrone only constituted 31.8 percent; the largest group consisted of people who abused both opiates and ephedrone—36.5 percent; a third group consisted of people who abused both alcohol and ephedrone—24.3 percent, and the last, and smallest, group consisted of patients who had mixed opiate, alcohol, and ephedrone dependence—7.4 percent.

The patients in these four groups had different social, demographical, and clinical characteristics, which demonstrated the level of their social adaptation and influenced the course and outcome of the disease. Thus, those who used ephedrone only had the highest level of social adaptation. The patients in this group were characterized by the following: less criminal behavior, more compliance during treatment, more likely to seek medical advice by themselves and to do so at an earlier stage of the disease, and more likely to have had a family and a job. This group also had the highest percentage of remission. This group was followed (when the same criteria were assessed) in order by the groups who were dependent on ephedrone and alcohol; ephedrone and opiates; and alcohol, opiates, and ephedrone.

These data suggest that different outpatient rehabilitation programs should be recommended for those who abuse ephedrone only or ephedrone and alcohol; those who are dependent on ephedrone and opiates and ephedrone, opiates, and alcohol will require longer rehabilitation on an inpatient basis.

DRUG-ABUSING FEMALE SEX WORKERS: THE GROUP AT HIGH RISK FOR STDs

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Ninety-seven female street sex workers were studied. Tests for syphilis and HIV infection were conducted as well as special questionnaires for 91 respondents. Fortunately, they were all HIV negative, but 30 women (about 33 percent) demonstrated evidence of syphilis. The mean age of this group was 22.5 years; 44 percent of them were mothers. Most of these women (88 percent) were drug abusers; 94 percent had abused heroin. The average period of drug use was 4 years, and 2 years was the mean

value for length of prostitution. The average number of clients per week was 13, but 38 percent of the investigated females had drug-abusing sexual partners.

The percentages of STDs among the respondents were 30 percent, syphilis; 22 percent, gonorrhea; 28 percent, tryhomoniasis; and 8 percent, chlamydiosis. At the same time only 58 percent acknowledged that they were at high risk for syphilis and other STDs. The risk rate for STDs depended mostly on their refusing to use condoms. The reasons given for unprotected sex were the client's wish (27 percent), psychological pressure (31 percent), and the partner's violence (39 percent). Obviously, women in such a situation required psychological assistance (75 percent) and medical care (62 percent).

The data suggest that drug abuse directly relates to the increasing rate of street prostitution. It also apparently leads to a decrease in controlled sexual behavior and the rejection of protected sexual activity. Undergoing psychological pressure and physical violence from sexual partners made these women need qualified medical assistance.

THE PROGRAM "WORLD WITHOUT DRUGS"

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One of the main activities of the Institute of Cultural Programs is the implementation of projects for children's creative work and education.

For several years the Institute cooperated with the international organization Paint Pals, which deals with child charity programs and includes children from more than 30 countries. Because of this partnership, children from St. Petersburg got to participate in an international arts program. One of the biggest projects was the exhibition "*World Without Drugs—We Can Do It!*," which took place during the Special Session of the United Nations General Assembly devoted to antidrug activity. This exhibition lasted from June to November 1998 in the U.N. headquarters in New York City. Participants of numerous international conferences and members of various commissions and committees of the United Nations visited the exhibition. Of the 125 works selected for the exhibition, one was the drawing of a young girl from St. Petersburg, Svetlana Konokotina. Svetlana's drawing was awarded the special prize and was used for the creation of the U.N. poster advertising the exhibition. The exhibition coordinators decided to display the works in other countries within the framework of the international children's program addressing the struggle against drugs.

The Institute of Cultural Programs is glad that Russia is one of the exhibiting countries. The presentation in St. Petersburg is part of the municipal program "World Without Drugs," which was conducted from May 18 to 25, 1999. The aim of the program is to prevent the spread of drug addiction in youth and to join the city government, educational and cultural organizations, and the mass media to attract public attention to this serious problem.

The program included the May 18 to 23 exhibition of children's drawings in the Navy Engineering Institute and the May 21 to 23 Annual Teenagers Festival, coordinated by the International Trade Fair "Russian Farmer." Last year this festival attracted the interest of young citizens of St. Petersburg. The 1999 motto of the festival was "World Without Drugs," and it was directed toward promotion of a healthy lifestyle as the alternative to ruinous drug dependence. During the festival, Alexandrovsky Garden in front of the Admiralty was the area for various activities for children and teenagers, such as sport

competitions, concours, concerts of youth groups, and the presentation of the achievements of youth subcultures.

The spread of drug addiction is an extremely important problem throughout the world. It involves the whole young generation; that is why the first priority for resolution of this problem is development of educational activity. Unfortunately, knowledge is lacking in the modern approaches to and methods of education in this problem area among the teachers of St. Petersburg.

A group of foreign experts came to St. Petersburg to participate in "World Without Drugs." Among them were Linden Longino, the coordinator of the international program Paint Pals, and Jean Arnsen, the head of U.N. exhibition programs. The purpose of their visit was international cooperation in the field of children's creative work and education and assistance in sharing experiences and ideas among organizations throughout the world that deal with children's arts.

Currently, it is necessary to direct all efforts to the design and development of efficient educational programs to prevent the spread of drug addiction among youth. The main preventive measures are the development of creativity in children, the appropriate organization of their leisure activities, and early help to resolve the existing psychological problems.

HIV INFECTION IN DRUG ADDICTS IN A HEALTH RESORT IN THE SOUTHERN PART OF RUSSIA

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Testing for HIV infection among drug users (and other groups) in Sotchi was started in July 1987, and by the middle of 1997, 150 cases of HIV infection were identified, which is 36.7 per 100,000 persons. For Russia as a whole this index is about 4.7 per 100,000.

Widespread use of homemade opiates by people with HIV infection has been observed since 1994. Since summer 1996, ephedrone has been used, and in 1997 the use of heroin was noted.

Before 1996 single cases of HIV infection were registered in the town, but in the 2 recent years 66 new cases of HIV infection were detected, 57 of them in drug abusers. Among them 22 people (33.3 percent) were infected with HCV, 2 (0.3 percent) were infected with HBV, and 10 (15.1 percent) had syphilis.

Most of those HIV-infected drug abusers used homemade opiate substitutes; in a few cases the use of heroin and ephedrone was observed.

The duration of injection drug use by people with HIV infection was as follows: more than 10 years—25 percent; 5 to 10 years—37.5 percent; 3 to 5 years—25 percent, and fewer than 2 years—12.5 percent.

Most of the HIV-infected people with drug addiction were between 14 and 24 years old. The critical time for starting drug use is during the teenage years.

An analysis of risk factors in injection drug use has shown that 50 percent of people who are addicted had used common bottles of drugs; 21 percent reported sharing syringes.

Since 1996 the leading route of HIV transmission is parenteral, related to drug use; however, since 1997 the sexual route of HIV infection started to increase among drug-using populations, and HIV infection in these people often occurs with other STDs (for example, syphilis or chlamydia).

The incidence of HIV infection traditionally increases during the summer health-resort season and was twice as high as during the rest of the year.

PREVENTION OF HIV INFECTION IN PERSONS ADDICTED TO DRUGS

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The spread of hepatitis B and HIV infection among injection drug users is becoming one of the most important problems in the Samara region. Among all HIV-infected persons in the Samara region, 74.4 percent are IDUs.

In 1998 the Samara Regional Narcological Clinic and Samara Regional AIDS Center performed a rapid assessment analysis among IDUs. The clinic and center specialists responded favorably to the rapid assessment methods.

The implementation of the proposed risk-reduction program for drug users in Samara produced the following results:

- Decreasing the rate of infection due to injection drug use (resulting from syringe exchange, shifting to safer routes of administration, and using peer education)
- Finding solutions for the social, economic, legal, and medical problems contributing to HIV infection in IDUs
- Reducing the hazardous effects of addiction on health and the social, legal, and spiritual sequelae of addiction (harm reduction)
- Developing and improving the collaboration between different departments and services for HIV prevention in IDUs
- Developing and implementing programs of sexual and moral education for various population groups
- Ensuring social protection to HIV-infected IDUs
- Organizing comprehensive medical care for IDUs who are HIV-positive or have AIDS
- Informing the community about the AIDS problem and the risk of contracting this infection through injection drug use
- Strengthening epidemiological control to ensure early identification of HIV-infected individuals and implementing special measures to prevent transmission of the disease among IDUs.

To inform students and the general public, the Samara Regional Narcological Clinic and Samara Regional Center for AIDS and Infectious Diseases run special training seminars on the prevention of drug addiction, HIV infection, and parenteral hepatitis for schoolchildren and students enrolled in professional schools and universities.

Training seminars are also run for schoolteachers, professional school trainers, family center employees, school health professionals, pediatricians, and doctors in the penal institutions. Booklets and leaflets are designed, published, and distributed among all the population groups.

The preventive work is done by the doctors/narcologists in accordance with the training programs of Medicines Sans Frontieres and Life at the Cross-Roads.

The Governor and Provincial Duma have adopted a regional program of actions to strengthen measures against illegal drug trafficking, prevent drug addiction, and treat drug abusers during 1999-2000.

PHARMACOTHERAPY OF HEROIN ADDICTION

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Among registered drug addicts in Russia more than 90 percent are addicted to heroin. The pharmacological treatment of heroin addiction includes three basic components: (1) treatment of severe acute intoxication, (2) treatment of opiate withdrawal syndrome, and (3) treatment to stabilize remission.

The treatment of severe acute intoxication includes the use of the short-acting opiate antagonist naloxone along with symptomatic treatment of cardiovascular and respiratory disorders.

There are two approaches to treating opiate withdrawal syndrome. The first is a clonidine treatment, and the second is based on a combination of an antidepressant (mianserin) and a dihydropyridine-sensitive calcium channel blocker (nifedipine). Benzodiazepine tranquilizers, hypnotics, and analgesic drugs (for example, tramadol) are also widely used to treat opiate withdrawal in Russia.

The pharmacological treatment of persons addicted to heroin during remission (after the withdrawal syndrome is terminated) includes two basic directions. The first is administration of the long-acting opiate antagonist naltrexone to isolate patients pharmacologically from heroin. The second is treating the syndrome of anhedonia, which includes affective disorders (mostly depression), sleep disorders, and craving for heroin and persists from several weeks to several months after detoxification. The most promising drugs to treat the syndrome of anhedonia seem to be selective serotonin reuptake inhibitors (SSRIs).

USE OF CITALOPRAM AND TRANSCRANIAL ELECTROSTIMULATION FOR STABILIZATION OF REMISSION IN PERSONS ADDICTED TO HEROIN

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Most heroin addicts, soon after the termination of withdrawal syndrome, suffer from anhedonia syndrome, which includes affective disorders (mostly depression), sleep disorders, and craving for heroin. Anhedonia syndrome often causes relapse to heroin use. Two different approaches to the treatment of anhedonia syndrome were studied: a regime of transcranial electrostimulation (TES), which activates endorphinergic brain systems, and the SSRI citalopram.

Preliminary results of these studies showed that 10 TES sessions reduced state anxiety and trait anxiety in a statistically significant way (by 36.1 percent and 22.3 percent, respectively) on the Spielberger scale, depression as measured on the Zung scale (by 30.4 percent), craving for heroin assessed with the visual analog scale (by 77.3 percent), and severity of all three components of anhedonia syndrome measured on the anhedonia syndrome scale (affective component by 74.1 percent, cognitive by 63.2 percent, and behavioral by 61 percent). Differences between the experimental (real TES) and control (sham TES) groups were statistically significant after only five TES sessions.

A 3-week treatment with citalopram (20 mg per day) significantly reduced state anxiety (by 42.3 percent) and trait anxiety (by 32.6 percent) on the Spielberger scale, depression as measured on the Zung scale (by 34.8 percent), craving for heroin assessed with the visual analog scale (by 58.9 percent),

and severity of all components of anhedonia syndrome as measured on the anhedonia syndrome scale (affective by 81.3 percent, cognitive by 70.6 percent, and behavioral by 82.3 percent).

There were no significant side effects noted in using either TES or citalopram. It appears that TES and citalopram are approximately equally effective in the treatment of anhedonia syndrome and thus in stabilization of remission in persons addicted to heroin.

SOME DATA ON DRUG ADDICTION, HIV INFECTION, AND HEPATITIS

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In the 1960s, drug addiction became a problem of social importance. The main drugs used were marijuana and opiates, essentially a homemade "cocktail" from poppy or opium injected intravenously.

Between 1982 and 1990 the number of drug addicts and drug users fluctuated between 900 and 1,300 and 1,200 and 1,617 persons, respectively, as the rate of drug addiction increased. During that time, statistical data appropriately reflected the incidence of disease; our assumption is that the real number of drug addicts and drug users fluctuated by 200. Among those infected with hepatitis B, 3.7 percent were drug addicts.

Beginning in 1991, after the collapse of the Union of Soviet Socialist Republics and the aggravation of the social situation in Georgia, the number of registered drug addicts and drug users increased from 2,886 to 6,075 by 1998. But these figures do not reflect the situation adequately; in reality, they might be increased 15 to 17 times. The infection rate of hepatitis B had also changed from 1989. Among Hepatitis Center patients, there were seven times more drug addicts among those infected with hepatitis B virus by 1990. Addicts represented 21.4 percent of those with HBV, and 39.1 percent of those infected with HCV.

From 1989 to 1999, 85 HIV-infected people were registered, and 68 percent of them were drug addicts.

NEUROBIOLOGY OF DRUG ADDICTION

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Drug addiction seems to be one of the most challenging problems of modern society. It must be stressed that drug abuse and addiction are not only a social problem, to be handled with social solutions, but are also health problems. Drug addiction is actually a chronic, relapsing illness characterized by compulsive drug-seeking and -taking. Thus, it is a double-faced health issue, as well as a social issue, affecting both the health of the individual and the health of the society because drug use is a major vector for the transmission of many serious infectious diseases, such as AIDS, hepatitis, STDs, and tuberculosis, as well as for violence.

Only some people experiment with drugs, and among those who do so, only some become addicted. Among those who become addicted, some eventually are able to stop taking drugs, whereas others are not, despite the damage to their health and their personal lives. What causes these differences? Risk

factors for drug dependence may be depicted by a classical triangle of pathogenesis with the drug, the individual, and environmental factors forming its peaks. Drugs differ in their addictive potential. This can be demonstrated in animal experiments with the aid of some updated techniques, such as intravenous drug self-administration, conditioning of drugs' effects, brain stimulation reward, or drug discrimination. Environmental factors (availability of drugs or peer group pressure) play a major role, but genetic factors are also important. Interaction of these factors influences people's behavior toward drugs and underlies a vulnerability to addiction.

Advances in neuroscience over the past decades have revolutionized understanding of drug abuse and addiction. Neural circuits that subsume the action of known drugs of abuse have been identified, and common pathways and mechanisms that are affected by such drugs have been specified. Major receptors for abusable drugs have been identified and cloned, and intracellular signaling mechanisms that follow receptor activation by drugs have been revealed.

The common pathway, the mesolimbic reward system, extending from the ventral tegmental area to the nucleus accumbens and frontal cortex, is the target for the action of drugs of abuse. Activation of this system appears to be a common element that keeps users taking drugs. Prolonged drug use causes pervasive changes in brain function at all levels—molecular, cellular, structural, and functional—that persist long after the individual stops using drugs. One of the most demonstrative tools for seeing drugs' effects on the brain is the positron emission tomography (PET) scan that shows how the organ functions. With the help of a radioactive tracer, the PET scan shows how drugs bind to brain structures and how this action correlates in time with a narcotic high. The PET scan demonstrates long-lasting changes in brain function after drug use has been stopped. A switch in the brain chemistry seems to occur as a result of prolonged drug use. The addicted brain is distinctly different from the nonaddicted brain, as manifested by changes in brain metabolic activity, receptor availability, gene expression, and responsiveness to environmental cues. The changes in brain structure and function are what makes addiction a brain disease.

Thus, the essence of addiction is compulsive drug seeking and use, despite negative health and social consequences. These behaviors not only are the elements responsible for health and social concerns but are also treatment characteristics that matter most to the patient and should be the targets of efforts. Understanding that addiction is a consequence of fundamental changes in brain function means that a major goal of treatment must be either to reverse or to compensate for those brain changes. These goals can be accomplished either through medications or behavioral therapies. Addiction is a brain disease for which the social contexts in which it has both developed and is expressed are critically important. Exposure to conditioned cues can be a major factor in causing persistent or recurring drug cravings and drug use relapses even after successful treatment. Thus, the treatment strategies must include biological, behavioral, and social-context elements. Brain changes must be treated, and behavioral and social cue components must also be addressed, just as they are with other chronic brain diseases. Because addiction is a chronic, relapsing disorder, it must be approached more like other chronic illnesses, with remissions and exacerbations, rather than like an acute illness. A good treatment outcome, and the most reasonable expectation, is a significant decrease in drug use, new behaviors to avoid drug use, and a long period of abstinence with only occasional relapses; that is, the management of the illness rather than a cure.

MANAGEMENT OF DRUG ADDICTION BY CORRECTING AFFECTIVE DISORDERS

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A number of reasons contribute to specific difficulties in the management of affective disorders in drug abusers, particularly adequate assessment of the patient's psychiatric state after detoxification, ineffective antidepressive agents, and high risk of relapse.

In patients with persisting depressive symptoms, there are nearly always depersonalization-derealization symptoms in the form of personality emptiness, when patients do not see any alternative to drug use to remove tension or to relax. The process of taking a patient's detailed history reveals a number of other depersonalization symptoms: the patients perceive themselves as robots.

At this stage of treatment, administration of tricyclic antidepressants (TCAs) is not reasonable because there is a high risk of developing delirium as a result of a patient's sensitivity to the cholinolytic properties of TCA. SSRIs, such as fluoxetine, sertraline, or reversible monoamine oxidase inhibitors, and moclobemide cause a significant excitation effect, which is extremely unpleasant for the patients.

Y.L. Nuller recommends managing depersonalization disorders within the structure of depression and anxiety by administering naloxone simultaneously with antidepressive therapy.

We observed 17 patients (13 men, 4 women) whose average age was 22.3 ± 2.1 years. All patients received 10 to 20 mg/day of paroxetine (Paxil). Naloxone was given once a week in doses of 4 to 10 mg. The action of paroxetine in these patients was not accompanied by excitement. Many patients reported that it was easier for them to resist drug cravings. Nevertheless, depersonalization thoughts persisted. Consistently increasing the naloxone dosage resulted in the complete removal of depersonalization symptoms from 1 to 3 days. Dose-dependent effects were observed: the higher the dose of naloxone, the longer the absence of depersonalization symptoms lasted. Later patients were shifted to naltrexone administered orally.

NEW ASPECTS OF MEDICAL AND SOCIAL WORK

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HIV infection is a socially important problem that has deep social roots. The specific features of the social behavior of HIV-infected people and the character of their social problems suggest the need for support from social workers and psychologists. This support should contribute to the increase in the level of psychological and social adaptation and should aid patients in assuming responsibility for their own social behavior. This group of patients requires long-term and continuous observation by social workers and psychologists based on individual contact and approach in accordance with the principle of continuity of care. All HIV/AIDS patients, in particular those with drug addiction, have various psychological/psychiatric disorders. The high-risk group also includes patients with viral hepatitis and concurrent drug addiction.

These groups of patients require a special psychosocial approach. Specialized departments were opened in the S.P. Botkin Municipal Infectious Hospital N 30 to ensure this approach.

Drug users with HIV/AIDS and hepatitis should negotiate mutual-intention contracts with their treatment personnel. Then patients must receive specialized narcological care (including therapy for withdrawal syndrome), undergo psychological testing, and begin rehabilitation (including individual and group sessions) to find solutions to problems related to social network interaction. The other compulsory element is preventive and educational work.

The main goals of the health and social workers (including the social worker and psychologist) in these specialized departments are as follows:

- Ensuring a positive emotional atmosphere, which motivates the patients and helps personnel maintain a positive attitude (including organizing recreational activities)
- Undertaking individual and group work with patients to ensure secondary prevention (including preventive and educational work)
- Elaborating individual patient's plans for medical and social rehabilitation
- Working with the parents and relatives of the patient.

The experience of this work in our country is limited; that is why at the moment efforts are directed toward the elaboration of the optimal methods of such activities.

INTERACTIVE SESSION ON WORKING WITH PARENTS

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Structural change, social stresses, social disconnection, and hopelessness have an impact on the family system's ability to protect its young children from crises (Reuben Hill's theory on family crisis). The child develops and functions within multiple levels of contextual relationships, which interact in micro and macro ways. To support each child's optimal functioning, one must assess each level of the child's ecology (Bronfenbrenner's theory of child development) and enhance multilevel relationships.

Brief explanations of both theories provide the background for developing prevention and early intervention projects. Strategies for building positive relationships for at-risk youth will be presented based on mental health and social science research: with one parent and one child; within whole families of at-risk youth; between families who share access to local institutions (for example, schools); across same-age peer groups (for example, adults, youth, children); and with helping professionals, school teachers, and the like. Discussions about activity-based approaches to enhance the strengths of family units and social networking within neighborhoods will follow. Alternative evaluations also will be presented.

SEXUALLY TRANSMITTED DISEASES IN PEOPLE ADDICTED TO DRUGS IN A HEALTH RESORT IN THE SOUTHERN PART OF RUSSIA

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It is well known that one of the main groups at risk for HIV infection are people addicted to drugs. An analysis of risk factors (opiates or ephedrone use) has shown that most of these people had used drugs from the same bottle. Of the 66 new cases of HIV infection reported during 1997 and 1998, 57 were drug-dependent individuals.

Because HIV infection can be transmitted sexually, studies were conducted on all HIV-positive drug abusers and control groups to determine the incidence of different sexually transmitted diseases.

The laboratory investigation included tests for chlamydia, mycoplasma, ureaplasma, syphilis, trichomoniasis, gonorrhea, and candidosis. STD diagnosis was confirmed by the immune-enzyme method and the immune-fluorescent method with a number of domestic and foreign test systems.

The analysis of clinical symptoms in the control group had shown that 44 percent of the men had prostatitis; 30 percent had urethritis; and 10 percent had epididymitis. There were also several cases of proctitis, reactive arthritis, cystitis, and ophthalmic symptoms. In women, urethritis was observed in 29 percent; cervicitis in 22 percent; and salpingo-oophoritis in 16 percent. There were also several cases of vaginitis, cystitis, cholecystitis, and appendicitis.

In 1997, 76 HIV-positive drug abusers were studied, and 32 percent of them had STDs; in 1998, 166 patients were studied, and 40 percent of them had STDs. Thus, since 1997 the sexual route of HIV transmission started to appear among drug abusers, and HIV often concurs with other STDs. Followup of HIV-positive drug users with STDs helped find and reach the partners of the patients, contributed to the investigation, and aided in control of this HIV-risk group.

PREVENTION OF DRUG ADDICTION IN THE PENAL INSTITUTIONS OF ST. PETERSBURG AND THE LENINGRAD REGION

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We do not have reliable information about the prevalence of drug addiction in the penal institutions of St. Petersburg and the Leningrad Region. The figures we have partially characterize the problem and suggest that there is a trend toward an increase in the number of drug abusers in penal institutions.

According to statistical data of the Department for Illegal Drug Circulation of the Chief Office of Internal Affairs of St. Petersburg and the Leningrad Region, in 1998 about 12,000 criminal cases related to drug trafficking were initiated, which is approximately twice the number initiated in 1996.

In the Chief Penitentiary Office of St. Petersburg and the Leningrad Region, there are no data about the number of prisoners convicted for drug trafficking and incarcerated during a year. The statistics use the figure for the first day of each month, and the number of changes from month to month; for example, in the period from December 1998 through April 1999, the figure fluctuated between 450 and 900 persons.

Some sources of information indicate that two-thirds of all crimes are committed by individuals intoxicated by alcohol or other drugs. But the statistics do not reflect the real situation. Drugs are still being confiscated in the penal institutions, and new criminal cases for possession and use of drugs confirm that drugs are used in penal institutions.

The analysis shows that drug users in penal institutions inject drugs less frequently, but it can be assumed that if injection drug use takes place, the risk of sharing needles increases. In addition, the involvement of other people in the drug use is quite possible in a penal institution.

Thus, evaluation of actual drug use and the implementation of new approaches to drug use prevention in penal institutions becomes an extremely important task. Unfortunately, the prevention of drug use in these facilities is now limited to operational interventions and disciplinary penalties.

It is possible to identify several reasonable approaches to coping with the problem of drug use in prisons by reviewing the experience of prevention interventions in the penal institutions of the United States and several European countries (Great Britain, The Netherlands, Poland, and France):

- Creating specialized medical penal institutions, opening therapeutic community-based rehabilitation departments to those with chemical dependencies (such as 12-step programs, Minnesota model, group analysis, cognitive therapy, occupational therapy, and individual therapy)
- Developing special training programs for prison staff involved in the rehabilitation of those with chemical dependencies
- Adopting special laws for those who successfully complete the rehabilitation program (probation or easing restrictions during custody)
- Performing compulsory routine testing of prisoners for drug use
- Conducting special interventions in the institutions to confiscate drugs (such as searches by trained dogs).

According to the data of one specialized prison in the United States, the number of drug use relapses and the crimes related to drug use among inmates who have completed one of the drug treatment programs decreases by 50 percent when compared with those who are released from ordinary prisons.

The psychological service of the Chief Penitentiary Office of St. Petersburg and the Leningrad Region, in collaboration with the Regional Public Fund of Humanization of the Penitentiary System, is now implementing the rehabilitation center experience with therapy for chemical dependencies in the St. Petersburg penal institutions.

HIV PREVENTION WITH DRUG-USING POPULATIONS

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The purpose of this presentation is to discuss the origins, evolution, and current status of the HIV-prevention scientific knowledge base on community-based interventions designed to reduce risk behaviors and to prevent the spread of HIV infection in drug-using populations. Each major strategy—community-based street outreach for out-of-treatment drug-using populations, syringe access programs, and drug abuse treatment as HIV prevention—has proven effective in getting at-risk populations to change their behaviors and to prevent the further spread of HIV. Evidence-based principles for the prevention of HIV among injection drug users have emerged from more than a decade of research and will be discussed in this presentation. This plenary session is the organizing framework for the subsequent presentations by Drs. Deren (outreach), Des Jarlais (syringe access programs), and Hagan (HIV pretest and posttest counseling) on risk-reduction strategies for out-of-treatment drug-using populations.

GENERAL GOALS AND MEASURES OF PRIMARY PREVENTION IN THE CONSUMPTION OF PSYCHOACTIVE SUBSTANCES AMONG CHILDREN AND ADOLESCENTS

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The desire to stop psychoactive substance consumption raises questions of how to create the methodology, organization, and technology to pursue prevention activity. Generally, the idea of primary prevention among children, adolescents, and young people can lead to the development of person-positive resources, harmonic socialization, self-confidence, and self-control in modern life.

We are creating a different organizational structure to address the problem of drug use. In the past the main efforts have been devoted to the treatment of already-developed alcohol and drug addiction. Today it is possible to identify three main prevention approaches regarding target audiences, influence possibilities, and content goals.

First, mass media campaigns describing the negative consequences of drug dependence and drug trafficking must contain practical data about:

- Signs of psychoactive substance abuse among children and adolescents
- Positive adult behavior patterns
- Self-diagnostic signs for the experimenter or person who has recently begun to use drugs.

The second prevention approach addresses the family directly and both temporary and permanent communities through family counseling, women's organizations, and special publishing sources. Within the community, values of life, health, success, and personal relations are established.

The third approach to primary prevention focuses on interactive education programs to develop psychosocial skills for personal autonomy, positive development through self-revelation, and interaction with the environment in situations that could contribute to future risky behavior.

At present, the plan does not exist, but this perspective is based on questionnaires completed by journalists, parents, students, teachers, school psychologists, and social pedagogues after prevention training.

SOME ASPECTS OF HIV PREVENTION IN THE ROSTOV REGION

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HIV infection is one of the important problems of the health care system in the Rostov region. The specific features of its transmission include:

- Nosocomial transmission of the infection (1989)
- Effects on people of productive age (80.1 percent are 20 to 40 years old)
- The predominance of injection drug users among the HIV-positive (80 percent).

An analysis of the specific features of HIV transmission has shown that prevention interventions should be a priority. Prevention interventions aimed at decreasing the risk of HIV infection are conducted in close collaboration with a number of interested institutions and organizations, including nongovernmental and public organizations. The main target groups are:

- Health professionals

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- Public and local communities
- High-risk groups
- Young people (secondary, high school, and university students and unorganized youth).

One prevention component organized by the Rostov AIDS Center is collaboration with mass media. Another component is the evaluation of the public's basic level of knowledge using a questionnaire about HIV infection. One important project disseminates addresses and telephone numbers of places where HIV tests are conducted.

Because most HIV-positive people are young, prevention interventions concentrate on the following:

- Conducting activities directly in classrooms and recreation areas, such as discotheques
- Educating the educators
- Assessing the level of knowledge through questionnaires for different age groups and in different communities (for example, schools, universities, military units)
- Arranging meetings between young people, drug users, and HIV-positive individuals to discuss the consequences of drug use and drug-related infectious diseases
- Participating in World AIDS Day and AIDS Victims Recollection Day
- Conducting telemarathons.

When planning HIV-prevention activity, one should consider the:

- Local epidemiological features of HIV transmission
- Possibility of contacts not only with health care institutions but also with nongovernmental, public, and other organizations
- Use of data derived from public surveys to increase the efficiency of prevention interventions.

The result of conducting preventive interventions was a decrease in the number of cases of HIV infection diagnosed in 1997 and 1998 in all age groups, including young people.

<u>Age</u>	<u>1997</u>	<u>1998</u>
16-20 years old	7.7 percent (48 persons)	4.7 percent (23 persons)
21-30 years old	53.7 percent (335 persons)	50.7 percent (246 persons)

As the data show, prevention interventions have decreased the rate of HIV incidence in the Rostov region.

THE MANAGEMENT OF HEROIN WITHDRAWAL SYNDROME IN VIRAL HEPATITIS

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According to the data of S.P. Botkin Municipal Infectious Hospital N 30, about 25 percent of the patients admitted have injected drugs. At admission 40 percent of patients with viral hepatitis require medical care for heroin withdrawal syndrome. Considering that 45 percent of the patients with viral hepatitis are people younger than 20 years, the prognosis in terms of their long-term health is a point of great concern. It is impossible to treat acute viral hepatitis if the patient continues to use drugs. That is why the complex management of combined infectious and narcological illness is extremely important. Of 1,354 patients in the hospital with chronic hepatitis, drug addiction was diagnosed in 593 (43.7 percent).

Withdrawal syndrome is one of the most severe and painful symptoms of addiction; the fear of withdrawal is often cited as a reason for continuing drug use. The duration of acute withdrawal symptoms in acute viral hepatitis is 10 to 14 days or longer because the liver damage caused by the chronic use of drugs is combined with acute inflammatory changes caused by the hepatitis virus. The treatment of drug addiction in the early stages includes detoxification and management of withdrawal syndrome with correction of somatoneurological and psychotic symptoms. In the later stages of treatment, complete restoration of metabolic disturbances and correction of the person's psychiatric state are necessary.

Pharmacological therapy for the withdrawal syndrome involves the appropriate choice of pathogenetical medicines that do not have hepatotoxic properties and can be safely used in the acute phase of viral hepatitis and for maintenance of remission and prevention of relapses. The medicine of choice is thiapridal, the selective antagonist of D-2 dopamine receptors, which is not hepatotoxic, does not cause dependence when used for a long time, has both analgesic and anxiolytic effects, is well tolerated by the patients, and has antiemetic properties.

One medicine used for pathogenetic therapy that restores the imbalance in catecholamine neurotransmitter systems is clopheline (clonidine), a synergist of α -2 adrenergic receptors of the central nervous system, which activates their postsynaptic formation and suppresses noradrenergic activity. It is most efficient for the management of somatic problems and for disturbances of the autonomous nervous system. Its effect on psychopathological and pain disorders is less significant.

The choice of the treatment regimen depends on the severity of viral hepatitis combined with the withdrawal syndrome. Experience shows that in severe forms of viral hepatitis, the withdrawal symptoms are less important, usually irrespective to the length of drug use and tolerance. The mainstay of the therapy is the management of intoxication caused by the viral liver damage. As the somatic state of the patient improves, the need to manage psychopathological symptoms occurs.

Moderate forms of hepatitis require detoxification therapy similar to that used for withdrawal syndrome. Pathogenetical therapy for withdrawal syndrome in moderately severe hepatitis is usually well tolerated by patients.

In a mild form of hepatitis, when the mainstay of the treatment is diet and symptomatic treatment, patients complain mainly of heroin withdrawal symptoms. The treatment regimen in these cases depends on the severity of the withdrawal syndrome.

PREVALENCE OF DRUG USE IN YOUNG PEOPLE IN ST. PETERSBURG, RUSSIA

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The past decade was characterized by a dramatic increase in drug use among young people all over Russia. Drugs are becoming more available, and teenagers are involved in criminal networks as drug dealers. Drug use is becoming an indispensable attribute of parties and discotheques and is becoming established in certain youth subcultures.

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Since 1989 the incidence of drug addiction has grown in St. Petersburg. This index per 100,000 of the teenage population was as follows:

<u>Area</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
Russia	135.5	132.8	
St. Petersburg	111.8	128.7	177.6

Morbidity caused by the use of psychoactive substances (drug addiction + toxic substance addiction) per 100,000 of population in 1996 was 12.1; in 1997, 12.5; in 1998, 29.2. The drug addiction morbidity per 100,000 of population in 1996 was 68.7; in 1997, 71.4; in 1998, 97.6. On January 1, 1998, there were 4,663 people with diagnosed drug addictions registered in the municipal narcological clinic; among them were 122 teenagers and 5 younger children.

A sociological survey conducted in St. Petersburg by the Center for Prevention of Drug Addiction among approximately 7,229 representatives of different social groups of youths (about 1 percent of youth in the city) assessed the prevalence of drug use.

Ninety-four percent of those surveyed were younger than 20 years; among them, schoolchildren constituted 50 percent; students of professional schools, 20 percent; university students, 12 percent; and students of technical schools, 52 percent. Among all those surveyed, 36.6 percent had used drugs at least once. Most (53.4 percent) continued to use drugs.

Among the schoolchildren and students, 4.3 percent said they used drugs regularly. In 1.4 percent of those surveyed, the first use took place before age 10. Between ages 11 and 14, 41.2 percent of children had experimented with drugs. Between ages 15 and 17, 51.0 percent of teenagers had tried drugs; in the total group up to 20 years old, 0.4 percent had done so.

The primary drugs of first use are cannabis derivatives (55.7 percent), hallucinogens (14.6 percent), amphetamines (10.8 percent), opiates (5.4 percent), cocaine (2.4 percent), and unspecified drugs (10.8 percent). The most common route of administration at first use is smoking (56.0 percent), injection (32.0 percent), oral (30.3 percent), and inhalation (6.9 percent). In 60.0 percent of cases, drugs are obtained from friends and acquaintances; in 12.1 percent, at recreation centers; in 6.5 percent, in educational institutions; in 5.7 percent, on the street; in 3.2 percent, in the pharmacy; and in 2.4 percent, the drugs are homemade.

Among people seeking medical advice for viral hepatitis, the predominant drug is injected heroin, which is used by 92 percent of patients. Beginning in 1997 heroin became available on the black market. In 1997 the users of opium substitutes among injection drug users represented 63 percent; heroin users, 21 percent; and other substance users, 16 percent. In 1998 the users of opium substitutes among injection drug users represented only 4 percent; heroin users made up 92 percent; and other substance users made up 4 percent.

The educational level of drug users was as follows:

Primary school	4.4 percent
Uncompleted secondary education	56.0 percent
Secondary education	21.6 percent
Secondary education with specialization	13.2 percent
Uncompleted higher education	2.6 percent

Among them, students constituted 53.7 percent; the unemployed, 21.6 percent; those permanently employed, 9.3 percent; and those temporarily employed, 5.7 percent. Fifty-two percent lived with both parents, 36.2 percent lived with a single parent, 3.5 percent lived alone, 0.4 percent lived with a partner, and 0.4 percent were homeless.

Replacement of opium substitutes by heroin has led to more rapid occurrence of physical dependence syndrome, which in turn increased the number of patients who needed medical care for acute withdrawal syndrome during treatment for viral hepatitis. Teenagers who started to use drugs in summer 1998 were admitted in October 1998 for the treatment of viral hepatitis with withdrawal syndrome.

In 1998 the epidemiological data recorded viral hepatitis transmitted by injection drug use in several professional schools. The incidence of viral hepatitis C in 1998 increased two times compared with 1997, indirect proof of the high prevalence of drug use in St. Petersburg.

HIV-INFECTION PREVENTION AMONG INJECTION DRUG USERS

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Drug addiction has become an issue of major concern for the youth in our country in recent years. The interrelationship between drug use and the transmission of HIV is well known. Therefore, an assessment of current injection drug use, based on the rapid assessment methods recommended by WHO, was conducted in St. Petersburg. The approximate number of IDUs in our city is 65,000. Among them, young people ages 15 to 18 predominate. Unemployed people or those who have temporary or occasional jobs represent 63.3 percent; students, 21.7 percent; and the permanently employed, 13.0 percent.

Drug addiction contributes to HIV/AIDS transmission through high-risk injection and sexual behaviors. Therefore, in addition to providing drug users with sterile injection equipment, prevention interventions should educate drug users about ways to reduce high-risk drug using and sexual behaviors. According to survey data, 28.8 percent of drug addicts use nonsterile syringes and needles, and only 29.8 percent use sterile syringes and needles continuously. Only 28.0 percent of respondents always use condoms. The main reason for refusal to use condoms is trust of their partner, but each of those surveyed had suffered from sexually transmitted diseases at least once in their lives, and 90 percent of IDUs are hepatitis C-positive. All surveyed have some knowledge about AIDS, viral hepatitis, and the role of injection drug use in the transmission of these diseases, but this knowledge does not affect their behavior. Most of the respondents get information only from their friends. Their trust in mass media is minimal.

A project was created to train drug users as outreach workers to deliver information to hard-to-reach IDUs. The interventions focused on training drug users to reduce high-risk behaviors, learning to work with IDUs based on the specific features of their psychology, selecting the people most suitable for outreach activity, and accessing drug users in all city districts. Thus, it will become possible to create networks of key informants in drug-using communities. The informational literature will educate significant numbers of drug users about how to reduce high-risk behavior, and the distribution of free condoms and sterile injection equipment will help establish contact between the drug user and the outreach worker and help prevent the transmission of HIV/AIDS and other STDs and parentally transmitted diseases.

Outreach work is a very new type of activity for St. Petersburg; it will introduce risk-reduction philosophies to drug users and, thus, will contribute to the prevention of HIV infection in high-risk groups.

DRUG ABUSE PREVENTION AMONG CHILDREN: SYSTEMIC APPROACH

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The main trends in drug abuse development today are the following:

- The acceleration of the growth rates of drug abuse
- Drug use by increasingly younger individuals
- The explosion in the number of young drug users
- The increasing role of drug dealing as a part of the culture.

The most important task is to change the youth culture values to form a negative attitude toward drug use. To achieve this goal, it is necessary to:

- Prevent acceptance of drug abuse among healthy young people by changing attitudes toward drug use in the youth subculture
- Prevent the development and intensification of medical and social consequences of drug use through adequate, well-timed social help
- Create barriers to drug trafficking.

There are three parts in drug prevention:

- Primary prevention. The goal is to foster antidrug attitudes among youth and to make those attitudes socially important.
- Secondary prevention. The goal is to reorient society from a medical perspective to a social perspective about drug use.
- Relapse prevention. The goal is to provide those who stop abusing drugs the necessary complex social help.

The target audiences of prevention are the following:

- Youth and adolescents—the basic group
- Parents
- Social workers
- Officials and politicians at all levels, including municipal workers.

The concept of prevention is that when there are common goals, aims, and strategies for all participants at all administrative levels, it is possible to influence every target audience on every level through education, information, assistance, planning, and evaluation of the effectiveness of prevention programs.

PRINCIPLES AND APPROACHES TO DRUG ABUSE PREVENTION

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This presentation describes principles derived from 20 years of drug abuse prevention research sponsored by NIDA. The research is presented in the context of the Human Ecological Model, a metatheory that examines interactions and transactions between the individual and the social context and between aspects of social contexts that can influence human functioning. Connections are made between the Human Ecological Model and the specific theories that have contributed to its development.

From this perspective, risk and protective factors are discussed, focusing on the contexts most central to human development: the family, school, and community (the near environment, such as the neighborhood or village). Etiologic research in the United States has identified numerous factors that either place youth at risk for or protect them from substance abuse. Knowledge of these factors is important because it informs the selection of prevention programming for a given context. However, the way that risk and protective factors operate may vary, depending on specific cultural, situational, or developmental factors.

Knowledge related to risk and protection and social context can also help determine targets or audiences for intervention. Universal prevention efforts are targeted to the general population, such as all children in a particular school. Selective interventions are targeted to individuals or subgroups of the population with well-defined risk factors for the development of substance abuse, such as children of substance users. Indicated preventive interventions are targeted to individuals or subgroups that are identified as having minimal but detectable signs or symptoms foreshadowing drug abuse, dependence, or addiction or to those with biological markers indicating predisposition to substance use disorders.

Background information on drug abuse prevention programming and principles derived from efficacy and effectiveness trials of family-, school-, and community-based programs are discussed. Findings are termed principles only after they have been replicated in multiple studies, across multiple settings, and with multiple subpopulations. Finally, this presentation outlines findings about adapting prevention programs and strategies to meet local needs.

SCHOOL PREVENTION PROGRAM (PROJECT HOPE)

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The Project "School Preventive Program" is implemented by Project *HOPE*, with the financial support of SmithKline Beecham in cooperation with the Moscow Educational Committee (MEC). The aim of the project (1997 through 1999) is to create a prevention program that addresses tobacco, alcohol, and other psychoactive substances used by children and teenagers.

The Project was launched in spring 1997 in five Moscow schools where a survey of the schoolchildren in grades 5 through 9 was conducted to assess the level of knowledge, values, and the prevalence of drug use. A total of 1,099 schoolchildren ages 10 to 15 participated in the survey. The survey found a wide prevalence of psychoactive substances (PASs) use (especially of alcohol and tobacco), values promoting PAS use, and a high level of awareness about PASs.

Guidelines for creation of a prevention program for primary school students were based on the survey results. Using the guidelines and the behavioral model of prevention education, a group that consisted of five authors and an artist created the program and wrote the primary school manual, which includes 32 teacher lesson plans, parental handbooks, and special workbooks for children in grades 1 through 4.

During 1998 and 1999, 24 lessons were tested by the teachers and pupils in the 5 schools. After additional professional consultations and necessary changes, the program was adopted by the MEC and the Ministry of General and Professional Education of Russia.

In 1998 and 1999 the program was implemented in five Moscow schools and in a number of schools in different Russian cities. Fifty-five teachers, 1,386 primary school pupils, and parents participated in the trial.

The trial was followed by an assessment of the program's effectiveness. This assessment included pretests and posttests for the pupils and a survey of the teachers. The teachers greatly appreciated the manual. Analysis of the remaining data is ongoing.

Future changes will be based on the results of the assessment and on assessments of a wider implementation of the program in 126 schools in Moscow.

HIV-PREVENTION PROGRAMS FOR PERSONS IN THE GENERAL POPULATION AND THOSE AT HIGH RISK

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HIV-prevention programs have been demonstrated to be effective in the United States with a variety of populations (substance users, youth, gay men, women in high-risk relationships) and settings (schools, work sites, shelters, health care clinics). Each of the successful interventions has adopted a similar approach and has concentrated on similar content.

First, specific information about HIV and access to the means to prevent HIV (for example, clean syringes and condoms) are presented. Second, all successful programs have mobilized social support and have helped redefine the social norms in the setting to endorse HIV prevention. This has often been accomplished by delivering the interventions in small-group settings. Third, attempts to change high-risk behaviors have used a strategy of building a sense of mastery and confidence in a person's ability to act in a safe manner by engineering small steps to perceive success in the intervention. These steps have also involved training participants to deliver HIV-prevention messages to others. Fourth, rewards and positive experiences permeate the programs delivered in the settings. Finally, there is a mechanism to encourage support for resisting high-risk behaviors on an ongoing basis, anticipating that there will be relapse and more challenges to maintaining new behaviors over time. To design such interventions, providers need social skills and the ability to solve problems and to help others acquire new skills.

HIV INFECTION IN PRISONERS IN ST. PETERSBURG AND THE LENINGRAD REGION

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The problem of HIV infection in the penal institutions of St. Petersburg and the Leningrad Region has been growing since 1995 when the first case of HIV infection was registered. The number of HIV-positive persons among those who are incarcerated is increasing continuously. Thus, in 1997 there were 25 HIV-positive prisoners (17 new cases); in 1998, there were 73 (19 new cases). As of March 22, 1998, there were 88 HIV-positive people in the institutions, among them 79 already sentenced (62 female and 17 male) and 19 people under judicial inquiry.

In all the new cases of HIV seroconversion, the diagnosis was made as a result of routine health examinations at the time of admission to the penal institution; in all cases, the inmates were drug abusers.

Currently, 79 HIV-positive individuals remain incarcerated; 1 has been admitted to the Interregional Hospital. All the HIV-positive people are confined to cells under the care of infectious disease specialists.

HIV-positive prisoners undergo laboratory testing and are examined by the specialists through the institutions' HIV/AIDS control programs. The prisoners are also provided with nonspecific treatments and appropriate diets. These HIV-positive persons do not receive antiviral therapy.

Current problems include:

- The absence of governmental programs to prevent and manage HIV infection in prisoners
- Lack of special facilities for HIV-positive prisoners in St. Petersburg and the Leningrad Region
- Irregular supplies of disposable medical instruments (for example, intravenous systems, syringes, vaginal speculi, surgical kits, abortion kits)
- Lack of surgical scrub suits and coats
- Lack of funds to obtain medical equipment (for example, gynecological chair, dental equipment) for the department serving HIV-positive women and antiviral agents and reagents for sophisticated immunological tests.

THE PRIMARY DIRECTIONS OF DRUG ADDICTION PREVENTION IN ST. PETERSBURG

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Drug use in St. Petersburg is characterized by the growth of drug trafficking and by a significant decrease in the age of drug users.

Drug use in Russia and in St. Petersburg requires a principally new strategy of antidrug activity. First, this new strategy requires a medical approach to care that moves from intensive pharmacological interventions and single psychotherapeutic sessions to more effective long-term medical and social rehabilitation programs despite the increased expenses and time required. That is why prevention should be the primary activity of the new antidrug strategy.

The basic concepts and the best chance of success for prevention interventions require the integration of all interested departments, structures, and organizations—both governmental and public.

A number of positive changes in St. Petersburg should be mentioned, such as:

- Creating an interdepartmental committee for antidrug activity in the city government
- Creating and organizing a governmental rehabilitation department
- Creating and organizing a special department for children and teenagers
- Adding new specialists in the municipal narcological service, including psychologists and social workers
- Opening the municipal crisis center with a 24-hour telephone hotline
- Opening territorial interdepartmental medical social centers for drug addiction prevention.

The city government has adopted a new program to prevent drug addiction that involves:

- A system for epidemiological research that employs unified criteria to assess and monitor the local drug addiction situation
- Early detection programs to identify and treat children with attention deficit and hyperactivity disorder and to prevent future drug addiction
- Parent and teacher educational programs as an integral part of drug abuse and addiction prevention in youth
- Drug addiction prevention programs among pregnant women and mothers and medical care for drug-dependent parents and their children

- Predoctoral medical and social consulting for drug abusers, such as counseling centers
- Counseling centers for pretest and posttest consultations with HIV-positive drug abusers
- Rehabilitation centers for drug abusers
- Education and training for social workers in drug abuse prevention and treatment.

THE COURSE OF INFECTIOUS DISEASES IN PERSONS WITH DRUG DEPENDENCE

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The diverse effects of narcotic substances on the human organism are reflected in the pathophysiology and clinical features of the infectious process. It has been proven that there is drug interference with the neuropeptide metabolism, its cyclic nucleotide content, neuromediator metabolism of all functional and structural levels of the organism (especially expressed in opiates), and suppression of the oxidation-reduction processes in tissues. As a result, the functional activity of practically all physiological systems substantially decreases. In addition, the activity of all regulatory systems, including the immune one, is disorganized. These changes become the cause and conditions of the infectious process in people addicted to drugs: The usual duration of infectious diseases alters (that is, the acute or convalescent period significantly lengthens) and the frequency increases for protracted or particularly severe forms of infection, specific or nonspecific complications, acyclic (subacute and chronic) forms, and mortality.

The restricted consciousness and euphoria in drug abusers lead to perceptive distortion and incorrect evaluation of infectious disease symptoms, which is intensified by the anxiolytic effect of the drugs. This leads to a delay in seeking medical treatment and is one of the reasons for adverse clinical and epidemiologic consequences of infectious diseases in drug abusers. In some cases the analgesic effect of the drugs, masking pain (for example, abdominal pains in intestinal infections, viral hepatitis, yersinioses, etc.; headaches in meningococcal infection, encephalitis, meningitis), becomes the reason for postponing medical treatment. The vegetative alterations with the predominant stimulation of the trophotropic system often mask manifestations of infections (typhoid and paratyphoid fever, scarlet fever, malaria, etc.).

Some special epidemiologic characteristics of infections are of significance—in particular, frequent development of epidemics (for example, AIDS, viral hepatitis, schizont malaria, cytomegalovirus, herpes-virus infections).

THE CENTER FOR REHABILITATION OF DRUG ABUSERS IN THE LENINGRAD REGION

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Rehabilitation is a complex of medical and social measures designed to recover the health and social status of patients. Special measures aimed at rehabilitating drug abusers include psychotherapy, counseling, and social work.

The rehabilitation center increases the efficiency of treatment in the inpatient and outpatient units of the Leningrad Regional Center of Addictions by helping drug abusers to cope with problems without drugs.

The Center for Rehabilitation carries out:

- Medical and psychological aid to patients, including motivation therapy and conflict- and stress-management training
- Skills training in communication, interaction, labor, and leisure activity
- Counseling to help patients recover their professional skills, stabilize their professional relations, or train for a new profession
- Assistance in registering the necessary documents and in solving problems associated with housing, employment, and juridical status
- Assistance in creating a healthy microenvironment for patients, including activity to improve family climate, consolidate the therapeutic atmosphere in families, and attract family members into rehabilitation programs focused on preventing relapse
- Analyses of the efficiency of patients' treatments in the Center for Rehabilitation and the resulting treatment outcomes
- Maintenance of the connection between rehabilitated drug users and the staff to prevent relapse, assist patients in coping with stress and crisis situations, and attract patients to work in the Center's rehabilitation programs.

AN ADDICTION PREVENTION PROGRAM FOR JUVENILES AND YOUNG PEOPLE

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Sociologically, addictive behavior is a serious international phenomenon, and the cost to society is substantial. It includes the loss of the economic and sociocultural contributions by the drug user and extends to the cost of medical and social support services as well as to the burdens on family and loved ones. The efforts of medical and human rights organizations to prevent addiction are not enough. Actually, preventing the disease of addiction is easier and cheaper than treating it. Hence, the problem of drug addiction prevention among juveniles and young people requires attention to guarantee the social stability and security of society.

In creating a prevention program for juveniles, one must consider their world outlook and personalities. Active participation of specialists who work with addictions using various methods of psychotherapy, psychocorrection, and rehabilitation is essential.

Field work with drug abusers indicates that in most cases, drug use is related to a complicated inner conflict of personality, conditioned by incorrect functioning of different patterns, and established in early childhood. It appears in the perception of juveniles as a feeling of isolation or abandonment or a deficit of love and attention.

In addition, juveniles and young people often do not have the basic knowledge, skills, and dispositions to allow them to express their own psyche (that is, personality, tendencies, and behavior in a diverse range of challenging and everyday circumstances); be capable of self-awareness, self-diagnosis, and self-help; express personal needs and goals; and seek creative solutions.

The program aims to enable participants to gain a comprehensive understanding of their inner world, relate to and cooperate sensitively and effectively with others, give and receive affection, express their own psychological needs, and plan and take action responsibly for the fulfillment of those needs. The

program encourages participants to develop a basic combination of knowledge, skills, and dispositions, or core qualities, including:

- Self-knowledge
- Self-esteem
- Self-efficacy
- Authenticity
- Friendship
- Teamwork
- Self-actualization.

The primary task of the program is to teach juveniles how to establish satisfying human contacts. The emphasis is on relating to others and on the meaning of responsibility, friendship, and cooperation. Programs can be very different, but the most effective are weekend or 5- to 7-day group sessions and summer camps that employ a therapeutic community model. The most important condition is creating a safe, friendly, loving atmosphere in which a child can feel trust, openness, and the desire to know himself or herself and can aspire to friendship and cooperation. Because of the deep connection between the physical body and the emotional sphere, group physical activities can contribute to emotional release, help resolve sexual complexes and problems, teach participants about relationships, offer constructive ways to solve conflicts, and reduce problems between parents and children. Thus, the program covers both the inner and outer worlds of a child.

To conclude, the program tells juveniles and young people: "Our way is not the easiest way. If you come to us, we are going to demand everything from you; we are going to look at you from all sides. We will get you physically and emotionally healthy. We want you to get up and feel that you are in this world, not for a shot of heroin, but because life is worth living."

MEDICAL AND SOCIAL PROBLEMS OF PREVENTION AND TREATMENT OF DRUG ADDICTION

Stakelberg, O.J.; and Bogdanov, A.O.

Department of Narcology, Medical Academy of Postgraduate Education, St. Petersburg, Russia

A survey of 186 injection drug users who sought advice from The Bus of Prevention for Drug Addicts of St. Petersburg revealed that among those surveyed, women made up 38 percent (71 persons) and men, 62 percent (115 persons). The average age of the women was 24 years (min 15, max 44) and men, 25 years (min 16, max 51). The average duration of drug use in both men and women was 5.5 years.

The survey allowed identification of significant differences in the behavior of drug users, depending on sex. These differences concerned the type of drug, a preoccupation with the person's own health, a pattern of drug use, and sexual behavior.

The use of heroin is more prevalent among women than among men (21 percent and 12 percent, respectively). In contrast, men used acetylated opium more frequently than did women: 32 percent and 24 percent, respectively. Both drugs were used with approximately the same prevalence: 52 percent in women and 50 percent in men. Three percent of women and 5 percent of men use stimulating agents (ephedrone, pervitine, or methamphetamine).

Women are more likely than men to realize the severe consequences of drug use. Ninety-seven percent of women and 57 percent of men are aware of the high risk of contracting parenteral hepatitis. Among women, 62 percent are afraid of becoming infected with hepatitis because of the potential impact on their health, and 14 percent do not want hepatitis to complicate their lives with events such as hospital

admission and loss of income. Among men, the figures are 51 percent and 21 percent, respectively. Thirty-five percent of women and 20 percent of men have routine health checkups. Conversely, real measures for protecting health are more frequently undertaken by men: 84 percent of men and 76 percent of women use disposable injection equipment; 42 percent of men and 34 percent of women prepare injectable drugs using only their own cooking pots. Of those who buy precooked drug solutions, 59 percent of men and 45 percent of women boil the solution; and 6 percent and 11 percent, respectively, frequently share a syringe with other people.

Women are more prone to reticence about their drug use. As an example, 45 percent of women and 31 percent of men use drugs at home. Seventeen percent of women and 9 percent of men use drugs when alone; respectively, 35 percent and 24 percent use drugs with a partner, 45 percent and 62 percent with friends, and 3 percent and 6 percent with strangers.

Drug-dependent men are more prone to sexual promiscuity. Twenty percent of men and 14 percent of women have several sexual partners, and 23 percent of men but only 11 percent of women have sexual contacts with strangers. Most women (56 percent) have permanent sexual partners, but only 32 percent of men do; 18 percent of women and 25 percent of men are not sexually active. In general, 54 percent of women and 42 percent of men have sexual relationships with drug users. It should be noted that women report that their partners use condoms more often (58 percent) than men do (48 percent); 23 percent of women do this continuously versus 13 percent of men.

The survey was conducted by directed interviews among those who sought medical advice or testing for HIV, hepatitis B and C, and syphilis.

**COOPERATION BETWEEN ST. PETERSBURG GOVERNMENT INSTITUTIONS AND
NONGOVERNMENTAL ORGANIZATIONS TO PREVENT PARENTERAL HEPATITIS B AND C AND
HIV INFECTION**

Taitz, B.M.; Rakhmanova, A.G.; Lineva, M.C.; Platoshina, O.V.; Andreeva, N.V.; and Yakovlev, A.A.
Public Health Committee of St. Petersburg Government, S.P. Botkin Municipal Infectious Hospital N 30,
St. Petersburg, Russia

The dramatic growth of the incidence of parenterally transmitted hepatitis in injection drug users and the diagnosis of HIV infection in the drug-using community requires special interventions. The availability of governmental institutions, which are supposed to interact with this group of patients, is extremely low. IDUs are being admitted into infectious hospitals for reasons not directly related to drug use; thus, these hospitals have psychological prerequisites to work with IDUs.

The governmental institutions, in contrast to the nongovernmental organizations that have worked with IDUs for a long time, have no experience or skills in the prevention, social, and psychological work with drug abusers. This fact encouraged the Board of the S.P. Botkin Municipal Infectious Hospital N 30 to begin cooperating with the nongovernmental Vozvrashenie (Coming Back) Foundation. This organization conducts activities to prevent viral hepatitis and HIV infection (such as syringe and needle exchanges and vaccination against hepatitis B) among IDUs and provides rehabilitation facilities for patients. The hospital has created a psychological support service for patients that cooperates with doctors, nurses, and medical social workers. The psychological support service conducts drug abuse prevention activities and encourages patients to seek treatment for both drug abuse and infectious diseases. The service also trains hospital personnel in working with drug abusers, which establishes a favorable psychological atmosphere.

An agreement between the foundation and the hospital allows patients of "The Bus of Prevention for Drug Addicts of St. Petersburg" to be freely admitted to the hospital for specialized narcological and psychological care. The patients who complete the inpatient therapy and who do not have infectious contraindications can then be referred to the foundation's rehabilitation center.

This cooperation of a governmental institution and a nongovernmental organization ensures optimal conditions for medical and preventive measures.

PREVENTION OF RELAPSE IN DRUG DEPENDENCE SYNDROMES

Tikhomirov, S.M.

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The most important components of treatment for alcohol and other drug dependence syndromes are maintaining remission and preventing relapse. After discontinuing use of alcohol or other drugs, patients have low tolerance of stress for a prolonged period, which makes them easily susceptible to fluctuations in affect. Hypophoria, characteristic of this period, is an obsession with drugs that dramatically increases the risk of relapse.

Treatment literature confirms the inadequacy of attempts to maintain sobriety through psychotherapeutic interventions alone. The use of antidepressive agents is not sufficient in many cases. Prescribing long-acting neuroleptic medications disrupts psychotherapeutic interventions by sedating the patients.

Thiapridal (produced by Synthelabo, France) was prescribed to prevent relapses to heroin and alcohol dependence. A group of 48 male patients, 20 of them dependent on heroin and 28 on alcohol, received Thiapridal for 90 days; the dose was 0.3 g per day for alcohol dependence and 0.4 g per day for heroin dependence.

During the trial, patients exhibited fewer neuroses, normal sleep patterns, no changes in affect, decreased anxiety, and increased self-esteem. A control group consisted of 10 heroin-dependent and 14 alcohol-dependent patients. The control group received conventional medicines.

The data support using Thiapridal in outpatient settings to maintain remission in persons addicted to alcohol or heroin. Longitudinal studies are required for more complete investigation of Thiapridal use in narcological practice.

PREVENTING TEENAGE DRUG ABUSE: THE ROLE OF THE INFECTIOUS HOSPITAL COUNSELING CENTER

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The Vozvrashenie Foundation, St. Petersburg, Russia

During the past year the problem of drug addiction became more severe for several reasons: Youth began to use drugs at a younger age, drugs became more available, and injection drug use contributed to the transmission of HIV, hepatitis, and other infections that are already present in the drug-using population. To prevent or decrease the risk of infectious disease transmission, a complex approach and the joint efforts of health professionals and specialists in psychology, education, and the law are necessary as well as a combination of the programs sponsored by governmental and public organizations.

The Consulting Center of the Vozvrashenie Foundation, with the support of UNAIDS and Physicians of the World, began its work in the S.P. Botkin Municipal Infectious Hospital N 30 in May 1998; it is an example of cooperation between the doctors of a governmental hospital and the psychologists of a public organization.

Initially, the Foundation concentrated on:

- Providing psychotherapeutical support of drug abusers seeking to stop using drugs
- Reducing the harm of drug use by teenagers and nonmotivated patients
- Consulting relatives.

In the process, counseling teenagers with viral hepatitis became a priority because the number of drug abusers younger than 18 who are admitted to the hospital with viral hepatitis is continuously increasing. A total of 133 teenagers were counseled, which is 27 percent of the Center's total number of patients.

Teenage patients were surveyed about social and demographic data, drug use history, and attitudes about their own drug-using behavior. Results correlated with the data obtained by surveys of out-of-treatment drug abusers by The Bus of Prevention for Drug Addicts of St. Petersburg. Twenty-four percent of those surveyed have a criminal source of income, 48 percent have committed some crimes, 10 percent were prosecuted, and 90 percent of teenagers are not registered as drug users despite the fact that 85 percent of them have used drugs for 1 to 5 years and are in their first year of regular injection drug use. The first drug used by 84 percent of those surveyed was marijuana, which was first used between ages 12 and 15. During the past 2 months, 84 percent of teenagers had used heroin. For 65 percent the drug is a way to relax or to have fun. Only 4 percent consider drug use to be a disease. Eighty percent of teenagers do not think they are drug dependent, although the reality is different.

Special work is conducted with teenagers who have viral hepatitis to prevent drug overdose, prevent HIV infection, and assess behavioral risk. Booklets with information about the most dangerous infections and the routes of their transmission are distributed among teenagers.

The relatives of drug users receive information, psychotherapeutic support, and counseling about how to communicate with young drug abusers.

One year of work at the hospital has demonstrated the need for counseling and prevention efforts in the hospital, need to cooperate with specialists of governmental services, and benefits of expanding the services provided by the centers.

DRUG ABUSE AND INFECTIOUS DISEASE PREVENTION PROGRAMS IN FIVE NORTHERN CITIES OF THE MOSCOW REGION

Vasiutina, O.P.

Regional Project SPAN on Drug Abuse Preventive Maintenance, Dubna Narcological "Rebirth" Center, Dubna International University, Dubna, Russia

Prevention of drug abuse has always received less attention than treatment, but that is changing because of the relationship between drug abuse and HIV/AIDS. IDUs form the second largest HIV-positive group in the United States and Europe. IDUs also account for large numbers of those who test positive for other infectious diseases, such as hepatitis B and C. In addition, drug use can lead to unsafe sexual activities, compounding the risk of infection with HIV and other STDs.

Prevention strategies targeting youth evolved during the past 20 years as evaluation research revealed more about what works. Several strategies are used effectively, especially in combination. The following strategies are used in the Dubna area (Dubna, Dmitrov, Taldom, Zaprudnia, and Klin, with a population of about 500,000) in the Moscow Region:

- *Information dissemination* provides awareness and knowledge of the nature and extent of substance use, abuse, and addiction and their effects on individuals, families, and communities. It also provides knowledge of prevention policies, programs, and services.
- *Prevention education* aims to influence critical life and social skills, including decisionmaking, refusal skills, and critical analyses of situations to assist in making positive choices.
- *Alternatives* provide for the participation of a targeted population (especially at-risk groups) in activities that exclude alcohol, drugs, and tobacco use by youth.
- *A problem identification and referral* strategy calls for identification, education, and counseling for those youth who have indulged in age-inappropriate use of tobacco or alcohol products or who have used illicit drugs.
- *Community-based interventions* aim to enhance the ability of the community to provide prevention and treatment services for alcohol, tobacco, and other drug use disorders more effectively. Building healthy communities encourages healthy lifestyle choices.
- *An environmental approach* promotes changes in written and unwritten community standards, codes, and attitudes and influences the incidence and prevalence of substance abuse problems in the general population.

There are currently many substance abuse prevention models in the world, but one that is more popular is the public health model, the most complex, universal prevention approach to controlling chronic diseases. The main purpose of this model is to develop a healthy lifestyle. All other models are included as component parts in this model. The public health model can be illustrated by a triangle, with the angles representing the host, agent, and environment.

This presentation introduces some experiences and preliminary results of programs adapted successfully in the five northern cities of the Moscow Region, some variants of the cooperation between different governmental and nongovernmental organizations and institutions, and activities and initiatives directed toward schoolchildren through peer programs.

Most programs have been received and adapted with the help and active participation of our American colleagues from Dubna's sister-city, La Crosse, Wisconsin, with which Dubna has had a close and productive partnership for 10 years. The Dubna-La Crosse health care partnership began 6 years ago and focuses on prevention, treatment, and rehabilitation for drug abusers and family members as well as on education programs for social work students at Dubna International University in accordance with world standards for programs addressing chemical dependency.

DRUG ABUSE COUNSELING

Woody, G.E.

Department of Psychiatry, University of Pennsylvania School of Medicine; Substance Abuse Treatment Unit, Philadelphia Veterans Affairs Medical Center, Philadelphia, Pennsylvania, USA

Drug counseling is the most widely used psychosocial treatment in the United States. It has been shown to be effective, at least for some patients.

This presentation will begin with an overview describing how drug counseling is used and its limitations, with an emphasis that it does not help all patients. That drug counseling can be delivered individually, in a group, by a combination of group and individual sessions, and with or without participation in self-help groups will be discussed. The philosophy that underlies drug counseling will be described.

The three basic steps of counseling will be reviewed; these are as follows:

- Recognize the problem.
- Achieve and maintain abstinence.
- Heal the damage to one's life, and develop recovery skills.

The frequency of appointments and the four stages of treatment will be reviewed; these are as follows:

- Initiation
- Early abstinence
- Maintaining abstinence
- Advanced recovery.

Twelve things common to each of the four stages of treatment will be reviewed, as will details about what is done in each of the four stages. Termination issues and how to identify "slips," as compared with limited use or relapse, will be discussed. Group discussion will be encouraged so that participants can review together the similarities and differences in psychosocial approaches in Russia and the United States.

MOTIVATIONAL INTERVIEWING: PREPARING PEOPLE TO CHANGE ADDICTIVE BEHAVIOR

Yahne, C.E.

University of New Mexico, Center on Alcoholism, Substance Abuse, and Addictions,
Albuquerque, New Mexico, USA

Motivational interviewing is a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence. It is most centrally defined not by technique but by its spirit as a facilitative style for interpersonal relationship. William R. Miller and Stephen Rollnick have built on the work of Gordon, Prochaska, and DiClemente and Miller and Sanchez in understanding how people change.

Motivational interviewing is based on the belief that motivation is not a personality trait within the client but rather a state of readiness that depends on the interaction between the clinician and the client. The clinician's behavior directly affects the client's readiness. Thus, if a client seems unmotivated to change addictive behavior, it means that the clinician needs to slow down and shift strategies. Motivational interviewing does not blame the client for lack of motivation. It requires the clinician to be creative and flexible.

The active ingredients of effective brief counseling include feedback of personal status, responsibility for change, advice to change, a menu of change options, an empathic counselor style, and client self-efficacy for change. Motivational interviewing is especially helpful in creating the empathic communication style, which involves accurately reflecting and summarizing what the client is thinking and feeling. The truly empathic clinician can actively repeat back the client's meaning so that the client feels understood and valued.

The stages of change through which people seem to pass include precontemplation, contemplation, preparation, action, maintenance, and relapse. Precontemplation is the stage in which a client does not think there is a problem. Contemplation is the stage in which he or she begins to consider that there may be good things and not so good things about his or her drug use. Preparation is the stage in which he or she decides to change his or her behavior but does not know how. He or she is prepared to consider some options presented by the clinician. Action is the stage in which he or she has selected one of the change options and has begun to try it. Maintenance is the stage in which he or she is continuing to work on the chosen option. Relapse is the stage in which he or she slips back into old patterns of behavior. The clinician's job here is to support the client by reminding him or her that a slip is not a disaster and that resuming the positive change is possible.

The spirit of motivational interviewing is one of acceptance, optimism, and hope that healthy behavior change is possible. Research data support the idea that this approach is an effective alcohol treatment method. Additional data are currently being analyzed at the Center on Alcoholism, Substance Abuse, and Addictions, and preliminary findings indicate it is also useful for people addicted to cocaine, heroin, and stimulants.

Those researching motivational interviewing welcome questions and collaboration. Let us continue the dialog begun here today!

DRUG USE AS A RISK FACTOR OF HEPATITIS B AND C INFECTION

Yakovlev, A.A.; Vinogradova, E.N.; and Stepanova, E.V.

S.P. Botkin Municipal Infectious Hospital N 30, St. Petersburg; Pasteur Institute, St. Petersburg, Russia

Viral hepatitis B and C are a serious problem for the Russian Federation. The incidence of hepatitis B infection increased almost twofold to 35.1 per 100,000 population in 1998 versus 18.6 per 100,000 in 1994; the incidence of hepatitis C increased almost sevenfold to 11.5 per 100,000 in 1998 versus 1.7 per 100,000 in 1994.

Unfavorable trends in the incidence of parentally transmitted hepatitis are also taking place in St. Petersburg. Between 1995 and 1998, the incidence of HBV was relatively stable but high (38.7 and 35.1 per 100,000 population, respectively), and the incidence of HCV increased continuously from 14.5 to 35.1 per 100,000 population.

Analysis of the dynamics of the incidence of drug addiction in the Russian Federation demonstrates the dramatic deterioration of the situation. In the past 4 years, the incidence of drug addiction increased four to five times. An issue of great concern is the decrease of the average age of drug users; the number of teenagers who use drugs increased nine times.

According to data from the Municipal Narcological Clinic, the incidence of drug addiction in St. Petersburg increased twofold in the past 5 years, especially among female teenagers. Drug use plays a crucial role in spreading viral hepatitis B and C. It was shown that parenteral drug use was the risk factor in 22.8 to 35.0 percent of the HBV infections and in 38.0 to 50.0 percent of the HCV infections. Data from the S.P. Botkin Municipal Infectious Hospital N 30 demonstrate that drug addiction was diagnosed in 33.4 percent of the HCV patients and in 22.6 percent of the HBV patients. More than 80 percent of the patients were 13 to 25 years old.

When drug abusers in St. Petersburg were studied, it was demonstrated that 80 percent of them were infected with either hepatitis B or C, and almost 50 percent had hepatitis B and C infection.

The data of the Institute of Sociology of the Russian Academy of Sciences indicate that drug abusers are aware of viral hepatitis B and C and think that the risk of their own infection is high, but nevertheless, more than 90 percent of them had shared syringes, and only 10 percent had disinfected or washed the used syringes with water.

High-risk behaviors by IDUs increase the risk of sexual transmission of hepatitis infection, especially HBV. (Sex was the risk factor in more than 20 percent of the HBV infections.)

COORDINATION OF INFORMATION EXCHANGE BETWEEN PUBLIC ORGANIZATIONS, MASS MEDIA, AND AUTHORITIES IN DRUG ABUSE PREVENTION

Zadorozhny, A.N.

Association of Social Programs Development, St. Petersburg, Russia

There is no further need to discuss whether drug addiction is a disease or a social problem. Children or teenagers from almost every family in St. Petersburg now are at risk for involvement in the drug world. This is why drug addiction is primarily a social problem.

The authorities working on this problem are doing an important job in terms of infrastructure organization and the combination of interventions that allow hope that drug addicts will not be lost to society.

The foreign experience shows that expensive governmental programs are not as effective as programs of nongovernmental organizations (NGOs) that directly contact the community where drug addiction is growing. These NGOs, which as a rule are located in specific districts of the city, are more aware of the "hot spots" of the district than are the police. Even a simple parents' survey can provide a more objective assessment of the situation than the reports of the Ministry of Internal Affairs.

This means that efficient prevention of drug addiction requires creation of a unified municipal center to coordinate activities of the executive bodies, medical institutions, and NGOs. The center should include specialists in prevention and psychology and should coordinate information and interventions run by all participants.

By including NGOs, the center can:

- Assess and monitor drug addiction less expensively than by conducting social surveys
- Influence public opinion and create an actively negative attitude about drug addiction
- Consider public opinion when approving night clubs or discotheques that can affect drug distribution.

The government authorities, executive bodies, and health care system should ensure:

- An objective assessment based on direct and indirect indicators of risk levels for susceptibility to drug addiction in different communities
- Prevention interventions tailored to specific needs of the district
- Comprehensive prevention interventions instituted in areas with high risks of drug addiction.

The mass media tasks are as follows:

- Preparing information (financed by the municipal budget) and advertising (financed by various companies) promoting drug abuse prevention
- Discussing the content of information and advertising materials with specialists from the unified municipal center to increase the effectiveness of the interventions.

The center creates the municipal database, which is available to the public, on issues of drug addiction prevention and collaborates with city authorities to develop comprehensive interventions, consider both public opinion and government tasks, and influence public opinion.

The Association of Social Programs Development has much experience in the field of implementing similar projects, in particular those requiring collaboration between the authorities and the public. The association's experience with methods and knowledge can be effectively used in creating an interdepartmental center to prevent drug addiction.

COUNTERACTING ILLEGAL DRUG TRAFFICKING

Zazulin, G.V.

Office for Counteraction to Illegal Drug Circulation of the Head Office of Internal Affairs of St. Petersburg and the Leningrad Region, St. Petersburg, Russia

One cannot agree with criminologists who refer to the concept of illegal drug trafficking as merely a complex of illegal actions directed toward illicit growing, manufacturing, buying, processing, storing, transporting, selling, or using drugs and maintaining places for their use.

Illegal drug trafficking is a broader concept; it is a negative social and legal phenomenon, caused by the existence of illegal demand for drugs and illegal activities directed toward satisfying this demand.

Counteracting illegal drug trafficking, which, on the general social level requires the prevention and treatment of addiction, is directly linked to the material and moral values of the individual's environment. These conditions play a much more important role than any narrowly directed method of prevention or the legal consequences for drug dealers.

Comparing the first quarter of 1999 in St. Petersburg to the same period of 1998, the monetary expenses of the population decreased by 30.9 percent, and the officially registered unemployment rate increased by 4.0 percent, for a total of 55,800.

The statement of E. Fromm that ". . . the wish to destroy *must appear* (italics added) at the time when the wish to create something cannot be satisfied" is, in our opinion, applicable to self-destructive behavior caused by drug dependence. In the first quarter of 1999 in St. Petersburg, 2,201 people (more than 24 people every day) were legally prosecuted for crimes related to illegal drug trafficking, an increase of 357 arrests when compared with the same period in 1998. About 65 percent of those arrested were caught "redhanded" by police officials who did not have primary jurisdiction in drug cases.

Currently, interventions in illegal drug trafficking in modern Russia are unsatisfactory at both the general and specific levels.

Before the Russian transition to a free-market economy is completed, the country probably will experience an extremely high level of drug-related criminality. But drug-related crimes can be decreased by one of three ways:

- Eliminating penalties for possessing drugs without intending to sell them (overt decriminalization)
- Increasing the amount of drugs one must possess to be charged with illegal possession or purchase of drugs (masked decriminalization)
- Sharply decreasing the incentive (10 times, for example) for social security police who report drug-related crimes, which can occur if the prosecutor's office is required to initiate a legal case for each charge of illegal drug possession, beginning with dead-end cases of unidentified drug sellers.

Although the negative trends at the general social level of counteracting illegal drug trafficking persist, even the most active interventions will not reduce the national levels of tension. At present, the regional efforts offer the best possibility to restrict drug abuse and illegal drug trafficking. A strategic task should find the appropriate balance between legal sanctions and the treatment of addiction.

APPENDIX A: AGENDA

**U.S.-Russia Binational Workshop
Drug Abuse and Infectious Disease Prevention Strategies
St. Petersburg, Russia
May 24-27, 1999**

Objectives of the meeting:

- Expand participants' knowledge about drug abuse and infectious disease prevention and treatment:
- Disseminate research results that describe cost-effective prevention interventions and drug abuse treatment protocols that offer significant returns on comparably modest investments
- Encourage development of multidisciplinary drug abuse and infectious disease prevention and treatment programs
- Promote rigorous scientific research
- Foster international drug abuse research collaboration

ORGANIZERS

U.S. National Institute on Drug Abuse

St. Petersburg Pavlov Medical University

ORGANIZING COMMITTEE

A. Leshner (USA, co-chairman), N.A. Yaitsky (Russia, co-chairman), M.P. Needle (USA, coordinator), E.E. Zvartau (Russia, coordinator), I.P. Anokhina (Russia), P.J. Delany (USA), A.Y. Grinenko (Russia), N.N. Ivanetz (Russia), Y.D. Ignatov (Russia), E.M. Krupitsky (Russia), R.H. Needle (USA), A.G. Rackhmanova (Russia), E.B. Robertson (USA), A.P. Skripkov (Russia), E.V. Verbitskaya (secretary)

❖ CONCURRENT MULTIDISCIPLINARY WORKING GROUP SESSIONS

Multidisciplinary Working Group 1: Drug Abuse Prevention

Organizer: E.B. Robertson

Presenters initiating discussion: K.P. Haggerty, M.R. McDonald, M.J. Rotheram

Main topics to discuss:

Drug Abuse Prevention To Limit Infectious Disease Transmission
Information Dissemination
Family- and School-Based Prevention Programs
Prevention Among General and At-Risk Populations

Multidisciplinary Working Group 2: Drug Abuse Treatment

Organizer: P.J. Delany

Presenters initiating discussion: J.A. Hall, G.E. Woody, C.E. Yahne

Main topics to discuss:

Inpatient vs. Outpatient Treatment Approaches
Aftercare and Relapse Prevention
Case Management
HIV Prevention (link with Group 3)
Information Dissemination

Multidisciplinary Working Group 3: Community Prevention Intervention Strategies

Organizer: R.H. Needle

Presenters initiating discussion: S.H. Deren, D.C. Des Jarlais, H.C. Hagan

Main topics to discuss:

Community Prevention Intervention Strategies
Community-Based Outreach
HIV Antibody Testing and Counseling as Risk Reduction
Needle-Exchange Programs

Monday, May 24

Day Venue: White Nights Spa

- 9:00 Buses from Main Building of Pavlov Medical University (6/8 Lev Tolstoy Street) and Astoria Hotel
Registration (Concert Hall Lobby, White Nights Spa)
- 12:30 Meeting of the Organizing Committee members, Secretariat, and group facilitators (Concert Hall Lobby, White Nights Spa)
- 15:00 **OPENING CEREMONY, GREETINGS, OVERVIEW OF WORKSHOP OBJECTIVES**
Co-chairpersons: N.A. Yaitsky, P.J. Delany, A.Y. Grinenko, Y.D. Ignatov, A.G. Rackhmanova, I.P. Anokhina, M.P. Needle, R.H. Needle, E.B. Robertson, E.E. Zvartau, A.P. Skripkov
- 16:00 **COFFEE BREAK**
- 16:15 **PLENARY SESSION 1: NATIONAL AND GLOBAL ASPECTS OF DRUG ABUSE AND INFECTIOUS DISEASE**
Co-chairpersons: M.I. Narkevich (Russia), R.H. Needle (USA)
- Prevention of Drug Abuse and Drug-Related HIV and Other Infectious Disease: National and Global Aspects
D.C. Des Jarlais (Beth Israel Medical Center, New York), 30 min
- Drug Abuse Problem in Russia: Current Status
A.Y. Grinenko, G.A. Korchagina (St. Petersburg), 30 min
- National Programs for HIV Infection Prevention in Russia
M.I. Narkevich (Moscow), 30 min
- Current Status of Drug Addiction Problem in Georgia
G.G. Lezhava (Research Institute on Addictions, Tbilisi) 20 min
- Current Status of Drug Addiction Problem in Ukraine
V.V. Chtenguelov (Ukraine Institute on Social and Forensic Psychiatry, Kiev), 20 min

18:25 **COFFEE BREAK**

18:45 **PLENARY SESSION 1** (continued)

The Neurobiology of Drug Abuse

A. Leshner (NIDA), E.E. Zvartau (Pavlov Medical University, St. Petersburg), 20 min

The Nature of Drug Abuse: A Chronic, Relapsing Disease

P.J. Delany (NIDA), 20 min

The Genetics of Drug Abuse: Perspectives on the Biological Methods of Prevention

I.P. Anokhina (Research Institute on Addictions, Moscow), 20 min

20:00 **RECEPTION**

Tuesday, May 25

Day Venue: Dune Spa

10:00 **PLENARY SESSION 2: STRATEGIES OF PREVENTION OF DRUG ABUSE AND INFECTIOUS DISEASES: U.S. EXPERIENCE** (Concert Hall, Dune Spa)

Co-chairpersons: L.S. Shpilenia (Russia), P.A. Gaist (USA)

Principles and Approaches to Drug Abuse Prevention

E.B. Robertson (NIDA), 30 min

Approaches to Drug Abuse Treatment

P.J. Delany (NIDA), 30 min

Prevention of HIV and Other Blood-Borne Diseases in Drug-Using Populations

R.H. Needle (NIDA), 30 min

11:30 **COFFEE BREAK**

12:00 **CONCURRENT MULTIDISCIPLINARY WORKING GROUP SESSIONS**

Group 1. Drug Abuse Prevention (Concert Hall)

Group 2. Drug Abuse Treatment (Sakura Hall)

Group 3. Community Prevention Intervention Strategies (Sport Hall)

14:00 **LUNCH** (Dune Spa)

15:00 **CONCURRENT MULTIDISCIPLINARY WORKING GROUP SESSIONS** (continued)

19:00 **DINNER** (Dune Spa)

19:30 Interactive Session on Working With Parents (Concert Hall, Dune Spa)

M.R. McDonald, University of Wisconsin-Madison

Wednesday, May 26

Day Venue: Sestroretsky Kurort Spa

- 10:00 **PLENARY SESSION 3: OVERVIEW OF THE RUSSIAN SITUATION** (Concert Hall, Sestroretsky Kurort Spa, Building 2)
Co-chairpersons: I.P. Anokhina (Russia), P.J. Delany (USA)
- Epidemiology of Drug Abuse in Russia
N.N. Ivanetz, I.P. Anokhina, G.A. Korchagina (Research Institute on Addictions, Moscow), 15 min
- Drug Abuse Prevention in St. Petersburg
L.S. Shpilenia (City Narcological Dispensary, St. Petersburg), 15 min
- Prevention Strategies in Russian Federation
O.Y. Stakelberg (Academy of Postgraduate Medical Education, St. Petersburg), 15 min
- Pharmacotherapy for Treatment of Drug Addiction
E.M. Krupitsky, A.Y. Grinenko (Regional Center on Addictions, St. Petersburg; Leningrad Region Narcological Dispensary, Academy of Postgraduate Education, St. Petersburg), 15 min
- Rehabilitation Center for Drug Addicts in the Leningrad region
T.Y. Slavina (Leningrad Region Narcological Dispensary, St. Petersburg), 15 min
- Clinical Aspects of HIV Infection and Viral Hepatitis Among Drug Addicts (current status and overview of data presented)
A.G. Rackhmanova (Academy of Postgraduate Medical Education, St. Petersburg), 15 min
- 11:30 **COFFEE BREAK**
- 12:00 **PLENARY SESSION 3** (continued)
- STDs Among Drug Addicts
E.A. Aravijskaya (Pavlov Medical University, St. Petersburg), 15 min
- TBC and Drug Addiction
N.A. Brazhenko, Z.I. Kostina (Pavlov Medical University, St. Petersburg), 15 min
- The Role of Administrative Bodies in Prevention of Drug Abuse
A.P. Skripkov (St. Petersburg City Administration), 15 min
- The Approach of Law Enforcement Agencies
G.V. Zazulin (Control of Drug Trafficking Agency, St. Petersburg), 15 min
- The Role of Community Organizations in Prevention of Drug Abuse and Infectious Diseases
O.V. Tyusova (Vozvrashenie Foundation, St. Petersburg), 15 min
- The Role of Youth Organizations and Movements in Drug Abuse Prevention
G.V. Latyshev (Committee on Youth, St. Petersburg), 15 min
- Mass Media, State, and Community Organizations= Interactions in Drug Abuse Prevention
A.N. Zadorozhny (Association of the Development of Social Programs, St. Petersburg), 15 min

14:00 **LUNCH** (Sestroretsky Kurort Spa, building 3)

15:00 **CONCURRENT MULTIDISCIPLINARY WORKING GROUP SESSIONS**

Group 1. Drug Abuse Prevention (Video Hall)

Group 2. Drug Abuse Treatment (Library)

Group 3. Community Prevention Intervention Strategies (Autotraining Hall)

19:00 **DINNER, CONCERT** (Dancing Hall, Sestroretsky Kurort Spa, building 3)

Thursday, May 27

Day Venue: White Nights Spa

10:00 **PLENARY SESSION 4: THE ROLE OF PUBLIC HEALTH IN HEALTH PROMOTION AND DISEASE PREVENTION** (Concert Hall, White Nights Spa)

Co-chairpersons: A.G. Rackhmanova (Russia), E.B. Robertson (USA)

The Role of the Public Health System in the Protection of Health and Prevention of Diseases
P.A. Gaist (Office of AIDS Research, NIH), 30 min

The Role of the Public Health System in HIV Infection and Viral Hepatitis Prevention in Drug Addicts
B.M. Taitz (Health Administration, St. Petersburg), 30 min

Perspectives of Specialized Departments for HIV Infected Addicts in the Infectious Hospital of the Big City
A.A. Yakovlev (Botkin=s Hospital, St. Petersburg), 30 min

11:30 **COFFEE BREAK**

12:00 **CONCURRENT MULTIDISCIPLINARY WORKING GROUP SESSIONS**

Group 1. Drug Abuse Prevention (Concert Hall)

Group 2. Drug Abuse Treatment (Fireplace Hall)

Group 3. Community Prevention Intervention Strategies (Small Hall)

13:30 **LUNCH** (White Nights Spa)

14:30 **CLOSING PLENARY SESSION 5**

Co-chairpersons: P. Needle (USA), A.G. Rackhmanova, E.E. Zvartau (Russia)

Working Group Reports:

Group 1 Facilitators Report

Group 2 Facilitators Report

Group 3 Facilitators Report

General Discussion

Next Steps

Resolution of the Meeting Approval

U.S.-Russia Binational Workshop

18:00 **FAREWELL PARTY** (White Nights Spa)

21:00 **DEPARTURE TO ST. PETERSBURG**

APPENDIX B: PARTICIPANT LIST

See pages 83-100 in the Russian-language section of this report for the Participant List, which has both English- and Russian-language versions of participants and their contact information.

APPENDIX C: ABOUT THE A.V. VALDMAN INSTITUTE OF PHARMACOLOGY

(on the 100th Anniversary of the Department of Pharmacology of the Women's Medical Institute)



100 лет

The Department of Pharmacology of the St. Petersburg Women's Medical Institute was founded in 1899. The first period, which lasted for more than 40 years from 1899 to 1942, was one of development. The Department is associated with the prominent Russian scientist, Professor A.A. Likhachev. During the early period, the unique scientific potential of the Department was established, which was reflected in the number of scientific works related to heat and gas exchange in different pathological states, including the effects of different classes of toxic substances. In 1915 the Department became the first in Russia to investigate the toxicology of substances used in warfare. The scientific and organizational talent of Professor Likhachev contributed to the development of Russian pharmacology and toxicology. As Head of the Department of Pharmacology, he organized and became the Head of the Department of Toxicology of the USSR Institute of Experimental Medicine. As Professor of the Chemical Pharmaceutical Institute and Head of the Laboratory of Standardization of Medicines, he worked on issues related to improving the quality of medicines. As the Scientific Director of the Sanitar Chemical Institute of the Public Health Committee of

Leningrad, Professor Likhachev participated in chemical industry safety issues.

After Professor Likhachev died in 1942, Assistant Professor M.I. Palchevskaya headed the Department, with the difficult task of preserving the scientific potential of the Department under wartime conditions. During that time, all efforts of the Department were directed toward the war effort. In 1944, a Member of the Academy of Medical Sciences (AMS) of the USSR, Professor V.V. Zakusov, became the Head of the Department; he served in that position until 1956. In 1954 he was appointed to the position of Director of the Institute of Pharmacology and Chemotherapy of the AMS. The main research of that period concerned the pharmacology of the central nervous system, including the investigation of the effects of neurotropic agents on different parts of the brain, viscerovisceral reflexes, and the transmission of nervous impulses to the internal organs of the body. Some research was conducted on the pharmacology of myorelaxing agents and ganglioblockers.

From 1956 until 1958 Professor Palchevskaya was again Head of the Department. Between 1958 and 1978 the Head of the Department was the Academician of the AMS, Professor A.V. Valdman. During that time, pharmacological research focused on the role of reticular formation in the mechanisms of action of narcotic substances, analgesic agents, neuroleptics, and several other classes of drugs. The Department was actively involved in the study of the neurophysiological mechanisms of analgesic agents'

effects on the regulation of the afferent input system and on descendant regulation of different spinal functions. The effects of neurotropic agents on the circulatory and respiratory systems were also studied.

A number of important theories of emotional behavior regulation were elaborated; the methods of reproduction and assessment of natural and pathological emotional states in animals were created; the effects were studied of a number of psychotropic agents on regulation of emotional and motivational reactions; and vegetative and endocrine changes under different stress modalities were investigated. The Section of Pharmacology was also founded. Under the leadership of the Doctor of Medical Sciences, V.P. Poshivalov, the Section implemented methods of etiological pharmacology, which opened new perspectives for adequate assessment of the mechanisms of action and the effects of different classes of psychotropic agents.

Since 1978 the Honored Scientist of Russian Federation, Corresponding Member of the Russian AMS, Professor Y.D. Ignatov has been the Head of the Department. The Department is now actively involved in the study of the mechanisms of the pain-relieving effects of different classes of analgesics; neurochemical and neurophysiological mechanisms of stimulation and acupuncture analgesia; and etiological aspects of affective pain behavior. The contributing factors and deep mechanisms underlying the formation of drug dependence on neurotropic agents are being investigated. The scientific solutions to these problems led to undertaking new approaches to the pharmacological therapy of pain; improving methods of assessing the addictive potential of different classes of drugs; and discovering new, promising analgesic agents.

After the Course of Clinical Pharmacology was created in the Department of Pharmacology in 1984 (the Head of the Course is Professor A.A. Zaitzev), the spectrum of scientific interests expanded, and now the Department is involved in the study of various aspects of the action of antihypertensive agents, bronchodilators, tranquilizers, and analgesic agents. This research is conducted in collaboration with the Departments of Internal Medicine, Neurology, Pediatric Dentistry, Anesthesiology, Obstetrics and Gynecology, and Psychiatry.

When the Laboratory of Drug Pharmacology was created in the Department in 1987 with Professor E.E. Zvartau as Head, the fundamental research of addiction mechanisms and methods of correction were resumed.

In 1995 the Department of Pharmacology, Course of Clinical Pharmacology, Laboratory of Drug Pharmacology, and Research Scientific Center Section of Pharmacology merged to become the Institute of Pharmacology named after Professor Valdman. The current Head is the Corresponding Member of the Russian AMS, Professor Y.D. Ignatov. The Institute consists of the sections of psychopharmacology and pharmacology of pain, which in turn consist of a number of laboratories and directs the efforts of teachers and researchers toward successful solutions to modern pharmacology questions. The Institute cooperates not only with scientists of St. Petersburg and Russia but also with colleagues from Finland, France, Germany, Italy, The Netherlands, Sweden, and the United States.

APPENDIX D: ABOUT THE NATIONAL INSTITUTE ON DRUG ABUSE



NIDA's mission is to lead the Nation in bringing the power of science to bear on drug abuse and addiction. This charge has two critical components: The first is the strategic support and conduct of research across a broad range of disciplines. The second is to ensure the rapid and effective dissemination and use of the results of that research to significantly improve drug abuse and addiction prevention, treatment, and policy.

Milestones in NIDA History

- 1999** NIDA releases *Principles of Treatment*, a research-based guide developed for use in local communities that describes the most successful concepts for treating drug abuse and addiction.
- 1999** NIDA launches its National Drug Abuse Treatment Clinical Trials Network to rapidly and efficiently test the effectiveness of behavioral and pharmacological treatments in real-life settings.
- 1998** NIDA establishes a new Center for AIDS and Other Medical Consequences of Drug Abuse to coordinate a comprehensive, multidisciplinary research program aimed at improving the knowledge base on drug abuse and HIV/AIDS and on other short- and long-term health consequences associated with drug abuse and addiction.
- 1997** NIDA releases the first research-based guide to preventing young people from using drugs. This practical information was developed for community use.
- 1995** NIDA researchers clone the dopamine transporter, cocaine's primary site of action in the brain.
- 1992** NIDA becomes part of the National Institutes of Health, the world's premier biomedical and behavioral research organization.
- 1990** NIDA establishes its formal Medications Development Program to focus efforts on new pharmacotherapies for drug addiction.
- 1988** Congress further increases NIDA funding for treatment research demonstrations, research on the maternal and fetal effects of drugs, and medications development.
- 1986** The dual epidemics of drug abuse and drug abuse-related HIV infection and AIDS are recognized by Congress and the Administration in a quadrupling of NIDA funding for research on both major diseases.
- 1981** NIDA's mission changes as Congress legislates the Block Grant Program to give States more control over drug abuse treatment and prevention services.
- 1974** NIDA is established as the Federal focal point for research, treatment, prevention and training services, and data collection on the nature and extent of drug abuse.

NIDA's Accomplishments

For the past two decades, NIDA has been exploring the biomedical and behavioral foundations of drug abuse. NIDA's scientific research program addresses the most fundamental and essential questions

about drug abuse, ranging from its causes and consequences to its prevention and treatment. Among the many and diverse accomplishments of the past 20 years, NIDA-supported research has:

- Identified the molecular sites in the brain where every major drug of abuse—opiates, cocaine, PCP, and THC (the active ingredient in marijuana)—has its initial effect. These discoveries, together with computer-aided drug design, are paving the way to development of novel medications to break the cycle of addiction.
- Produced a neurobehavioral model to explain drug-taking behavior to improve treatment and rehabilitation methods.
- Supported the development of two medications—LAAM and naltrexone—through the approval process by the Food and Drug Administration for the treatment of opiate addiction.
- Supported the development and evaluation of pharmacologic treatment for newborns withdrawing from exposure to narcotics.
- Defined nicotine addiction and established the scientific basis for therapy that uses nicotine gum and skin patches.
- Pioneered innovative community-based research on AIDS prevention efforts that showed that drug users will change AIDS-risk behaviors, which can reduce their susceptibility to HIV infection and AIDS.
- Demonstrated that participation in methadone treatment significantly reduces HIV seroconversion rates and decreases high-risk behaviors.
- Demonstrated that successful drug abuse treatment reduces criminality as well as relapse to addiction.
- Demonstrated the value of treating drug abusers' depression and other mental disorders to improve the results of addiction therapy.
- Measured the positive effect of comprehensive research-based community drug prevention strategies that involve the media, schools, families, neighborhoods, and the workplace.
- Used advanced imaging techniques to identify in awake humans the specific brain circuits that are involved in craving, euphoria, and other sequelae of drug addiction. These exciting studies will provide the foundation for the development of new, targeted medications to block individual aspects of drugs.
- Used molecular genetic technologies to clone the genes for the major receptors for virtually every abusable drug, thus providing scientists with the tools necessary to study in fine detail how drugs of abuse exert their many behavioral effects.
- Produced genetically engineered animals in which a particular drug receptor had been eliminated or "knocked out." These animals are providing unprecedented insight into how drugs exert their many effects in the brain and produce addiction.
- Demonstrated that prenatal exposure to cigarettes and marijuana have long-term effects on cognitive performance.
- Successfully immunized rats against the psychostimulant effects of cocaine, thus opening up the possibility of developing a vaccine against cocaine addiction.

The results of these and other achievements through NIDA-funded research offer this country's best hope for solving the medical, social, and public health problems of drug abuse and addiction.

NIDA's Future

Never has there been a greater need to increase our knowledge of drug abuse. Ever-changing drug use patterns, the continuing transmission of HIV infection among drug abusers, and the need to develop new and effective treatment and prevention interventions underscore the importance of research in finding new and better ways to alleviate the pain and devastation of addiction. Some of the Institute's goals are to:

- Design and develop new medications for opioid and cocaine addiction, especially for use during pregnancy, by building on the recent molecular discoveries that have uncovered the basis for addiction in the brain
- Develop techniques to detect subtle effects of drug exposure in children of drug-using parents to provide opportunities for early preventive or clinical intervention
- Broaden research on women and addiction to determine the biological and behavioral differences that need to be addressed in effective drug abuse prevention and treatment
- Reduce the spread of HIV infection through improved drug abuse interventions and better understanding of the interactions between drugs of abuse and the body's immune system
- Apply state-of-the-art neuroimaging techniques to the problems of drug abuse prevention and treatment
- Design, develop, and test new behavioral therapies and promote their use for appropriate patient populations
- Study the treatment of special clinical problems presented by drug abusers with HIV, tuberculosis, hepatitis, and other infections
- Understand the organization and financing of drug abuse treatment and its benefits to the larger health care system
- Identify the protective and resiliency factors that prevent drug use in those individuals with multiple risk factors so that more effective prevention techniques can be developed
- Strengthen the research infrastructure by providing additional opportunities for research training and career development for clinical researchers and by improving mechanisms for training and mentoring minority researchers
- Expand the use of scientific information to educate the public about the real nature of drug abuse and addiction and the hope and promise for more effective prevention and treatment
- Broaden the dissemination of research findings and improve drug abuse prevention and treatment practice and policy.