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Needle Sharing Among Intravenous Drug ers:

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U. S N SERVICES • Public Health Service • Alcohol, Drug Abuse, and Mental Health Administration

Needle Sharing Among Intravenous Drug Abusers: National and International Perspectives

Editors:

Robert J. Battjes, D.S.W.

Roy W. Pickens, Ph.D.

Division of Clinical Research
National Institute on Drug Abuse

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Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857

Needle Sharing Among Intravenous Drug Abusers: National and International Perspectives

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Foreword

Checking the spread of AIDS is the most urgent task confronting public health officials today. One in four persons with AIDS in the United States has used illicit drugs intravenously. Hence the National Institute on Drug Abuse (NIDA) has committed its resources on many fronts to help curb this deadly infection among intravenous drug abusers, their sexual partners, and their children.

Transmission of the AIDS virus–human immunodeficiency virus (HIV)–among intravenous drug abusers most often occurs when they share drug injection equipment. Small amounts of contaminated blood left in needles or syringes can carry the virus from person to person. Almost all intravenous drug users sometimes share their "works," for reasons that include convenience, friendship, and ritual.

In some cities in the United States, rates of HIV infection among intravenous drug users are already high. In many others, still in relatively early stages of the AIDS epidemic, a window of opportunity exists to prevent catastrophe. How can the risks from sharing injection equipment, commonplace among intravenous drug users, be reduced? How can individuals who are often hard to reach and unresponsive to "authority" be made aware of the danger and motivated to change long-established behaviors?

To review existing research and program experience in dealing with these questions, NIDA convened more than 40 experts for a 2-day meeting in May 1987. They came from across the United States and from England, The Netherlands, and Italy, from governments, universities, treatment facilities, and professional associations.

Participants described a wide variety of programs and policies which have been implemented in U.S. cities and in Western Europe. They spoke from diverse perspectives and expressed differing views. This monograph, summarizing the presentations at the meeting, is both informative and thought-provoking. It can provide a valuable basis for further discussion about the challenging problem of stopping the spread of AIDS through "needle sharing."

Charles R. Schuster, Ph.D.
Director
National Institute on Drug Abuse

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Participants

National Institute on Drug Abuse Technical Review Meeting on Needle Sharing Among Intravenous Drug Abusers: National and International Perspectives, Bethesda, MD, May 18-19, 1987

MODERATORS

Robert J. Battjes, D.S.W.
Associate Director for Planning
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-38
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6697

Roy W. Pickens, Ph.D.
Director, Division of
Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-38
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6697

REVIEWERS

Ernst C. Buning, Psychologist
Drug Department GG & GD
Valckenierstraat 2
1018 XG Amsterdam
The Netherlands
011 31 20 5555 349

Don C. Des Jarlais, Ph.D.
Assistant Deputy Director
New York State Division of
Substance Abuse Services
55 West 125th Street, 10th Floor
New York, NY 10027
(212) 870-8362

Harvey W. Feldman, Ph.D.
Executive Director
Youth Environment Study, Inc.
1779 Haight Street
San Francisco, CA 94117
(415) 751-4221

Harry W. Haverkos, M.D.
Chief, Clinical Medicine Branch
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-08
5600 Fishers Lane
Rockville, MD 20857
(301) 443-1801

William Hopkins, Ph.D.
Supervisor, Street Research Unit
New York State Division of
Substance Abuse Services
Vincent Building
55 West 125th Street
New York, NY 10027
(212) 870-8501

Alberto G. Mata, Ph.D.
Postdoctoral Fellow
Center for Health Promotion
University of Texas
Health Science Center,
Houston
P.O. Box 20036
Houston, TX 77225
and
Assistant Professor
Center for Hispanic Research
School of Social Work
Arizona State University
Tempe, AZ 85287

John Newmeyer, Ph.D.
Epidemiologist
Haight-Ashbury Free
Medical Clinic
529 Clayton Street
San Francisco, CA 94117
(415) 431-2450

Chris B. Pascal, J.D.
Legal Advisor
Alcohol, Drug Abuse, and Mental
Health Administration
Office of the General Counsel
Department of Health and
Human Services
Parklawn Building, Room 4A-53
5600 Fishers Lane
Rockville, MD 20857
(301) 443-1212

Robert Michael Power, Ph.D.
Research Fellow
Drug Indicators Project
Department of Politics
and Sociology
Birkbeck College
University of London
16 Gower Street
London, WC1, England
44 1 631 6246

Gerry V. Stimson, Ph.D.
Director, Monitoring
Research Group
Sociology Department
Goldsmiths' College
University of London
New Cross, London SE14 6NW
England
44 1 631 6246

Enrico Tempesta, M.D.
Chief, Alcohol and Drug
Dependence Unit
Università Cattolica Sacro Cuore
Facoltà di Medicina
Lg. Gemelli 8
00168 Rome, Italy
039 6 330 545 73

W. Wayne Wiebel, Ph.D.
Principal Investigator
AIDS Outreach Demonstration
Project
Epidemiology and Biometry
Program (M/C 925)
School of Public Health
University of Illinois at Chicago
Box 6998
Chicago, IL 60680
(312) 996-5523

OTHER PARTICIPANTS

Robert Bernstein, M.D.
Commissioner of Health
Texas Department of Health
1100 West 49th Street
Austin, TX 78756
(512) 458-7375

George Beschner
Chief, Community Research Branch
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-46
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6720

Karst Besteman
Executive Director
Alcohol and Drug Problems Association
444 North Capitol Street, Suite 181
Washington, DC 20001
(202) 737-4340

George Bigelow, Ph.D.
Associate Professor of Behavioral Biology
Director, Behavioral Pharmacology Research Unit
Johns Hopkins University School of Medicine
D5 West, Psychiatric Department
Key Medical Center
4940 Eastern Avenue
Baltimore, MD 21224
(301) 955-0035

Jacqueline Bowles, M.D.
Senior Science Advisor
Office of Minority Health
U.S. Public Health Service
Hubert H. Humphrey Building, Room 118F
200 Independence Avenue, SW
Washington, DC 20201
(202) 245-0020

Deborah Brimlow, Ph.D.
Postdoctoral Fellow
Behavioral Pharmacology Research Unit
Johns Hopkins University School of Medicine
D5 West, Psychiatric Department
Key Medical Center
4940 Eastern Avenue
Baltimore, MD 21224
(301) 955-0014

Lawrence Brown, M.D.
Vice President, Research and Medical Affairs
Addiction Research and Treatment Corporation
22 Chapel Street
Brooklyn, NY 11201
(718) 834-5332

William Butynski, Ph.D.
Executive Director
National Association of State Alcohol and Drug Abuse Directors
918 F Street, NW, Suite 400
Washington, DC 20004
(202) 783-6868

Kennieth Castro, M.D.
Medical Epidemiologist
AIDS Program
Centers for Disease Control
Building 6, Room 285
Atlanta, GA 30333
(404) 329-3162

John A. Dougherty, Jr., Ph.D.
Research Psychologist
Clinical Medicine Branch
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-08
5600 Fishers Lane
Rockville, MD 20857
(301) 443-1801

Iris Gelberg
Assistant to the AIDS Coordinator
U.S. Public Health Service
Hubert H. Humphrey Building, Room 729H
200 Independence Avenue, SW
Washington, DC 20201
(202) 472-4248

Bernard Gropper, Ph.D.
Manager
Drugs, Alcohol, and Crime Research Program
National Institute of Justice
Department of Justice
633 Indiana Avenue, NW
Washington, DC 20531
(202) 724-7631

Jerome Jaffe, M.D.
Director
Addiction Research Center
National Institute on Drug Abuse
P.O. Box 5180
Baltimore, MD 21224
(301) 955-7594

Nolan Jones
Staff Director
Criminal Justice and Public Protection
National Governors Association
444 North Capitol Street, Suite 250
Washington, DC 20001
(202) 624-5360

Joseph Kelaghan, M.D.
Medical Officer
AIDS Program
National Institute of Allergy and Infectious Diseases
Westwood Building, Room 3A-12
9000 Rockville Pike
Bethesda, MD 20892
(301) 496-6177

Nick Kozel
Chief, Statistical and Epidemiologic Analysis Branch
Division of Epidemiology and Statistical Analysis
National Institute on Drug Abuse
Parklawn Building, Room 11A-55
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6637

Linda Lewis
Administrator, Alcohol and Drug Abuse Program
Department of Health and Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32301
(904) 488-0900

Joyce H. Lowinson, M.D.
Director
Albert Einstein College of Medicine
Division of Substance Abuse
1500 Waters Place
Bronx, NY 10461
(212) 409-1916

David Mactas
President
Therapeutic Communities of America
(Marathon House, Inc.)
131 Wayland Avenue
Providence, RI 02906
(401) 331-4250

Stephen Margolis, Ph.D.
AIDS Drug Abuse Coordinator
AIDS Office
Centers for Disease Control
1600 Clifton Road, NE
Atlanta, GA 30333
(404) 320-2790

Joan Porter, D.P.A.
Office for Protection from Research Risks
National Institutes of Health
Building 31, Room 4B-09
Bethesda, MD 20892
(301) 496-7041

Beny Primm, M.D.
President, Addiction Research and Treatment Corporation
22 Chapel Street
Brooklyn, NY 11201
(718) 834-5350

Richard Russo
Assistant Commissioner
Division of Narcotic and Drug Abuse Control
State of New Jersey
129 East Hanover Street
Trenton, NJ 08625
(609) 292-5760

Rachel Stricof, M.Ph.
Epidemiologist, Bureau of Communicable Diseases
Center for Community Health
New York State Health Department
Empire Plaza
Corning Tower Building, Room 651
Albany, NY 12237
(518) 474-4568

Ernestine Vanderveen, Ph.D.
Associate Director for AIDS
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-38
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6697

Chauncey Veatch III, Esq.
Director, Department of Alcohol
and Drug Abuse
State of California
111 Capitol Mall
Sacramento, CA 95814
(916) 445-0834

Gloria Weissman
Public Health Analyst
Community Research Branch
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-46
5600 Fishers Lane
Rockville, MD 20857
(301) 443-6720

Lester Wright, M.D., M.P.H.
Deputy Administrator, Oregon
Health Division
P.O. Box 231
Portland, OR 97207
(503) 229-5806

Needle Sharing Among Intravenous Drug Abusers: An Overview

Robert J. Battjes and Roy W. Pickens

INTRODUCTION

The acquired immunodeficiency syndrome (AIDS) has emerged as a worldwide public health epidemic. In the United States, intravenous drug abusers, along with homosexual and bisexual men, are one of the groups most at risk for contracting AIDS. Twenty-five percent of adult persons with AIDS in the United States report that they have used illicit drugs intravenously. AIDS cases in the intravenous-drug-abusing population have until recently been largely concentrated in a small number of metropolitan areas. However, cases are now emerging in communities across the United States. AIDS among intravenous drug abusers is also emerging as a serious health problem in many European countries.

AIDS is spread among intravenous drug abusers primarily through the sharing of needles, syringes, and other paraphernalia used in the injection of illicit drugs. Since drug injection equipment is widely shared among intravenous drug abusers and since they seldom take adequate steps to sterilize injection equipment, the potential for the rapid spread of AIDS in this population is considerable.

The National Institute on Drug Abuse (NIDA) is the lead Federal agency within the United States with responsibility for reducing the demand for illicit drugs. NIDA has a commitment to help curb the spread of AIDS among intravenous drug users, and it has initiated a program of research, training, and technical assistance regarding the drug abuse aspects of AIDS.

Because of the important role of needle sharing* in the spread of AIDS, NIDA convened a conference to explore the problem of needle sharing among intravenous drug abusers and to consider the implications of public policy alternatives for controlling this behavior. The conference, "Needle Sharing Among Intravenous Drug Abusers: National and International Perspectives," was held on May 18-19, 1987, in Bethesda, MD. Participants included Federal and State drug abuse and public health officials, drug abuse treatment providers, and drug abuse researchers. Participants came from Italy, The Netherlands, and the United Kingdom, as well as the United States. The conference agenda included formal presentations regarding the drug abuse aspects of AIDS and needle sharing among intravenous drug abusers. The agenda also included small group discussions in which the participants considered the advantages and disadvantages of alternative public policies for controlling needle sharing.

MONOGRAPH OVERVIEW

This monograph contains the formal papers presented at the conference and a review of the key findings emanating from the conference. First, HARRY HAVERKOS summarizes epidemiological data regarding the extent of AIDS and human immunodeficiency virus (HIV) infection among intravenous drug abusers in the United States and Europe. Information on drug abuse and injection practices among intravenous drug abusers in several areas of the United States is presented, with WILLIAM HOPKINS focusing on New York City, HARVEY FELDMAN and PATRICK BIERNACKI focusing on San Francisco, and ALBERTO MATA and JAIME JORQUEZ focusing on Mexican-Americans in the Southwest.

European participants review needle-sharing practices and public policies impacting on these practices in four countries. First, ERNST BUNING, GIEL VAN BRUSSEL, and GERRIT VAN SANTEN consider implications of drug policy in Amsterdam, The Netherlands,

*Intravenous drug abusers share needles, syringes, and other injection equipment, including the "cooker" which is used to liquify the drug prior to injection and cotton which is used to strain the liquified drug solution. In this monograph, "needle sharing" is used generically to refer to the sharing of injection equipment.

for controlling needle sharing. ROBERT POWER assesses the influence of AIDS upon drug use practices in the United Kingdom, while GERRY STIMSON reports on that nation's recent efforts to make sterile injection equipment readily available. ENRICO TEMPESTA and MASSIMO DI GIANNANTONIO then report on needle-sharing practices and HIV transmission in Italy, and CLAUDE OLIEVENSTEIN considers implications for preventing the spread of AIDS among intravenous drug abusers in France.

CHRIS PASCAL then reviews Federal and State laws regulating the availability and use of hypodermic needles and syringes within the United States and considers implications of legislation and enforcement practices for the prevention of AIDS transmission. Efforts to reduce needle sharing in the United States are then considered. WAYNE WIEBEL describes ethnographic and epidemiological methods for targeting AIDS prevention efforts. Recognizing that a substantial number of addicts will continue to inject drugs and share needles, JOHN NEWMEYER reports on a San Francisco outreach program that teaches intravenous drug abusers to sterilize their injection equipment with household bleach. DON DES JARLAIS, SAMUEL FRIEDMAN, JO SOTHERAN, and RAND STONEBURNER review the AIDS epidemic among intravenous drug abusers in New York City and consider efforts to prevent HIV transmission. Finally, ROBERT BATTJES and ROY PICKENS review the key findings and recommendations that emerged from the conference.

NIDA'S AIDS PROGRAM

It is important to place the conference on needle sharing and this monograph within the context of NIDA's AIDS program. The conference and this monograph represent only one part of NIDA's extensive AIDS program.

In curbing the spread of the AIDS virus, NIDA's primary objective is to reduce intravenous drug use. Efforts to accomplish this goal include (1) supporting research to improve efforts at treating and preventing intravenous drug use; and (2) expanding the availability of drug abuse outreach and treatment services. NIDA is also developing educational materials and training programs relevant to AIDS prevention, e.g., information on unsafe injection practices. In addition, NIDA is supporting research to develop effective AIDS risk reduction interventions. Research on the clinical epidemiology and natural history of HIV infection and AIDS in intravenous drug

users, their sexual partners and offspring is also supported, as is basic research to determine the effects of abused drugs on the immune system.

Specific NIDA initiatives in the AIDS area include:

Reducing Intravenous Drug Use. For opiate addicts, a number of treatment strategies, e.g., methadone maintenance, have been found to be effective in reducing intravenous opiate use (thereby reducing exposure to a known risk factor for AIDS). However, only a limited number of opiate addicts are enrolled in treatment programs, and those that are enrolled tend to do so only relatively late in their addiction careers. NIDA is encouraging the expansion of outreach efforts to attract more intravenous drug users into drug abuse treatment. NIDA is also encouraging the expansion of drug abuse treatment capacity in order to eliminate waiting lists of intravenous drug users currently seeking treatment and to provide treatment services for those intravenous drug users recruited through enhanced outreach activities. Thus, expanding community-based programs to enable more opiate addicts to enter treatment, and to encourage opiate addicts to enter treatment at an earlier stage, is a primary strategy implemented by NIDA for reducing the spread of AIDS.

Research efforts to improve the effectiveness of drug abuse treatment, e.g., the use of contingency contracting in methadone maintenance and the use of other pharmacological agents such as buprenorphine, are being pursued. Also, since methadone maintenance is not an appropriate treatment for nonopiate intravenous drug abusers, development of specific treatment strategies for reducing intravenous use of nonopiate drugs is being encouraged. In addition to controlled research studies, drug abuse treatment demonstration projects are being undertaken in an effort to evaluate outreach strategies on a broader scale. These demonstrations will involve more intravenous drug abusers in drug abuse treatment, thereby reducing the spread of AIDS.

Information on Unsafe Injection Practices. Information on risk factors in the spread of HIV infection is being disseminated to intravenous drug users. Information includes the possibility of viral transmission by sharing of needles and other injection paraphernalia and by inadequate needle sterilization procedures. Various methods for increasing awareness of these risk factors and for motivating

intravenous drug users to change their injection practices are being tested through demonstration projects and research studies.

Establishing Voluntary HIV Screening Within Drug Abuse Treatment Programs. Intravenous drug abusers and their sexual partners should be encouraged to participate in HIV antibody testing so that individuals who are infected with the AIDS virus can take appropriate precautions to prevent further transmission of the virus and can take steps to enhance their own health status. Testing should also be available for the offspring of intravenous drug abusers, as appropriate. Since intravenous drug users are suspicious of many community agencies, drug abuse treatment programs are appropriate testing sites. NIDA is encouraging the establishment of HIV-screening capacity, with pre- and posttest counselling regarding test interpretation and risk reduction, within drug abuse treatment programs.

Preventing Intravenous Drug Use. Prevention activities focus on identifying individuals at high risk for becoming intravenous drug users, and developing educational materials and intervention strategies for halting the progression from initial drug experimentation to chronic intravenous injection that may occur in drug users.

Clinical Epidemiology of AIDS in Intravenous Drug Users. For at least the next several years, NIDA will monitor HIV infection among intravenous drug abusers in selected U.S. cities to determine trends in prevalence of the viral infection. NIDA is also developing estimations of the prevalence of intravenous drug abuse and needle sharing by intravenous drug abusers. Research is also being supported to assess aspects of HIV exposure and cofactors that determine the vulnerability to infection, affect further transmissibility of the illness, and influence the clinical course of the disease. Particular attention is being paid to the effects of drugs on immune function, especially regarding those drugs that are used in drug abuse treatment, e.g., methadone and buprenorphine.

Sexual and Perinatal Transmission. Three-quarters of the cases of heterosexual AIDS transmission are related to intravenous drug use as are approximately two-thirds of the cases of perinatal transmission. Research is being supported to determine the extent of HIV infection among these groups and to explore cofactors related to infection and disease progression. Educational materials and training programs are being developed to focus on sexual and perinatal

transmission. Outreach strategies to inform both intravenous drug abusers and their sexual partners regarding their risks associated with sexual and perinatal HIV transmission and ways to prevent infection are being evaluated.

Minorities and AIDS. Approximately 50 percent of the AIDS cases related to intravenous drug abuse have occurred in blacks and 30 percent in Hispanics. Thus, NIDA's AIDS program is designed to be culturally relevant to and to target these high-risk populations.

AUTHORS

Robert J. Battjes, D.S.W.
Associate Director for Planning
Division of Clinical Research

Roy W. Pickens, Ph.D.
Director, Division of Clinical Research

National Institute on Drug Abuse
Parklawn Building, Room 10A-38
5600 Fishers Lane
Rockville, MD 20857

Overview: HIV Infection Among Intravenous Drug Abusers in the United States and Europe

Harry W. Haverkos

BACKGROUND

The acquired immunodeficiency syndrome (AIDS), a recently recognized health problem, is characterized by a severe and persistent breakdown in the immune system. The case fatality rate among AIDS patients is high. In April 1987, about 6 years after the first published description of AIDS appeared, the total number of cases diagnosed and reported in the United States and Europe exceeded 40,000, and over 22,000 of the patients had died. Results of national surveillance indicate that the total number of cases has been doubling every 12 to 14 months.

However, the numbers of AIDS cases do not adequately describe the extent of the problem. AIDS is caused by human immunodeficiency virus (HIV), a virus that is transmitted from person to person through sexual contact, exchange of blood and blood products (including sharing needles containing contaminated blood), and from mother to child during pregnancy. The mean latency period (time from HIV infection to diagnosis with AIDS) is estimated to be from 3 to 6 years (Peterman et al. 1985; Lui et al. 1986). In June 1986, projections by the U.S. Public Health Service indicated that 1 to 1.5 million Americans had already been infected with HIV and that 20 to 30 percent of infected persons may proceed to AIDS by 1991. It has been suggested that the number of HIV-infected individuals may be increasing at a rate similar to that of AIDS cases. When these data are coupled with the emerging evidence that HIV infection may spread from the original risk groups through heterosexual transmission, the number of potential cases is staggering.

Intravenous drug abusers (IVDAs) constitute a significant proportion of individuals with AIDS and HIV infection in the United States and Europe. In this paper, I will review the epidemiology of reported AIDS cases and HIV seroprevalence studies among IVDAs in the United States and Europe.

AIDS AMONG IVDAS IN THE UNITED STATES

Concomitant with the initial case reports of AIDS among homosexual men was a report of *Pneumocystis carinii* pneumonia among men who denied homosexuality but admitted intravenous drug abuse (Masur et al. 1981). Initially several skeptics, including the author, assumed that those cases were individuals who prostituted themselves to other men to pay for their drugs. However, as the case reports among IVDAs continued, and as female IVDAs were reported, it became clear that IVDAs were also at risk for AIDS.

Between June 1981 and May 4, 1987, 35,219 AIDS cases of Kaposi's sarcoma and/or life-threatening opportunistic infections in the United States were reported to the Centers for Disease Control (CDC). (About 380 new cases of AIDS are reported to the CDC each week.) All reported cases were among persons without underlying disease, e.g., cancer, nor did these cases include renal transplant recipients or patients undergoing immunosuppressant therapy (Centers for Disease Control 1985). Approximately 25 percent of the AIDS cases were among IVDAs. Heterosexual IVDAs accounted for 5,800 AIDS cases (17 percent), whereas homosexual and bisexual IVDAs accounted for an additional 2,638 AIDS cases (8 percent). Of all male cases, 4,600 (14 percent) were heterosexual men who reported using needles for self-injection of drugs not prescribed by a physician, at least once prior to developing AIDS. Of all adult female cases, 1,200 (50 percent) reported such a drug abuse history. The mean age of heterosexual IVDAs with AIDS was 35 years, with a range of 15 to 69 years.

There is considerable variation in the numbers of AIDS cases by race among the various risk groups (table 1). According to the 1980 U.S. census, whites account for approximately 80 percent of the U.S. population; blacks, 12 percent; and Hispanics, 6 percent. Whites constitute 75 percent of AIDS cases among homosexual/bisexual men, 80 percent of cases among hemophiliacs and blood transfusion recipients, and 19 percent of cases among heterosexual IVDAs. Blacks account for 51 percent of cases among heterosexual

IVDAs, 73 percent of cases attributed to heterosexual transmission, and 62 percent of cases attributed to perinatal transmission. There are more Hispanic than white heterosexual IVDAs and children with AIDS.

TABLE 1. *Number (and percent) of AIDS cases reported to the CDC, by transmission category and racial/ethnic group (May 4, 1987)*

Transmission Category	White not Hispanic	Black not Hispanic	Hispanic	Other/ Unknown	Total
Gay and Bisexual Men	16,908 (74)	3,350 (15)	2,322 (10)	238 (1)	22,818 (100)
IVDA	1,092 (19)	2,940 (51)	1,734 (30)	34 (1)	5,800 (100)
Gay and IVDA	1,714 (65)	579 (22)	330 (13)	15 (1)	2,638 (100)
Hemophiliac	284 (85)	21 (6)	23 (7)	6 (2)	334 (100)
Heterosexual*	186 (14)	975 (73)	174 (13)	5 (0)	1,340 (100)
Transfusion Recipient	565 (75)	115 (15)	56 (7)	15 (2)	751 (100)
Parent at Risk	45 (12)	242 (62)	100 (26)	2 (1)	389 (100)
Undetermined	420 (37)	486 (42)	220 (10)	23 (2)	1,149 (100)
Total	21,214 (60)	8,708 (25)	4,959 (14)	338 (1)	35,219 (100)

*Includes 687 persons (130 men, 557 women) who have had heterosexual contact with a person with AIDS or at risk for AIDS and 653 persons (522 men, 131 women) without other identified risks who were born in countries in which heterosexual transmission is believed to play a major role, although precise means of transmission have not yet been fully defined.

SOURCE: Centers for Disease Control 1987.

There are also considerable geographical differences (table 2). As of May 4, 1987, all 50 States, Puerto Rico, and the District of Columbia had reported at least one AIDS case among heterosexual IVDAs. However, New York and New Jersey accounted for 74 percent of all heterosexual cases among IVDAs compared to 26 percent of homosexual IVDAs with AIDS and 28 percent of all AIDS cases not reporting intravenous drug abuse. In New Jersey, heterosexual IVDAs with AIDS accounted for 45 percent of all cases. In California, heterosexual IVDAs with AIDS accounted for only 2 percent of all cases (Pershing 1987).

TABLE 2. *AIDS cases in the 10 States or territories reporting the largest numbers of heterosexual IVDAs with AIDS (May 4, 1987)*

State or Territory	Total IVDAs	Hetero-sexual IVDAs	Homo-sexual IVDAs	Total AIDS Cases	Percent IVDAs
New York	3,929	3,373	556	10,434	38
New Jersey	1,059	942	117	2,085	51
California	1,022	183	839	7,921	13
Florida	439	307	132	2,022	22
Texas	332	68	264	2,249	15
Connecticut	154	127	27	403	38
Puerto Rico	153	113	40	328	47
Pennsylvania	128	66	62	794	16
Massachusetts	121	89	32	669	18
Maryland	94	71	23	547	17

SOURCE: Centers for Disease Control 1987.

HIV infection is transmitted between IVDAs primarily, but not exclusively, when needles and other paraphernalia used to inject drugs are shared. Some HIV transmission is certainly due to sexual contact between IVDAs. Infected drug abusers are also capable of transmitting HIV to non-IVDA sexual partners during sexual contact and to their infants during pregnancy. Many of the heterosexual and pediatric AIDS cases in the United States can be linked directly to IVDAs. Sixty-one percent of U.S.-born AIDS cases attributed solely to heterosexual transmission reported sexual contact with an IVDA. Fifty-six percent of the mothers of children with AIDS where HIV was transmitted during pregnancy were IVDAs, and an additional 18 percent of the mothers were heterosexual contacts of IVDAs (Rogers 1987).

There is a paucity of data describing the sexual and drug histories of the heterosexual AIDS cases attributed to intravenous drug abuse. The CDC collects data on whether each AIDS case has ever self-injected a drug not prescribed by a physician. The CDC collects no data on the types of drugs used, history of needle sharing, marital status, employment status, or history of drug abuse treatment. Friedland and colleagues have published some information on

these topics for 12 heterosexual (9 male and 3 female) and 4 homosexual AIDS cases (Friedland et al. 1985). More information about drug abusers with AIDS may provide insight into how to educate and prevent HIV infection in the drug-using community.

AIDS AMONG IVDAS IN EUROPE

The Institut De Medecine et D'Epidemologie Africaines et Tropicales, World Health Organization Collaborating Centre on AIDS, located at Hopital Claude Bernard, Paris, France, has been collecting information about AIDS cases diagnosed in Europe. The French epidemiologists use the same definition of AIDS as the CDC but collect periodic summary reports of cases from a single source in each of 27 reporting European countries. The summary reports are more convenient for reporters than the individual case reports required by the CDC, but the European system does not allow ready manipulation of individual data intrinsic in the CDC system. The Centre publishes its results quarterly, and its latest report is the source of the following data (Brunet and Ancelle 1987).

Between 1983 and December 31, 1986, 4,549 cases of AIDS were reported to the Centre from 27 countries. All 27 reporting countries reported at least one case. An average of 63 new cases per week was reported in the last quarter of 1986. Ninety percent of the cases were born in Europe; 5 percent, in Africa; 2 percent, in the Caribbean; and 3 percent were natives of other places, most commonly North America.

Of the 3,898 AIDS cases among adult European natives, 2,653 (68 percent) were identified as homosexual or bisexual men; 600 (15 percent) were heterosexual IVDAs; 98 (3 percent) were both homosexual men and IVDAs; 162 (4 percent) were hemophiliacs; 3 percent were blood transfusion recipients; and 7 percent were "undetermined." Cases among IVDAs, by sexual orientation and country of diagnosis, are shown in table 3. Italy and Spain accounted for 67 percent of heterosexual IVDAs with AIDS in Europe, 55 percent of homosexual IVDAs, and only 10 percent of all other cases.

The distribution of AIDS cases of African and Caribbean origin diagnosed in Europe shows a majority of heterosexual cases with few homosexual men and/or IVDAs. Two IVDAs with AIDS among African and two among Caribbean natives have been diagnosed in Europe.

TABLE 3. *AIDS cases in 10 countries of Europe which report the largest numbers of IVDAs, by sexual orientation (December 31, 1986)*

Country	Total IVDAs	Hetero-sexual IVDAs	Homo-sexual IVDAs	Total AIDS Cases	Percent IVDAs
Italy	310	283	27	523	59
Spain	152	131	21	264	58
France	116	89	27	1,221	10
Federal Republic of Germany	56	50	6	826	7
Switzerland	25	18	7	192	13
Austria	9	8	1	54	17
The Netherlands	7	6	1	218	3
United Kingdom	6	4	2	610	1
Ireland	4	1	3	14	29
Portugal	3	3	0	46	7

SOURCE: Brunet and Ancelle 1987.

Of the 134 pediatric cases in Europe, 85 (63 percent) had a mother either with AIDS or at risk for AIDS. Forty-two (49 percent) of the 85 mothers were IVDAs reported from Austria, the Federal Republic of Germany, Ireland, Italy, Spain, and Switzerland.

SEROPREVALENCE STUDIES IN THE UNITED STATES AND EUROPE

The seroprevalence of HIV infection among IVDAs has been studied in many parts of the United States and Europe. I will not try to review all the studies but will concentrate on selected serologic studies.

The seroprevalence of HIV infections in a population of IVDAs increases over time. This is illustrated in a study conducted by Novick et al. (1986). They studied heterosexual men and women in New York City who were current or former IV heroin abusers, were on methadone maintenance, and were enrolled in a study of chronic liver disease. Stored sera from participants were tested for HIV antibody. In 1978, 0/7 sera were HIV positive; in 1979, 14/49 (29 percent); in 1980, 8/18 (44 percent); in 1981-83, 14/27 (52 percent); and, in 1984, 56 percent.

The rapid spread of HIV infection among IVDAs in Italy is illustrated by data collected by Angarano et al. (1985). They tested apparently healthy IVDAs enrolled in a hepatitis B virus survey for HIV antibody. HIV seroprevalence rates increased each year starting in 1980: 0/44 in 1978; 0/76 in 1979; 4/68 (6 percent) in 1980; 6/58 (10 percent) in 1981; 7/47 (15 percent) in 1982; 15/49 (31 percent) in 1983; 18/34 (53 percent) in 1984; and 45/59 (76 percent) in 1985.

In Spain, Rodrigo and colleagues have noted a similar increase in HIV seroprevalence among IVDAs over time: 6/58 (11 percent) in 1983; 70/174 (40 percent) in 1984; and 36/75 (48 percent) in 1985. HIV seropositivity was directly associated with the duration of drug addiction history and the presence of any hepatitis B virus marker (Rodrigo et al. 1985).

Within a city or country, HIV seroprevalence rates among IVDAs may vary by drug-using behavior, race, sexual orientation, and treatment facility. In San Francisco, Chaisson and colleagues studied 281 heterosexual IVDAs recruited in five major opiate addiction treatment programs from December 1984 to October 1985 (Chaisson et al. 1987). Ten percent of subjects had ELISA- and Western-blot-confirmed seropositivity for HIV antibody. Addicts who reported sharing needles with two or more persons were more likely to be positive than those who did not report sharing needles (10/68 (15 percent) vs. 2/65 (3 percent)). Black and Latino participants were more likely to test positive than whites (20/138 (14 percent) vs. 8/143 (6 percent)).

In another study conducted in San Francisco by Watters and colleagues, 401 IVDAs were screened for HIV antibody and interviewed concerning their medical, sexual, and drug use histories (Watters et al. 1986). Three hundred were participants in a 21-day detoxification program located in San Francisco, and 101 were out-of-treatment IVDAs recruited through a modified chain-referral program. Of the detoxification patients, 21/300 (7 percent) were HIV seropositive; of the out-of-treatment participants, 16/101 (16 percent) were HIV seropositive. Out-of-treatment participants were more likely to be male (80 percent vs. 62 percent) and to have engaged in male homosexual activity (31 percent vs. 6 percent) than detoxification patients. No differences were found when the data were evaluated by race: 9 percent of 223 whites, 8 percent of 120

blacks, and 11 percent of 47 Latinos were HIV seropositive (Watters et al. 1986).

Geographical differences within populations of IVDAs in the United States and Europe have been noted. Lange has collaborated with investigators in six regions of the United States. In 1985 and 1986, 1,770 IVDAs were tested for HIV antibody. In New York City (Harlem and Brooklyn), 61 percent of 280 samples were HIV positive in late 1986, up from 50 percent of 585 samples from the same treatment program drawn in early 1985. In Baltimore, 29 percent of 184 samples were positive; in Denver, 5 percent of 100; in San Antonio, 2 percent of 106; in southern California, 1.5 percent of 413; and, in Tampa, none of 102. The rates in the different cities did not correlate with needle-sharing practices. The highest rate of needle sharing was reported in San Antonio (99 percent of participants); the lowest rate, in New York (70 percent).

In New York, Baltimore, and Denver, seroprevalence rates were significantly higher for blacks than whites (70/145 (48 percent) vs. 16/152 (11 percent)) (Lange 1987).

To my knowledge, collaborative seroprevalence studies of IVDAs in Europe have not yet been reported. However, the highest rates of seroprevalence are reported among IVDAs in Italy (Angarano et al. 1985; Aiuti et al. 1985) and Spain (Rodrigo et al. 1985). Lower but significant rates have been reported elsewhere in Europe, including studies in Switzerland (Schupbach et al. 1985) and the United Kingdom (Cheingsong-Popov et al. 1984).

SUMMARY

AIDS is a serious public health problem for IVDAs in the United States and Europe. Although AIDS and HIV infection are concentrated in New York and New Jersey in the United States, and in Italy and Spain in Europe, AIDS has been diagnosed and reported among IVDAs in all 50 States of the United States and 16 countries in Europe. It is quite apparent that, once HIV is introduced into a group of IVDAs, it can spread readily between IVDAs, to their sexual partners, and to their children in utero.

Unfortunately, one can only expect HIV seroprevalence rates and AIDS cases to continue to increase among IVDAs worldwide for at least the next several years. Concerted efforts to develop, implement, and evaluate potential prevention strategies among IVDAs are urgently needed.

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AUTHOR

Harry W. Haverkos, M.D.
Chief, Clinical Medicine Branch
Division of Clinical Research
National Institute on Drug Abuse
Parklawn Building, Room 10A-08
5600 Fishers Lane
Rockville, MD 20857

Needle Sharing and Street Behavior in Response to AIDS in New York City

William Hopkins

INTRODUCTION

In New York City and other urban areas, there are thousands of drug abusers who hang out or live in the streets. These people are referred to as "street drug abusers." The vast majority of these street people are homeless, unemployed, or underemployed. Most are loners; some are couples, families, and runaway children who, in addition to their drug addiction, may be alcoholics. The two goals they all seem to share are survival and support of their drug habits. To survive, they resort to all kinds of legal and illegal activities such as washing car windows, collecting deposit cans, selling legal or stolen merchandise on the street, pulling con games, shoplifting, robbery, prostitution, and selling drugs, to name a few.

We see these people sleeping in doorways, on trains, in bus terminals, loitering on corners, in hallways, coffee shops, parks, playgrounds, and other public places. Many have been forced into the streets by their families or landlords because of their drug problems. Others may have started as young runaways who were exposed to drugs in their new social milieu. Drug abusers and other street people create a subculture which is understandable only to themselves and those who associate with them. As part of the street socialization process, habits, rituals, and means of survival and subsistence are learned and shared within the group. Shelters for the homeless, methadone maintenance centers, drug treatment programs, and other public service places are vehicles that connect these people.

THE STREET RESEARCH UNIT

The Street Research Unit, unique of its kind in the country, was created by the Director of the New York State Division of Substance Abuse Services, Julio A. Martinez. He wanted to know what was going on in the streets of New York City and New York State as far as drug dealing was concerned. Since lives were involved, he wanted this information immediately and did not want to wait for long, drawn-out, extensive studies. The role of the Unit, which employs black, white, and Hispanic men and women as researchers, is to learn what is going on in the streets.

What makes the Unit unique is that its street researchers are all ex-drug abusers, and the methods by which they gather data are different from those of other street researchers; that is, they do not identify themselves as researchers. They hang out, eavesdrop, listen, and ask probing questions. The Unit has done over 200 studies in the last 8 years, examining drug dealing in areas such as Wall Street, transportation terminals, schools, parks, and playgrounds. Many of these studies have made major headlines, not only in the New York City newspapers but across the State (for example, see Herndon 1984; Raab 1984; Kantrowitz 1986; Kerr 1987). Because the Unit's field-workers gather data without identifying themselves as researchers, they have to use unique methods to record their data. For example, a researcher may actually stand face-to-face with someone who is selling drugs. As they talk, the researcher might eat candy, every so often dropping a piece of candy into his pocket. The researcher knows that a red candy in the shirt pocket means one thing; a red candy in the pants pocket means something else. Instead of eating candy, the researcher may play with a handful of coins, now and then dropping a dime, nickel, or penny into his pocket. What the researcher is actually doing is gathering street ethnographic data on the people who are buying and selling drugs. He records what is being sold on that corner, how it is packaged, what the prices are, and what the trends are in the neighborhood, including the sale of intravenous (IV) needles.

RESEARCH FINDINGS ON AIDS TRANSMISSION AND STREET LIFESTYLES

As of April 27, 1987, the Centers for Disease Control reported 34,575 AIDS cases in the United States, 30 percent (10,660) of which were in the State of New York (Centers for Disease Control

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1987). By January 1987, at least 8,887 AIDS cases were reported in New York City alone (New York City Department of Health 1987).

IV drug addicts, homosexuals, and sexually active heterosexuals are major risk groups for AIDS. Most of the sexual hustling and needle-sharing behaviors take place in the streets of major urban areas, and a number of IV drug abusers are involved in prostitution. Thus, transmission of the AIDS virus by needle sharing and sexual intercourse may at times be closely related.

By now, many social researchers have focused on the etiology of the disease as well as on the demographics of persons with AIDS. However, more studies are needed on the behaviors and attitudes in the street that contribute to the spread of the AIDS virus. While the nature of the disease falls more in the realm of medical science, the street aspect of AIDS should also be included as part of a social research agenda. This paper reports the preliminary findings of a 1987 study on attitudes toward needle sharing, prostitution, sexual behavior, and the use of prophylactics in a sample of 178 drug users in New York City.

Methods

The 1987 study examined IV and non-IV street drug users. One hundred and seventy-eight subjects were selected arbitrarily from the five boroughs of New York City.

Data were collected by nine members of the Street Research Unit of the Bureau of Research and Evaluation of the New York State Division of Substance Abuse Services and outreach workers of the Narcotic and Drug Research, Inc. (NDRI), AIDS Outreach Program. (NDRI is a not-for-profit research agency that works with the New York State Division of Substance Abuse Services.) The street researchers collected data through observation and direct and indirect interviews. A data collection form containing 36 questions was targeted to street people of the type who usually engage in questionable or illegal activity, i.e., prostitutes, their customers (johns), and drug users (both IV and non-IV). After the researchers filled out the questionnaires, individual and group debriefing of the researchers was carried out by the author. Anecdotal accounts of statements, ideas, and points of view of street people were gathered and elaborated on by the researchers. In instances where the fieldworkers knew their respondents, direct interviews were carried out.

In other situations, indirect interviews were used; that is, the field-workers manipulated their usual "rapping" with street people to obtain responses to questions they had memorized.

Table 1 presents a breakdown of the sample by geographical area.[1] The ethnic and sex composition of the respondents is presented in table 2.

TABLE 1. *Percent of sample by borough and sex*

	Male		Female	
Borough	Number	Percent	Number	Percent
Manhattan	35	39	31	35
Brooklyn	21	23	24	27
Bronx	8	8	6	7
Queens	24	27	24	27
Staten Island	2	2	3	3
Total	90	51	88	49

TABLE 2. *Percent of sample by ethnicity and sex*

	Male		Female	
Ethnicity	Number	Percent	Number	Percent
White	14	8	24	13
Black	44	25	32	18
Hispanic	22	12	26	15
Other	10	6	6	3
Total	90	51	88	49

The researchers were directed to interview only drug abusers (both IV and non-IV) and to include in their sample prostitutes who were also drug abusers.

All the respondents were street people and street-level drug abusers, which generally means they are not legally or gainfully employed and survive by questionable or illegal methods such as running con games, selling drugs, stealing, washing car windows, selling stolen merchandise, etc.

Of the 178 persons interviewed, 108 were IV users; 70 were drug users but not IV users; and 40 were prostitutes, of whom 19 were IV users and 21 were drug users but not IV users.

Needle Using/Selling in a New York City Sample

To show changes in attitudes toward needle sharing and prophylactic practices, I will first present some key findings of a similar study, albeit with a smaller sample, done in 1984. Given the growing problem of AIDS among IV drug users in New York City, the Street Research Unit conducted an exploratory study to learn about needle-using behavior and to obtain information on the extent to which sterilized needles were being used on the streets. The researchers interviewed drug users and sellers in drug areas throughout the City. Of a total of 89 respondents, 75 percent were IV addicts; 16 percent were needle sellers; and 9 percent were both sellers and IV addicts. The main findings of the study were the following:

- The use of needles for injecting drugs was widespread.
- Users and sellers reported that new needles were readily available.
- Among those who injected, more than 50 percent shot drugs 2 or more times a day, and a few injected as often as 10 times a day.
- Although they expressed fear of getting AIDS, 20 percent of the addicts did nothing to protect themselves from contracting AIDS. Another 20 percent of the addicts said they only rinsed their needles with water.

- Needle sellers made profits of 50 to 100 percent from the sale or rental of needles.

- Needles were purchased with forged prescriptions from pharmacies, or stolen from several places including hospital emergency rooms.

- Needles used for insulin injection by diabetics were the most available.

- Fifty percent of needle sellers reported that they had resold used and unsterilized needles as new ones.

The Effect of AIDS on Attitudes and Behaviors of Street People

The general attitude in the streets in 1984 was that AIDS was almost an exclusive malady of the gay community and that heterosexuals were safe from the transmission of human immunodeficiency virus (HIV). While average persons may have access to scientific information on the transmission of the virus, street people do not. The 1987 study began with the question, "Has the massive publicity given AIDS changed people's behavior regarding needle sharing, use of condoms, and prostitution?" This study shows many changes in the habits of street people in reference to AIDS. Fear of AIDS is such that IV users and non-IV users, as well as nonaddicts, now have views very different from those of our 1984 sample.

About 50 percent of our 1987 sample stated that needle sharing and sex were the most common methods of contagion. There is much fear on the streets about AIDS. Comments and stories about deaths caused by AIDS are common. Many addicts, especially those participating in methadone maintenance programs, have already lost friends or relatives to AIDS.

Neither needle-sharing nor -cleaning practices, however, have changed much. Addicts report that, frequently, when they want a "fix" and do not have sterile needles, or if they do not have enough money for both drugs and needles, they cannot wait until they buy new or clean needles. This may be more so with cocaine addicts, who usually inject more frequently than heroin addicts.

When asked about the length of use of the same needle before disposing of it, some reported using it for as long as 2 weeks. Of

the 108 shooters interviewed, 90 provided information on the frequency of using the same needle. Only 19 percent said they used their needles only once. Forty-nine percent reported using the same needle from 2 to 10 times, while 32 percent reported using the same needle more than 10 times (see table 3).

TABLE 3. *Frequency of use of same needle*

Times	Number	Percent
Once	17	19
2-5	32	36
6-10	12	13
11-15	6	7
16-20	10	11
21+	13	14
Total	90	100

Of the 108 IV users, 57 (53 percent) said they usually or always share their needles.

When asked if their sexual partners shared needles with them or anyone else, 36 of the 178 respondents said, "Yes." However, we do not know how many of the sexual partners are IV drug abusers.

When we asked the 178 respondents about how many people they know who shoot drugs and share their needles, the average answer was between 10 and 25 persons.

Of the 108 shooters, 94 provided information about their needle-cleaning practices (see table 4). Eleven percent of these addicts reported that they never cleaned their injection equipment. Another 40 percent reported that they used water, which does not provide satisfactory protection against HIV.

Since the 178 respondents are street people who abuse drugs and are knowledgeable of the subculture's street drug-selling methods, each of them was asked where he/she thought people who shoot

drugs got their needles. Their responses, listed in table 5, show that the bulk of the shooters buy their needles from street sellers and shooting galleries.

TABLE 4. *Needle-cleaning behavior*

Cleaning Method	Number	Percent
Water	38	40
Boiling Water	31	33
Alcohol	11	12
Bleach	2	2
Sterilize	1	1
Never Clean	10	11
Other	1	1
Total	94	100

TABLE 5. *Sources of needle supply*

Source	Number	Percent
Diabetics	14	8
Street	81	45
Galleries	28	16
Doctors/Pharmacies	36	20
Other	19	11
Total	178	100

Earlier studies and reports from street sources show that most of the needles sold on the streets of New York are brought into the city from other States by individual entrepreneurs. Some sellers steal needles from hospitals or doctors' offices; others get needles to sell from hospital garbage bins, forged prescriptions, or diabetics.

Although some addicts have given up IV drug use, the consensus on the street seems to be that the demand for needles has gone up. They argue that the supply in the city is increasing and that more needle sellers are making larger profits. It is not rare to see needle sellers "hanging out" in front of, or nearby, shooting galleries. In fact, prices of needles, especially the blue-tip number 25, which now sells for as much as $7, have gone up considerably.

CONCLUSIONS

In comparison to our 1984 study, the 1987 study shows that IV drug users have learned more about the contagion of the AIDS virus, especially as it relates to needle use. This study shows that many addicts have developed positive attitudinal and behavioral changes in relation to needle sharing, buying, and cleaning. However, the study also shows that, although there has been some progress since 1984, the majority of the IV-drug-using population studied still has a long way to go in changing their habits if they are going to avoid contracting and spreading the virus.

This study shows that 53 percent of the respondents were still regularly sharing needles, even though they are becoming more aware of AIDS and have expressed fears of contracting this deadly disease. The study also shows that some addicts are changing their needle habits for the better by sharing less or being selective about with whom they share. It is also known that some addicts have stopped using needles or are carefully examining the packages of the needles they do buy. Based on data from street sources, this writer believes the reported increase in demand for needles is due to decreased sharing.

This study further shows that about 61 percent of the needles used by IV drug users come from questionable sources where they may not be sterilized, such as street sellers or shooting galleries. In addition, the study shows that more than half of the addicts studied either do not clean their needles at all or use noneffective cleaning methods.

Some seemingly careless attitudes of street people toward AIDS may only be a reflection of their low social and economic status. Continuing to share a needle because of insufficient money to buy a new one is an example. Also, some addicts have expressed the

attitude that they may already have AIDS--so why stop sharing needles now?

FOOTNOTES

1. The borough where the interview took place may or may not coincide with the borough of residence of the subject. The majority of addicts buy outside their neighborhoods, and street loiterers do not necessarily "hang out" in their own communities. If asked their place of residence, addicts frequently give a false address.

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AUTHOR

William Hopkins, Ph.D.
Supervisor, Street Research Unit
New York State Division of Substance Abuse Services
Vincent Building
55 West 125th Street
New York, NY 10027

The Ethnography of Needle Sharing Among Intravenous Drug Users and Implications for Public Policies and Intervention Strategies

Harvey W. Feldman and Patrick Biernacki

INTRODUCTION

In California, as in several other States where the AIDS epidemic has taken hold among intravenous (IV) drug users, the total activity of drug consumption from the point of purchase to the actual injection takes place under clandestine conditions. These secretive and furtive arrangements, usually made in concert with other IV drug users, are necessary because both the drugs that users inject and the equipment required for injection are prohibited by State statutes.

The apparent rationale for these public policies is to discourage such undesirable behavior by creating harsh criminal sanctions which will act as deterrents, punishing individuals so that people who do not follow societal expectations as defined by public policy will serve as negative examples. The philosophical underpinnings for this public policy are not all that clear but are somehow connected to government's responsibility to protect the health of individuals (although there is considerable confusion regarding why some harmful substances are included in the policy, while other equally or more harmful substances are not). This policy of prohibiting access to drugs and narcotics through criminal sanctions has been in effect for over 70 years and dates back to the Harrison Act of 1914, which was implemented shortly after the end of World War I. During this 70-year period, each decade has managed to produce a substantial number of IV drug users, and the total numbers have varied from Federal Bureau of Narcotics Commissioner Harry Anslinger's estimate in 1962 of 65,000 nationally, to 600,000 during the Nixon War on Drugs in the early 1970s. These

numbers, we might add, estimated only heroin addicts and did not, to the best of our knowledge, include speed or cocaine injectors.

If the goal of the policy has been to discourage current users from continuing their drug use and to dissuade new injectors from beginning, it appears that this public policy has been less than successful. Each successive decade has produced a substantial number of drug injectors who select this form of behavior even in the face of harsh criminal sanctions.

We have worked in the drug field in one capacity or another for 30 of the 70 years these policies have been in effect. One overriding observation we can make regarding the national drug policy of prohibition is that, while it may have discouraged many prospective individual candidates from using drugs and narcotics, it clearly has not succeeded in lessening the overall number of new recruits, nor has it discouraged succeeding generations from finding some attraction in the activity of injecting drugs. In fact, some street ethnographers who have examined the etiological issues of drug use (Preble and Casey 1969; Sutter 1969; Sutter 1972; Feldman 1968) have even suggested that the excitement, adventure, and action involved in securing and using drugs may, in fact, be the primary motivation–not the drug sensation itself–which accounts for the persistence of drug-using activities. This perspective suggests that these activities are carried out not despite official attempts to discourage them, but because of them. The excitement and action can be seen as one of the direct results of the game playing that takes place between street drug users and representatives of the social control system.

Now that the AIDS virus has entered IV-drug-using networks and threatens to spread within those populations and possibly beyond, into previously uninfected groups, it behooves those of us who are concerned about this epidemic and actively involved in attempting to slow its spread to develop a clearer understanding of how these public policies influence the social organization of IV drug users, and how the criminalizing of hypodermic syringes in some States contributes to the clandestine nature of drug use and constructs the social context that favors the efficient and rapid spread of human immunodeficiency virus (HIV).

THE MIDCITY CONSORTIUM TO COMBAT AIDS

In San Francisco, the MidCity Consortium to Combat AIDS, a federation of five social, health, and research agencies, banded together to address the spread of HIV among out-of-treatment IV drug users. Under grants from the National Institute on Drug Abuse (NIDA) and a contract with the San Francisco Department of Public Health, the MidCity project has three components: (1) ethnographic studies of needle scenes in communities with the highest concentrations of needle users, (2) an education campaign to inform needle users of the dangers of AIDS and ways to avoid contracting the virus and transmitting it to others, and (3) a monitoring component designed to determine the prevalence of HIV among IV drug users.

ETHNOGRAPHIC STUDIES OF IV DRUG USERS

The aim of the ethnography was to identify, through direct observation and extended personal interviews, the various needle-using scenes and needle-using practices of IV drug users who were not in treatment, which in San Francisco is estimated to be approximately 75 percent of the 12,000 heroin and speed injectors believed to live there. To begin our work, we selected the two areas of San Francisco known to contain the highest concentrations of needle users: the Tenderloin and Mission Districts. Both areas contained users of heroin, amphetamines, and cocaine, as well as "speedballers" who inject mixtures of heroin and cocaine. Many of them were addicted, some were occasional users, and others used in sprees.

Demographically, the two areas differ. In the Mission, there are large numbers of Latino and non-English-speaking IV drug users as well as lesser numbers of black and Caucasian IV drug users. The Tenderloin, on the other hand, is a sex trade zone which contains small concentrations of Cuban refugees, black old-time "righteous dope fiends," large numbers of transvestites or "drag queens," adolescent runaways and young street hustlers, ex-convicts, and a substantial number of mentally ill who, as part of the deinstitutionalization trend, are no longer housed in hospitals and may mix antipsychotic prescription medicine with injected street drugs.

The studies themselves were carried out by experienced drug ethnographers, namely Biernacki and Feldman in the Tenderloin, and

Dr. Jerry Mandel and Vincente Matus in the Mission. All of us had carried out street drug studies during our research careers and grappled with issues of acceptance and credibility as we attempted to become acquainted with active IV drug users. With AIDS as the central focus of this study, we discovered that the period of testing (i.e., the establishment of acceptance and credibility) was considerably less than in our earlier work. Although there were clearly suspicions which needed to be addressed, concerns about this incurable, deadly disease permitted much quicker access to IV drug users.

Reported here are some of our findings, which helped shape the nature of our intervention, and comments on the policy implications of our research.

Findings

First, and most significant, was the finding that the at-risk needle-using population in both communities, almost without exception, had grave concerns about their potential for having been or becoming exposed to the AIDS virus. Whatever may be the stereotypical description of the "addict personality," the ethnographers found little support for this view or for the notion that addicts lack concern for their personal health. Instead, IV drug users showed great interest in the general topic of AIDS and their potential risk for becoming infected. At the start of the study, many of them believed that they might already be infected. In the summer of 1985, when we began our research, even though there were few heterosexual or even homosexual IV-drug-use AIDS cases in San Francisco, IV drug users were aware that the AIDS epidemic was in full force among needle users in New York City and New Jersey; and they believed, as did we, that it was only a matter of time until the AIDS epidemic reached and spread through San Francisco.

Second, the IV drug users who had committed themselves to drug-using careers were cooperative in all aspects of the study, allowing our ethnographers to observe them during episodes of needle sharing and participating in lengthy interviews which explored in detail descriptions of their drug-using and sexual activities. Further, they cooperated with the street-based intervention that followed the ethnographic research, and later with the serological testing and still more lengthy survey-type interviews. In short, the IV drug

users became deeply involved in helping us gather health information regarding AIDS and its means of transmission. They generally looked favorably on such efforts to involve them voluntarily and encouraged their friends to cooperate in a similar fashion.

Third, it was clear that the IV drug users we studied looked to health professionals and later to trained street workers to provide them with accurate, useful information as well as direction in order to help them avoid becoming infected and spreading the disease to others.

These findings are all optimistic, and collectively they offer observations contradictory to the usual portrait of addicts and other IV drug users who are often presented as little more than a composite of reprehensible traits.

Our optimism, however, was tempered by other findings. Most notable was the finding that needle sharing was common among all groups of IV drug users, even when users were aware that AIDS is spread through sharing contaminated hypodermic syringes. This was due to two factors: (1) the regulation of syringes which made possession a crime, and (2) scarcity, which made sharing a necessity. Further, we found that IV drug users' living arrangements influenced the frequency of needle sharing: those in hotel-based living arrangements tended to share needles at a greater level than those in house-based arrangements. In the residence hotels, particularly in the sex trade zones, there was more informality and spontaneity in visiting patterns. This often resulted in the kind of near anonymous needle sharing that might be comparable to the numerous anonymous sexual encounters which some people believe to be responsible for spreading the virus within the gay population.

Even though there were and are far fewer shooting galleries in the Greater Bay Area than are reported to be in the New York/New Jersey corridor, the hotel needle-sharing arrangement provided a similar setting in which several participants often used the same hypodermic syringes and needles. These hotels were not established for the purpose of needle sharing, nor do people move into residence hotels because of easy access to drugs, narcotics, or hypodermic syringes. However, by its nature, the hotel living arrangement brings together similar kinds of people involved in similar economic circumstances, lifestyles, occupations, and recreational activities. Under these circumstances, for individuals involved in

the use of injected drugs and narcotics, the inducements to needle sharing are favorable. For example, one of our ethnographers, assigned to the hotel-based groups, reported observing 10 different individuals in one hotel room sharing five different hypodermic syringes in a 1-hour period. When the ethnographer asked one of the central figures to calculate how many different people had come to that particular room and shared his needles since the previous Friday (the observation being made on a Monday), the man enumerated the persons by first name. The count quickly went to 27 before he began to search his memory.

When these ethnographic studies were carried out (prior to the development of the MidCity Consortium to Combat AIDS and its street-based intervention), the methods for cleaning hypodermic syringes between shared uses were another cause for concern. The ethnographers observed that cleaning practices–or more appropriately, the lack of cleaning–between needle-sharing episodes were highly conducive to the spread of the AIDS virus. In most cases, no effort was made to clean hypodermic syringes between shared uses. IV drug users frequently squirted warm water through the "works." This operation, however, was practiced mainly to keep the needle from clogging and only secondarily to cleanse it of bacteria or viruses. In most cases, the IV drug users under study were either unaware or unsure of cleaning practices which would protect them against contracting and transmitting the AIDS virus.

A final factor that tempered our optimism and contributed to the favorable conditions for the spread of HIV in San Francisco was the frequent overlap between the two major at-risk populations: the gay male and the IV drug user. Conceptually, there appeared to be a distinction between these two groups, as though needle users, particularly heroin addicts, were exclusively heterosexual. While this distinction may be more true of other urban areas, it is far less so in San Francisco. Rather than distinct separation, there appeared to be overlap in precisely those activities through which the virus is transmitted: namely, sexual activities and the shared use of injection equipment. Our research indicated that one of the major concentrations of needle scenes was in the sex trade zone of the Tenderloin, where several social networks bring together gay men and youth and heterosexual men and women, many of whom have both multiple sexual partners and share hypodermic syringes. In a sociological sense, they have a common interest in injecting drugs which results in sharing hypodermic syringes. Drug use,

however, is only one aspect of their lives. They are often bound together in small systems of mutual obligations and interdependencies that transcend sexual preferences and include many activities other than drug use. In many cases, their common bond is the state of being outcast (such as "drag queens" (transvestites) within the gay community or Caucasian ex-convicts within the white working class) and, more importantly, economically deprived. Many of these relationships are transitory or recent linkages that bring together marginal people who profit mutually by sharing resources--doubling up in a single room, splitting the cost of a meal, sharing a bag or balloon of heroin, or sharing a used hypodermic syringe. Preble and Casey (1969) noted that the basic unit in the heroin world of New York City was the "dyad," a partnership of two best buddies or lovers, in which both participants implicitly understand the common benefits of the partnership. Whether the relationships were of recent development or long standing--some of them, we found, had lasted as long as 20 years and withstood arguments, separations, and incarcerations--they seemed to have a binding quality founded on a desire for trust, and often concluded violently as a result of betrayal of that same trust.

As an underclass, these marginal people appear to be disenfranchised: relatively prosperous, middle-class transvestites; black "righteous dope fiends" who have lost contact with their families of origin and find identity in demonstrating a shrewd street competence; and homeless adolescents with youth and sexual energy to market. All these various social types are voluntarily located in specific geographic areas where the design of informal social policies (which determine access to food, shelter, recreation, and the other necessities of life) is based on short-term, often daily rather than weekly, timetables. Because of these features, disenfranchised IV drug users were distanced from AIDS risk reduction and health promotion information directed to what outsiders might view as their "natural" reference groups. Even though many of the disenfranchised were gay-identified or heterosexuals in close contact with gays, they did not have consistent access to the education or prevention programs which had been developed during the mid-1980s. It was especially surprising to find this level of ignorance among an at-risk population in San Francisco, a relatively small city which led the nation in alerting its citizens to the threat of AIDS.

ILLEGALITY OF POSSESSING DRUG INJECTION EQUIPMENT: EFFECTS ON NEEDLE SHARING

In attempting to understand the practice of needle sharing among IV drug users, the overriding issue was, and remains, the illegality of possessing hypodermic syringes in the State of California. This public policy accounts for the scarcity or unpredictable supply of hypodermic syringes, the chronic fear of arrest, and the necessity of constructing social arrangements that involve needle sharing. It is almost axiomatic that, while the supply of injectable drugs and narcotics remains relatively steady despite law enforcement efforts, the supply of needles is inconsistent. During periods of scarcity, needle sharing among IV drug users increases.

Similarly, the illegality of hypodermic syringes prevents many publicly labelled addicts from keeping needles in their possession, since another arrest for "oldtimers" may well result in jail sentences. For those persons with previous incarcerations, the periods of time in jail have been bitter experiences which they dread and strive to avoid repeating. The dramatic nature of this dilemma was stated boldly by one female heroin addict when one of our ethnographers questioned her on why she would not keep new, uncontaminated needles on her person so they would be available when she injected drugs. "Because," she answered, "I would rather get AIDS than go to jail."

Given the fact that AIDS has an incubation period that may last as long as 5 years or more, compared to the immediacy of jail, the option to share needles and risk becoming infected with the AIDS virus becomes socially realistic even if it is medically dangerous. Yet it typifies the dilemma the public policy poses to drug users who use injection equipment.

In California, as in New York, it appears unlikely that hypodermic syringes will be made freely available to IV drug users, as is done in some European cities such as Amsterdam in The Netherlands. The clear implication is that needle sharing will continue at approximately the same level as when the ethnographic studies were carried out. Without some dramatic effort at altering or monitoring this activity, the prediction for the future is that HIV, which has already entered some of the needle-sharing groups, will move quickly through the various IV-drug-using subsystems of the Greater Bay Area.

INTERVENTION STRATEGIES: SYRINGE AVAILABILITY AND DECONTAMINATION OF INJECTION EQUIPMENT

One of the purposes of this conference was to explore the impact of making hypodermic syringes available to IV drug users as a strategy to prevent the spread of the AIDS virus among this drug-using population and possibly beyond, into the general population. When our street ethnographers first began to study needle sharing as it related to the AIDS epidemic, one of the usual questions we posed to IV drug users was to ask what they thought would be an effective intervention. One of the first respondents we talked with was an oldtimer in New York who, in mid-1985, knew that the epidemic was gathering force in his city. This individual understood that the virus which caused the condition was passed from one IV drug user to another by sharing hypodermic syringes containing blood particles contaminated with the AIDS virus. He was conversant about "shooting galleries," the structure of social roles, the prices for various services the galleries offered, and their potential for being the informal social institution that fueled the epidemic among the New York and New Jersey IV drug users who frequented them. "If you guys are serious about stopping this epidemic," he said, "You'd see that every junkie had a new needle each time he shot drugs."

If we put aside all moral issues and differing opinions of addict behavior, the sheer simplicity of the argument is persuasive: if the virus is not on the injection equipment, then it cannot be transmitted into the bloodstream of the next person who uses it for IV injection. In San Francisco, the MidCity Consortium to Combat AIDS, unable to circulate sterile hypodermic syringes, created what we thought was the next best alternative. Newmeyer (this volume) describes the bleach protocol the MidCity Consortium developed and how, as part of the MidCity effort, Community Health Outreach Workers (CHOWs) take information on decontaminating hypodermic syringes with common household bleach directly into the hangouts and living quarters of IV drug users in San Francisco. The plan harks back to some old-time, traditional public health intervention measures, as well as the kind of street work that was done in many major cities during the 1950s with adolescent fighting gangs.

From the preliminary results of our own administrative evaluation, it appears that IV drug users for the most part have adopted our recommended protocol on cleaning hypodermic equipment between

shared uses. If this experiment with changing the behavior of IV drug users works, then the natural next question would be: What is the necessity of deregulating hypodermic syringes? This question becomes even more complicated by the reported seroprevalence rates in places where hypodermic syringes are not regulated. In Italy, for example, where hypodermic syringes are readily available, the seroprevalence rate among drug addicts is reported to be between 50 to 70 percent. Clearly, this high prevalence of seropositivity for HIV appears to be an argument against the easy availability of needles, until one finds that few, if any, educational efforts regarding the risk of contracting AIDS accompanied the circulation of hypodermic syringes. In a comparable sense, condoms were available to gay men in San Francisco during the period when the virus was spreading through the homosexual population. The fact that they were not used seems more the result of gay men not knowing that unprotected sex, particularly anal intercourse, allowed the virus to enter their bodies. The missing ingredient, we are suggesting, is the concerted education campaign that has now become the mandate of all governments if we are to slow a worldwide epidemic and literally keep many of our known cultures and civilizations from being dramatically altered and damaged.

RECOMMENDATIONS

The magnitude of the problem and its devastating consequences should direct us to ask not what minimal effort can be made to adjust our moral position to the necessities of this epidemic, but rather, what optimum measures should we take to avoid what the National Academy of Sciences has predicted will be a "catastrophe." Whatever may be the merits of punishment as a discouragement to socially undesirable behavior such as IV drug use–whether one believes it succeeds in stopping such behavior or merely acts as a statement of society's standards–the enforcement of repressive and prohibitive policies in the drug field has forced all activities associated with injecting drugs and narcotics outside of medical use to be done in a clandestine way. It seems that what we do not need, at this point in the epidemic, are policies that push this behavior farther away from the social and medical systems which can enlist IV drug users in protecting themselves and keeping the epidemic under some control. What we clearly do need are well-constructed

interventions which optimize the chances of reducing the number of new individuals who become infected and preventing seropositive individuals from becoming reinfected.

For now, we would like to recommend consideration of public policies and interventions which will bring IV drug users into cooperative relationships with public health measures rather than encourage resistance to them. This, we think, can be realized first by decriminalizing the possession of hypodermic syringes in those States where this applies; second, by developing needle exchange programs in order to insure that IV drug users have greater access to sterile injection equipment; and third, by providing the kind of prevention/education outreach efforts that bring IV drug users into face-to-face contact with trained, qualified educators who can counsel them and monitor their activities as a way to encourage compliance and affect referrals to other social, health, and drug treatment programs.

None of us can be certain just how any recommendation will eventually impact the epidemic, nor do we have the luxury of awaiting controlled experiments before developing public policies and intervention strategies (although all efforts should be rigorously evaluated). Our experience with the MidCity project indicates that a substantial portion of IV drug users will cooperate (with appreciation) in efforts to help them during this epidemic. Like us, they recognize the serious and ominous implications of the uncontrolled spread of this deadly, incurable disease.

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AUTHORS

Harvey W. Feldman, Ph.D.
Patrick Biernacki, Ph.D.

Youth Environment Study, Inc.
1779 Haight Street
San Francisco, CA 94117
and
The MidCity Consortium to
Combat AIDS
1779 Haight Street
San Francisco, CA 94117

Mexican-American Intravenous Drug Users' Needle-Sharing Practices: Implications for AIDS Prevention

Alberto G. Mata and Jaime S. Jorquez

INTRODUCTION

We were asked to provide a review of Mexican-American* intravenous (IV) drug use and needle-sharing behaviors, to identify potential influences promoting or deterring these practices, and to discuss how these practices have been impacted by the growing attention and concern with acquired immunodeficiency syndrome (AIDS). Thus, we began our efforts by focusing on these general topics:

(1) Reviewing the literature (Chaisson 1987; Cohen 1985; DiClemente and Boyer 1987; Feldman 1985; Watters et al. 1986) and exploring with a handful of experts their knowledge and understanding of Mexican-American IV drug use practices, particularly as it concerns needle sharing.

(2) Given the rising concern over AIDS, exploring and discussing with these experts their knowledge about changes in IV drug use practices and related health risk behaviors.

(3) Exploring and examining factors that contribute to the practice of needle sharing and potential measures to attenuate IV drug use among Hispanics.

*The terms "Mexican-American" and "Chicano" are recognized as having different meanings, but for purposes of this paper they will be used interchangeably.

The importance of examining this subpopulation is underscored by the fact that IV drug use constitutes a major health risk behavior among Mexican-American IV drug users. IV drug use and needle-sharing practices have been implicated in the spread of AIDS not only among IV drug users (Des Jarlais et al. 1985) but also their sexual partners and, perinatally, their children (Bakeman et al. 1986; Centers for Disease Control 1986; Rogers and Williams 1987; Samuel and Winkelstein, in press; Worth and Rodriguez 1987). It is also important to examine Mexican-American IV drug use because it is prevalent in many low-income Mexican-American communities. Another reason to examine this subpopulation is the widely held belief that "tecatos" (Mexican-American addicts), their networks and social world are resistant, if not unresponsive, to societal and community pressures and campaigns to eradicate, if not lessen, their influence.

BACKGROUND AND HISTORICAL CONTEXT

Since World War II, racial and ethnic minority substance abusers have drawn the attention and concern of many, not only from within the barrio, but also from without. By the 1950s, policy-makers, practitioners, and service providers began to draw attention to the problem of marijuana and heroin addiction among Mexican-American youth and young adults in the Southwest (Casavantes 1976; Morales 1984; Moore and Mata 1982).

Within a relatively short period of time, in most major southwestern inner city and port of entry barrios, one found that the social worlds of the "pelados" (youth and young adults who tend to "hang around" on street corners) had gained not only a strong foothold but had also spread to other communities in the Southwest. The social world of the pelado soon began to be typified by the emergence of three distinct social types in the barrio: the "vato loco" ("crazy dude"--not bound by street or societal norms), the "pinto" (ex-prisoner), and the "tecato" (addict). These important new character types began to compose a social hierarchy that action-oriented barrio youth would emulate.

Gradual involvements in local barrio street scenes served as initiating experiences and practicing grounds for a career with heroin. The move from the world of the pelado to the world of the tecato would entail an apprenticeship. The move from the role of observer to that of participant required knowing someone who already

had knowledge of how to "turn on," to "hustle," and to "cop." If one were "lucky," it would be a "veterano" (a tecato who has been around and knows the ropes). While each IV-drug-use scene would bear some localized traits, those into "la vida loca" (the addict lifestyle) soon came to share a common language and subculture that would serve them well across town, in prison, and throughout their spiral of addiction. By the 1950s, a full-blown tecato subculture could be observed in almost all major cities in the Southwest, with an argot and a lifestyle distinct from others in the barrio (Casavantes 1976).

By the late 1950s, attention began to focus on the spread of heroin use among adolescent Mexican-Americans, particularly those involved with gangs. While there was great concern, societal reactions were mostly punitive and resulted in large numbers of Chicanos being arrested and incarcerated in jails, forestry camps, or prisons. The incarceration of large numbers of Hispanics from diverse regions of the Nation had the unintended consequences of reinforcing and homogenizing both the pinto and the tecato subcultures (Casavantes 1976; Davidson 1970; Irwin 1970; Moore 1978; Moore and Long 1981). As novice Hispanic drug users entered these correctional settings, they encountered racially segmented and antagonistic drug user networks. Thus, the novice tecato became enmeshed with others who had shared in similar socializing experiences. In this milieu, individuals from many different localities began to share and exchange mutually reinforcing pinto/tecato perspectives, codes of conduct, conventions, and crime and drug use "technologies," and also reinforced sharing norms in such areas as food, clothing, jobs, information, and even drugs and sex (Davidson 1970; Irwin 1970; Bullington 1977).

Coinciding with the civil rights and mental health movements of the mid-1960s, societal responses to the drug problem began to be less coercive, less punitive, and more treatment oriented (Inciardi 1986). In this era, Mexican-American IV drug users' reliance on barrio-born and -maintained personal and social networks lessened in some ways. For example, Mexican-Americans in institutional and community drug abuse treatment programs commonly met nonbarrio drug users from diverse social, economic, racial, and ethnic backgrounds. These social experiences, in part, contributed materially to breaking the insularity of the tecato subculture and to the opening of the barrio drug scene to nonbarrio outsiders and vice versa.

To those who could read the signs, throughout the late 1960s and into the 1970s, the tecato subculture remained visible, secure, and firmly entrenched. Concurrently, a variety of distinct and competing drug scenes in the barrio were also flourishing. For example, "chavalos" (youth) were into the "sniffing thing" (inhalants); teens and young adults were into "pills" and "barbs" (amphetamines and barbiturates); and some "safados" (especially prone to risk taking) were using LSD, PCP, and amyl nitrite. For the truly innovative and trendy users, there was always a new "drug" to experience and take to the limit, e.g., cocaine, crack, smoking opium, and designer drugs (Crider et al. 1986). It bears mention that alcohol and marijuana remained universal staples of each of the drug scenes (Mata 1984; Mata 1986).

One could argue that, by the 1970s, both gangs and barrio drug use scenes were quasi-institutionalized (Moore 1978; Bullington 1977).

THE PROBLEM IN PERSPECTIVE

Official national, State, and local reports continually indicate that Mexican-Americans are overrepresented in narcotics arrests (Moore and Mata 1982; Aumann et al. 1972; Morales 1984), narcotics-related offenses (Irwin 1970), drug treatment rolls (National Institute on Drug Abuse 1982; National Institute on Drug Abuse 1986), and medical examiners' statistics (U.S. Department of Justice 1980).

Official national, State, and local reports have a number of serious limitations (Desmond and Maddux 1984). In most instances, ethnic identifiers remain key problems. In some reports and studies, the focus is on broad categories such as "Hispanics." Arrest, conviction, and imprisonment reports combine opiate use with cocaine use. Other reports fail to clearly differentiate users from nonusers who have been convicted for narcotics-related offenses or from convicted felons whose convictions are narcotics related.

Treatment data involving the five southwestern States do not provide data about all narcotics users in treatment. In fact, most reports generally reflect only those using publicly funded services and not private ones (Scott et al. 1973). Last, but more important, while these data do provide some sense of the incidence and prevalence of drug use and occasionally information about mode of drug administration and age and year of drug abuse onset (Ball and

Chambers 1970), there is little that one can glean from these data about needle-sharing practices and related topics.

Taking their lead from Chein et al.'s (1964) study *The Road to H: Narcotics, Delinquency and Social Policy,* several studies focused on Mexican-American heroin and other drug use in the late 1960s and early 1970s. One example is Redlinger's (1970) qualitative case study focused on drug-marketing and distribution patterns in San Antonio, TX. The work of Bullington et al. (1969) focused on heroin use and its consequences, particularly as it concerned treatment. This work was soon followed by Moore's (1978) examination of continuities and discontinuities in the drug use careers of barrio youth and young adults. These studies provide important firsthand accounts about major dimensions and themes of Mexican-American drug use, e.g., barrio contexts, careers in drugs, and barrio perspectives.

While these studies generated important data on and better understanding of heroin use in the barrio, they did not provide data focused on specific IV-drug-using behaviors such as learning to use and share injection equipment ("works," "fierros") or dealing with "malias" (opiate withdrawal syndrome) (Howard and Borger 1974). Studies of heroin relapse (Schasre 1966; Jorquez 1983; Jorquez 1984) and women and heroin in the barrio (Moore and Mata 1982) provided data and insights about IV-drug-using behaviors in the barrio. While these later studies did focus some attention on the problem of IV drug use ("turning on" and "getting down"), on tecatos' and their significant others' attitudes about the health consequences of IV drug use, and on the process of extrication from la vida loca, they provided little data about needle sharing and factors associated with health risks.

It is at this point that we saw the need to develop our own data sources. Although we began with knowledge and familiarity gained from our earlier studies, the need for additional data sources became readily apparent.

Our initial probes consisted of discussions and on-site visits with both IV drug users and service providers with whom we had pre-existing relationships. Responses to our original research questions concerning IV-drug-using behaviors and needle-sharing practices suggested that drug- and works-sharing practices of most Mexican-American IV drug users were not extensive, pervasive,

and entrenched. For example, a Chicano former IV drug user with numerous contacts with the San Antonio, Austin, and Chicago IV-drug-using scenes held that almost all self-respecting and aware IV drug users now possess their own works. Another knowledgeable contact, in Phoenix, strongly argued that, while needle sharing occurred, it was not as serious a problem as it is in the East, in the Midwest, and on the west coast (as needles were relatively easy and cheap to obtain). If any needle sharing was going on, it would be among young, "mocoso" (wet nose) tecatos.

A Chicano former IV drug user, now working as a paraprofessional counselor, noted that needles were readily available in drug stores and that "aguajes" (shooting galleries) were a part of the past--more of a problem elsewhere than they were in the border communities of Texas and Arizona.

Our initial probes were developed from long-term users' information. It was soon clear that we were obtaining valid and relevant observations and insights about a segment of Mexican-American IV drug users but not one that extended to a wide range of actors and sets. From other sources, we soon became aware of, and interested in following leads about, the problem that new Chicano IV drug users were presenting at treatment programs. We found that it was easier to obtain needles and syringes in some southwestern States than in others. We also found that many Mexican-American IV drug users were still sharing their works or stashing their used "fierros" (IV drug works) and "algodones" (cottons) for "a rainy day" when they might find themselves short on their luck. There seemed to be conflicting and puzzling aspects to what we were learning about current IV drug use scenes among Chicanos. It is here that we began to develop separate and distinct information sources.

METHODOLOGY

When we asked our respondents about their past and current IV-drug-using experiences, they could not relate to the queries about needle sharing and works sharing as we had anticipated. However, when we explored their own drug use experiences, particularly in relation to the first time that they "turned on" or their "sharing of drugs," we found that we had struck a responsive chord. In exploring their initial IV drug use experience(s), they related that they had been "turned on" by others and had seen others "get off"

from the same "stuff" (heroin) and possibly the same "erres" or works.

Our initial exploratory efforts extended only to key experts and informants in major cities. As professionals and practitioners, they were knowledgeable of the Chicano heroin addict scenes in their respective cities. The cities included Wilmington, San Pedro, East Los Angeles, and Oakland (California); Denver (Colorado); Albuquerque (New Mexico); Phoenix and Tucson (Arizona); and El Paso, Houston, San Antonio, Harlingen, and Austin (Texas). In these inquiries, we learned of the pervasiveness of Mexican-American IV drug use. To supplement these data, we also conducted ad hoc telephone interviews with our Mexican-American drug abuse treatment personnel contacts in the communities mentioned above and with others.

Given our limited research resources, we focused our efforts on three major urban regions in Texas and two in Arizona. We did this because we saw an opportunity to gather data where syringes are relatively easy to obtain legally rather than in States where this is not the case (such as California and Colorado), and, also, because these are regions where heroin use among Chicanos is well established.

Since there was some indication that drug users were no longer primarily tied to barrio-born and -maintained social networks and that some IV drug users were involved in other drug scenes, we focused some attention on the nature of IV-drug-using networks outside the barrio. We looked for a range of experiences common to addicts in our respondents' drug-using social networks. We also wanted to explore the continuities and discontinuities (i.e., starting and ending drug use "runs") in their drug use patterns and explore factors that promote or deter barrio IV drug users' needle- or works-sharing practices. The saliency and representativeness of the data were cross-checked with other data sources.

We chose to develop four distinct data sources and frames of reference focusing on a major IV drug use scene in each of the five cities. The first data source involved key medical, counselling, and substance abuse treatment personnel who had been identified as being most knowledgeable about IV drug use in their respective target areas or communities. A second source of data involved individual and group discussions with IV drug users who were in treatment or

a related institutional setting. The third source of data involved interviews and discussions with police narcotics officers who were identified as being the most knowledgeable about the IV drug use scene in the barrio(s). The final source of data involved individual interviews with active IV drug users at large in the community and not in treatment.

An ethnographic interview guide was used to gather data from respondents known to have information relevant to IV drug use. Some respondents were interviewed singly and others, in groups. The interview settings included such places as job sites, youth programs, drug abuse treatment programs, jails, barrio streets, barrio porches, and parks. While some interviews were conducted in English, many respondents were interviewed in a mixture of Spanish and English, and sometimes Mexican-American street argot ("calo") was used.

IV DRUG USE IN THE BARRIO

One of the first observations that we would like to make is that Mexican-American IV drug use scenes are currently flourishing throughout the Southwest. We found that IV heroin use is found not only in the expected Mexican-U.S. border towns and larger inner city barrios of such places as East Los Angeles, Phoenix, Albuquerque, El Paso, and San Antonio, but also in many smaller cities, towns, and rural villages where barrios exist. For the last 10 to 20 years, there have been growing indications that tecatos were becoming a part of most barrios, regardless of their size. While heroin use is widespread, our information suggests that Southwest Mexican-Americans are using it at levels that are relatively affordable and not likely to require extremes of crime to maintain the habit (10- to 20-dollar-a-day habits). A common observation was that Mexican heroin is available and cheap, especially for Mexican-Americans with Mexican connections.

A second observation is that, in many Southwest barrios, various drug use scenes exist. In large part, they tend to remain age-graded phenomena but generally evolve and coexist with each other. Eventually, they may come to draw upon distinct segments of the larger community. Each of these scenes requires different identities, attachments, skills, commitments, and personal/social investments.

The important distinction to be drawn here concerns the varying degree of insularity that these different drug use scenes exhibit with respect to racial and ethnic composition. Mexican-American drug users' social networks range from being barrio oriented, completely insular, localized, and virtually impermeable to outsiders (as in "gangs"), to being open to interethnic and intercommunity drug use networks. For the most part, we found that Mexican-American IV drug use scenes located in well-defined, insular barrios were more localized and more socially cohesive. By contrast, we also found drug user networks (especially on city fringes where there is racial and ethnic mixing) where Mexican-Americans were highly involved but were less influential concerning such things as dress codes, lifestyles, and drug use preferences and patterns. As one drug abuse counselor reported, there are tecatos who "hang around" with Anglos and blacks. Their concern is not with whom they associate but that they "score and get well."

A third observation from our study is that polydrug use is more typical than it once was. While drug users may have a particular preference for a given drug, it is not uncommon for them to switch from drug to drug depending on circumstances and opportunities. In most Southwest locales, it was suggested that cocaine, alcohol, and marijuana were regarded as barrio staples. Most respondents mentioned that cocaine for snorting and injecting and for "speedballing" with heroin is currently "very" popular among barrio Mexican-Americans and undocumented Mexicans. Among youth and young adults, PCP, crack, LSD, and inhalants were sometimes mentioned as being problematic in some, but not all, barrio communities. The more important suggestion here is that Mexican-Americans' IV drug use is extending to substances other than heroin, yet IV drug use still remains heroin dominant.

A fourth observation concerns the role of personal social support networks for both barrio and nonbarrio drug users. While recognizing that different drug use scenes now exist and different barrio orientations also exist, we discovered that, among drug users, there was a continuing reliance on personal social support networks for learning to use drugs, obtaining drugs, and avoiding arrest; for information and resource exchanges; and for coping with the exigencies of illicit drug use.

This particular observation has important implications for understanding factors which promote the sharing of drugs, works,

information, and resources. These personal social support systems or networks could be utilized, once better understood, to introduce new behavioral norms conducive to dealing with communicable diseases.

A fifth observation concerns the difference between controlled and less controlled users. We found that controlled IV drug users tended to be older and more experienced. They tended to use various precautions, e.g., less frequent drug use and less drugs used, and they were more careful about who they shared their drugs and IV injection works with. They also were more likely to be involved with other users of a similar cautious orientation; to know each other more intimately and for some period of time; and to be less prone to high-risk escapades. By contrast, novices, "hardheads," "gutter hypes" ("cucarachas"), and "burnouts" were drug users who were reported to be careless (regarding police surveillance, using "dirty" works, or being "burnt" and "ripped off") and more concerned with getting loaded. The key implication we would like to draw attention to concerns the need to explore and understand the process by which users move from being less controlled to more controlled.

The sixth major observation in our study involves IV drug users' awareness of health risk factors. It appears that controlled users have grasped the potential for contracting illnesses such as hepatitis and, more recently, AIDS. Learning what factors or experiences lend themselves to the internalization of this health awareness is beyond the scope of our preliminary research efforts. We found evidence that controlled users are concerned and are taking some measures to reduce their health risks. Among less controlled users, we found that there was also an awareness of the many serious consequences of shooting up drugs, but there was little evidence to suggest that they had internalized the seriousness of communicable diseases related to IV drug use.

In discussing with Chicano addicts their knowledge of AIDS, we found that almost all had some level of awareness. However, among most novice heroin users and "hardheads," we found strong tendencies to deny or minimize the AIDS threat. Within this group, there were expressions that AIDS was a white, gay male disease affecting areas of the country far away from their backyards. For both controlled and less controlled users, the topic of safer sexual practices was much more difficult to raise and fully discuss.

Most clinicians and more "open-minded" tecatos suggested that initial efforts and contacts with high-risk individuals be on a one-to-one basis; at the same time, both saw a great need for community outreach efforts that are culturally relevant and sensitive.

With respect to awareness of health risks, we were warned that the current AIDS situation is an opportunity for harmful myths and ineffective or dangerous behavioral adjustments to enter the IV-drug-using world. For example, our attention was drawn to the fact that tecatos commonly treat opiate overdoses by placing the victim in cold water, packing ice around the genitals, and injecting substances like salt, coffee, or milk into the victim's veins. It was also suggested to us that immediate measures to introduce legitimate medical information could arrest the institutionalization of dangerous myths and practices concerning IV drug use and AIDS.

A seventh observation concerns IV drug use and alternative sexual preferences. We found that Mexican-American gay and lesbian worlds have existed for some time. While Chicano homosexual worlds exist in larger urban communities, such as Los Angeles, Houston, and Phoenix, and even in the larger border communities, in virtually all these places, homosexuality remains a strong taboo, a denigrated and depreciated lifestyle. Unlike the tecato subculture, Chicano gay and lesbian social scenes were usually outside the view and influence of their barrios. Most of our contacts (IV drug users and experts knowledgeable about both scenes) remarked on how distant the IV drug use and gay worlds remained from each other. This is not to say that, for some Chicano gays and lesbians, drug use is not a part of their social worlds.

What may be a more fruitful line to explore with both Chicano IV drug users and gay Mexican-Americans is an assessment concerning their health risk behaviors and unsafe sexual practices. It is imperative that such an assessment be made and that the results lead to the development of curricula, materials, and services designed to address these health risk issues. These products must then be delivered to four specific populations. We suggest beginning with (a) the sexual partners of IV drug users; (b) IV-drug-using men and women, their families, and their children; (c) institutionalized persons in settings such as jails, detention centers, and prisons; and (d) high-risk youth (school dropouts, homeless/runaway youth, and adjudicated delinquents).

COMMENTS

The personal social networks of barrio IV drug users serve to meet their need to belong, to meet expressive social and psychological needs, and also to address utilitarian needs and wants, e.g., learning to use drugs, to cop, to fix, to hustle, and to maintain a habit. These personal social networks are even applied to an addict's attempts to end a run or to quit using drugs altogether. This is facilitated by calling on barrio "carnales" (acquaintances and friends) who have "connections" (entrée to treatment programs) or know how to "kick" at home.

Efforts to curb IV drug use and needle sharing must begin with the understanding that these practices are embedded and maintained by a set of ongoing personal relations and exchanges in IV drug users' personal social networks. Needle sharing must be seen as part of the larger picture of "drug-sharing" practices. Drug sharing is at once a means to socialize, to belong, and to provide some measure of protection from the exigencies of la vida loca. More immediately, it is a means to cope with one's craving for drugs. Thus, in southwestern States with strict laws and enforcement patterns focusing on needles and related paraphernalia, needle sharing is expedient, economical, and, of course, "gratifying."

With few exceptions, among Mexican-American IV drug users, needle-sharing practices associated with shooting galleries are rare, yet needle sharing as a drug use practice in this group is quite common. Among more controlled users, the frequency of drug use and who they use with is more routinized and restricted. Among less controlled users, the factors promoting drug use, frequency, and needle sharing are more variable and problematic. For these users, caution, care, and attention to legal and health issues are overridden by the pressing need to "alivianarse" (get well/straight). It is common for less controlled users to inject within walking distance of their connection (motel, park, house/apartment, or the dealer's car).

For many drug abuse treatment, criminal justice, and other professionals, the Mexican-American IV drug user remains hard to reach and unresponsive to treatment. Our observations suggest that both the less controlled and the controlled IV drug users are open to

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various strategies and modes of intervention and treatment. The two key dimensions that we suggest can break the spiral of addiction are identifying the stage of drug involvement and linking it to the appropriate treatment interventions, and developing and maintaining entrée to Mexican-American IV drug user networks.

In comparison to AIDS among IV drug users in the Northeast, AIDS among IV drug users in the Southwest, particularly among Mexican-Americans, may be characterized as being in the first stages of the epidemic.

We noted that AIDS awareness was found among most users and also among their IV-drug-using acquaintances and their families, yet the internalization of the serious consequences of this disease was not evident. As Mexican-American addicts continue to engage in needle-sharing practices, they remain important vectors of AIDS virus transmission to nonusers, i.e., their sexual partners and their children. Therefore, it is imperative that we undertake projects that help these IV drug users to internalize the seriousness of this disease and the consequences of continuing to engage in high-risk behaviors--specifically, IV drug use, sharing of injection equipment, and unsafe sexual practices. Contrary to the contention that addicts do not care enough or are unable to respond, we suggest that *some* have learned from their "bottoming out" experiences and their familiarity with the many problems associated with the spiral of addiction. Whether it be a severe bout with hepatitis or their "just being sick and tired of being sick and tired," there are natural points of intervention that we can draw on to access them. Successful intervention will require aggressive case finding and concrete information and assistance (Friedman et al., in press).

RECOMMENDATIONS

Prevention Efforts

It is recommended that a series of well-coordinated community efforts be instituted and adequately supported to prevent Mexican-American youth from starting drug- and alcohol-using careers. Existing programs should be encouraged to coordinate their efforts and also should be provided necessary support: money, manpower, and technical assistance (Friedman et al. 1986). To prevent IV drug use among Mexican-Americans at risk for entering the spiral of addiction, we recommend the following:

(a) The development of culturally sensitive educational programs designed to inform all at risk--Mexican-Americans and others who reside in barrios--about the negative consequences of using drugs and to encourage positive alternatives. These programs should involve a broad spectrum of Mexican-Americans working closely with agencies and people who are sensitive to the Mexican-American culture.

(b) The development of local councils of barrio people (including undocumented Mexicans and Central Americans) to facilitate and improve community efforts in drug abuse and health risk prevention.

(c) The development of culturally sensitive, trained professionals and indigenous barrio people, including ex-addicts who are respected by drug users, to work in the barrio and provide educational/prevention services to the general population and to special, at-risk subpopulations (Beschner and Friedman 1979).

Active IV Drug Users in Treatment

The population of Mexican-American IV drug users in treatment at any time depends greatly on available treatment services, their attractiveness to Mexican-American IV drug users, the obstacles (money, hassles, etc.) in accessing such programs, and other factors.

Drug abuse treatment provides the opportunity to help addicts internalize the seriousness of their health risk behaviors to themselves, their sexual partners, and their children. In treatment, addicts can be exposed to information, educational aids, and resources to help them not only to cope with their addiction but also to internalize behaviors which minimize their risk for exposure to AIDS and other communicable diseases, such as hepatitis. Since relapse to drug abuse is common following treatment, programs should make risk reduction efforts a priority. Also, these addicts in treatment can, in turn, influence other addicts in their personal social networks to begin to consider their health risks.

Active IV Drug Users Out of Treatment

For active Mexican-American IV drug users out of treatment and at large in the community, we recommend three basic but well-integrated elements for dealing with the transmission of AIDS and other communicable diseases through needle-sharing and unsafe sexual practices:

(a) Efforts must be made by trained individuals with high credibility and respect among Mexican-American addicts to locate and make appropriate entrée into addicts' barrio social networks. Such individuals could come from the ranks of ex-addicts and other "streetwise" individuals.

(b) Once meaningfully engaged with active addicts' social networks, these trained community health education workers would provide information on AIDS and its transmission, instructions on safer sexual practices, and information on how to reduce risk during drug use. These workers could also gather epidemiological data that would be useful in planning and evaluating risk reduction programs (Akins and Beschner 1980).

(c) The community health education workers must not simply inform addicts but must encourage and reinforce behavioral change. Addicts who are ready for treatment would be assisted in this process. The mission is to "carefully" attempt to induce active IV drug users to develop incentives to stop or curtail IV drug use and unsafe sexual practices. Here, great care must be taken to insure that workers do not gain the reputation of "lame do-gooders." Community health education workers must have official legitimacy so that they can gain the cooperation of barrio people, drug users, treatment program personnel, the police, probation and parole officers, and medical personnel.

Sexual Partners, Families, and Children

Efforts are needed to reach the sexual partners and families of IV drug users to alert them to the AIDS risk faced by addicts, to alert them regarding the risk of sexual and perinatal transmission of AIDS, and to inform sexual partners of specific steps to reduce their risk as well as that of future offspring. These risk reduction

efforts should include media campaigns to sensitize barrio communities to health risks; educational workshops to be offered through churches, schools, and other community organizations; and individualized educational strategies to be provided at health clinics and by indigenous outreach workers. Prostitutes would constitute an important target group.

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AUTHORS

Alberto G. Mata, Jr., Ph.D.
Postdoctoral Fellow
Center for Health Promotion
University of Texas Health Science Center, Houston
PO Box 20036
Houston, TX 77225
and
Assistant Professor
Center for Hispanic Research
School of Social Work
Arizona State University
Tempe, AZ 85287

Jaime S. Jorquez, D.S.W.
Assistant Professor
Center for Hispanic Research
School of Social Work
Arizona State University
Tempe, AZ 85287

Amsterdam's Drug Policy and Its Implications for Controlling Needle Sharing

Ernst C. Buning, Giel H.A. van Brussel, and Gerrit van Santen

INTRODUCTION

In this presentation, we will briefly give attention to the history of Amsterdam's drug problem and the helping system that has developed over the last decade. We will then go into more detail on measures that were taken on account of the spread of AIDS among intravenous (IV) drug addicts, examining, in particular, the pros and cons of the needle exchange system. Conclusions about the effectiveness of Amsterdam's approach to the drugs-and-AIDS problem are drawn at the end of this presentation.

HISTORY

The Netherlands is a small, densely populated country of 14 million. The capital, Amsterdam, is a relatively small city of 650,000 inhabitants, but it has the characteristics of a metropolis, i.e., extensive social and cultural life, international business activities, limited social control, transient population, relatively large groups of ethnic minorities, and, finally, a considerable drug problem (about 7,000 of the 20,000 Dutch drug addicts, i.e., regular users of drugs such as heroin, live in Amsterdam, and 30 to 40 percent of these addicts use intravenously). In the sixties, Amsterdam was considered to be the European counterpart of San Francisco. Hippies gathered in the "Vondelpark," playing music and smoking hashish and marijuana. Dutch authorities decided not to use law enforcement on individuals who used drugs such as marijuana and hashish, since it was thought that this would criminalize the users and, in the long run, be counterproductive.

In 1972, heroin was introduced in Amsterdam. It took over 5 years before the effects of heroin use became visible in the form of street junkies, criminal activity, overdoses, and harassment in certain downtown areas. Though drug-free treatment centers were actively involved in trying to get addicts off heroin, it became clear that their success rates were rather disappointing, and only a small percentage of the drug-taking population was willing to enter treatment.

In 1979, the City Council of Amsterdam instructed the Municipal Health Service to come up with proposals to approach the drug problem from a different angle. The general outline of the proposals was aimed at:

(1) obtaining insight into the scope and character of the heroin problem by contacting as many addicts as possible and by setting up a registration system,

(2) reducing the risks of drug use for those addicts who are not (yet) capable or willing to give up their addiction, and

(3) motivating drug addicts to enter drug-free treatment programs and/or resocialization projects.

In the years 1979-82, the Municipal Health Service developed, in close cooperation with Government-granted foundations, a coherent helping system for drug addicts.

THE HELPING SYSTEM

In the helping system, four phases are differentiated: (1) contact, (2) harm reduction, (3) drug-free treatment, and (4) resocialization. In the subsequent paragraphs, a short description of these four phases will be given.

Contact

To get in touch with addicts who do not seek help, three activities are undertaken. First, street workers frequently visit places where concentrations of addicts can be found. They observe what is going on, provide verbal and/or written information and serve as a

"bridge" to helping institutions. Second, doctors from the Municipal Health Service visit local police stations twice a day to see arrested drug addicts. Medical first aid is given (including methadone), and, like the street workers, the doctors give information (recent examples of written information are leaflets about AIDS and leaflets with instructions on what to do in case of an overdose). Third, a specialized team of social psychiatric nurses visits general hospitals. They counsel addicts who have been admitted and act as consultants to hospital staff. Their first priority is to facilitate "normal" medical treatment. As soon as this is realized, possibilities of treating a patient's drug problem are considered.

In 1985, about 2,000 drug addicts were seen in local police stations and 300 in general hospitals. Since street workers do not register, numbers of these contacts cannot be given.

Harm Reduction

The best way to eliminate the risks of drug use is, of course, to stop using totally. However, daily experience with drug addicts (especially heroin addicts) teaches us to be realistic: most addicts are caught in a pattern of drug use--cleaning up and relapsing--finally resulting in either death or a stable, drug-free life. Harm reduction seems the second best aim if it is not (yet) possible to "cure" the addicts. In this way, the addicts are helped through a difficult phase in their lives, while it is hoped that one day they may overcome their addiction either through treatment or natural recovery (Waldorf 1983).

In Amsterdam, harm reduction is being accomplished through social/medical primary care. Socially, this means that addicts will be assisted if they face problems concerning housing, financial, and legal matters. This should not be labelled as "mothering," since emphasis is put on the client's own responsibility, while the social workers maintain a friendly but firm attitude. Medically, harm reduction is achieved through regular medical examination; methadone distribution; distribution of birth control information, condoms, and other contraceptives; referral to hospitals; and a needle and syringe exchange system.

Methadone distribution is seen as a major tool in harm reduction, and Amsterdam has various methadone projects of different "thresholds." The most outstanding is the low-threshold project "Methadone by Bus." Every day, two rebuilt city buses take a distinct route through Amsterdam, stopping at a total of six different places in or near the "drug scene." In these buses, liquid methadone is dispensed to heroin addicts who have been referred to the buses by one of the Municipal Health doctors. Preconditions for participating in the project are: (1) regular contact with a medical doctor (at least once every 3 months); (2) introduction into the central methadone registration; and (3) no take-home dosages. Further hassle, i.e., urine check, mandatory contact with a counselor, etc., is avoided. In this project, methadone is used as a means to contact drug addicts and to provide a starting point for further stabilization of the addiction. The nurses who work on the methadone buses play a significant role in recognizing addicts who suddenly deteriorate.

From the methadone buses, clients can be referred to one of the four outpatient methadone clinics of the Municipal Health Service, on the condition that they are willing to give up their illegal drug use. In those clinics, urine checks are mandatory, and counselling is provided. As soon as a rather stable situation is reached, the client's general practitioner is asked to take over the methadone prescription.

In 1986, approximately 3,500 addicts made use of the buses and/or outpatient clinics, and about 1,500 addicts received methadone from their general practitioners.

A last activity clearly aimed at risk reduction is a needle and syringe exchange system. This exchange system will be discussed in more detail later.

Drug-Free Treatment

Drug-free treatment is provided by Government-granted foundations that include inpatient as well as outpatient facilities. Individual, group, or family therapy is available. The aim is to realize substantial lifestyle changes, including total abstinence. The goals and means of these programs are similar to those of drug-free facilities in other European countries and North America.[1]

Resocialization

We believe that the process of resocialization should begin as early as possible in an addict's "drug career." This implies that active drug addicts as well as ex-addicts are involved in resocialization activities. Of course, the kind of activity differs according to the general state of the addict or former addict. Sports (especially soccer) turned out to be a successful activity for active drug addicts, while much more stability is necessary for participation in educational and work projects.[2,3] For former addicts, there is a possibility of working for 1 year as a civil servant. In a special experiment, the City of Amsterdam created 40 jobs for ex-addicts in an effort to set an example for other employers to follow.

Summary

In summary, it can be stated that Amsterdam has a wide variety of helping modalities. Approximately 70 percent of the city's 7,000 drug addicts are in contact with this helping system.

In The Netherlands, no evidence could be found to support the fear that low-threshold methadone programs keep addicts away from drug-free treatment. Figure 1 shows that the number of addicts entering drug-free treatment doubled in the period 1981-85 (most popular has been the drug-free aftercare). This is even more striking since the estimated number of addicts did not increase in that same period. So, instead of keeping addicts away from treatment, low-threshold programs and outreach activities may have been effective tools in motivating addicts to enter drug-free treatment.

Figure 2 shows the rise of the mean age of drug addicts, while figure 3 indicates that the percentage of addicts under 22 years decreases (14.4 percent in 1981 and 5.1 percent in 1986). Since the total number of addicts is quite stable, this may suggest that heroin is becoming less attractive to young people.

MEASURES TAKEN ON ACCOUNT OF AIDS

As of March 31, 1987, 260 AIDS cases were registered in The Netherlands; 8 (3 percent) were IV drug addicts.

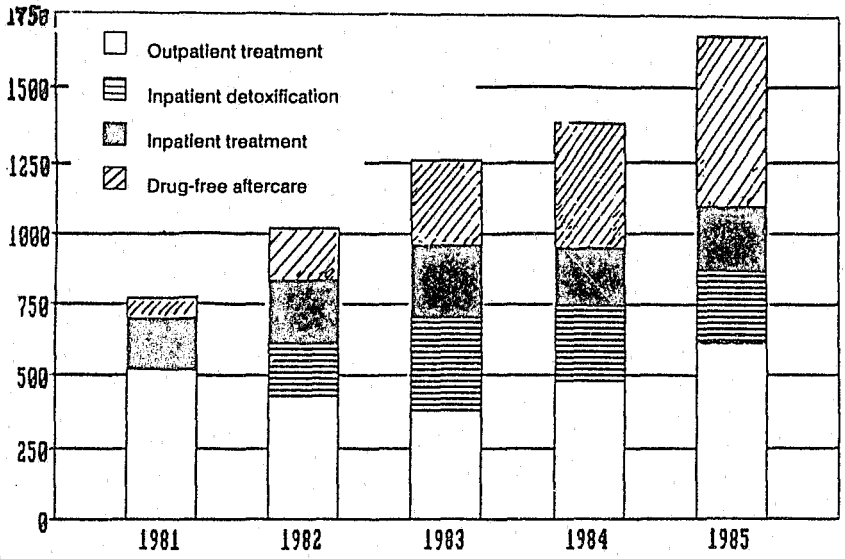

FIGURE 1. *Patient load: Drug-free treatment*

SOURCE: GG & GD Amsterdam 1986.

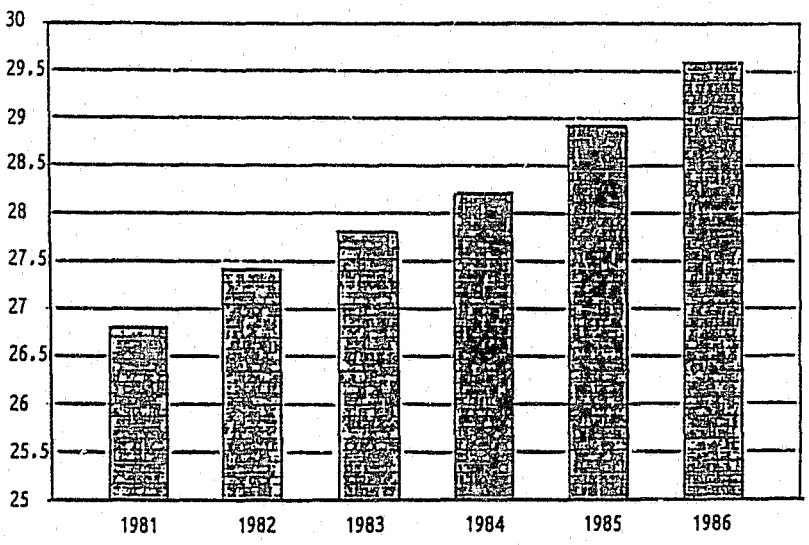

FIGURE 2. *Mean age of drug addicts in Amsterdam*

SOURCE: GG & GD Amsterdam 1987.

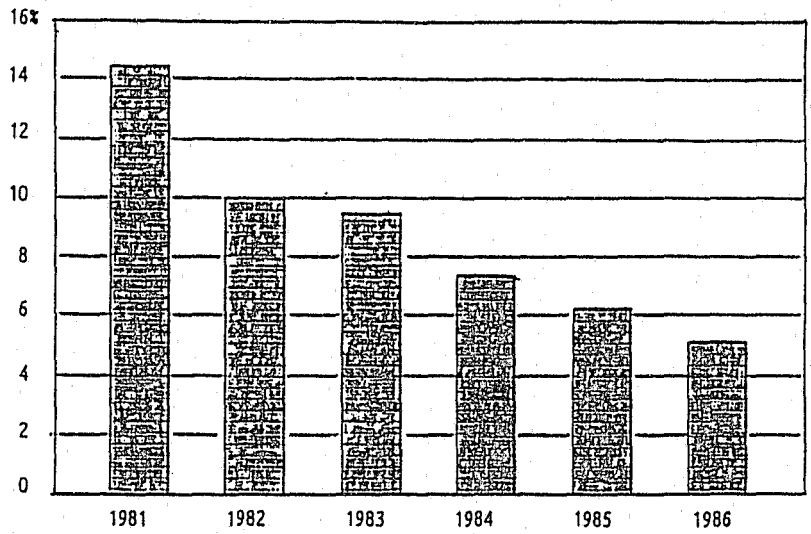

FIGURE 3. *Percentage of drug addicts under 22 years*

SOURCE: GG & GD Amsterdam 1987.

In a current study among IV drug addicts in Amsterdam conducted by van den Hoek et al. (in preparation), a seropositivity rate of approximately 30 percent is found. The group studied, however, is not representative of the Amsterdam drug-taking population. Therefore, the 30-percent seropositivity rate may not be seen as a rate for the total group of IV drug addicts. Important to mention here is the fact that only about 2,500 (35 percent) of the addicts in Amsterdam are injecting. The remaining 65 percent are "chasing the dragon," i.e., inhaling the vapor of heroin as a means of drug administration.

Whether or not AIDS prevention measures slow the spread of human immunodeficiency virus (HIV) infection has yet to be seen. Nevertheless, three distinct measures have been taken (Buning et al. 1986): (1) a publicity campaign, (2) condom distribution, and (3) needle and syringe exchange.

The rationale behind these measures is that information about safer sex and safer drug use can lead to behavior changes only if the necessary conditions are met, i.e., availability of condoms for safer sex, availability of drug-free treatment programs for those who want to "kick the habit," availability of methadone programs which can help addicts switch from IV addiction to oral addiction, and, finally, availability of clean syringes and needles for those IV drug addicts who are not capable or willing to give up their use. Figure 4 shows this schematically.

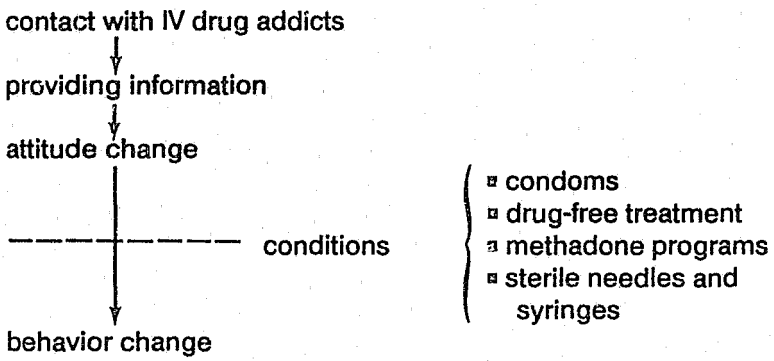

FIGURE 4. *A policy model for AIDS and drug abuse*

Applying this model to traffic safety, it is clear that a campaign to spur drivers to use safety belts can only be effective if safety belts are available and can be installed at reasonable cost and within a short period of time. If these conditions are not met initially, a publicity campaign would be quite in vain. With this model, we want to emphasize that behavior changes can take place only if certain conditions are fulfilled. In the following paragraphs, the three measures are discussed.

Information

In a publicity campaign, information about AIDS has been given to addicts. Personal contact turned out to be the best way of getting

the messages of safer use and safer sex across. Of course, leaflets and posters are very good to support this personal contact. Recently, a leaflet making use of cartoons and written in a way that appeals to the average addict was introduced. Also a slide series about AIDS and drug abuse is available for showing in the waiting areas of the drug treatment clinics. So far, the publicity campaign has been quite successful, since the majority of the drug-taking population is in touch with the helping system.

Condom Distribution

Condom slot machines have been installed in all outpatient clinics and in the methadone buses. Condoms can be obtained at a very low price (3 for $0.50). In a special V.D. clinic for addicted prostitutes, condoms are distributed free. This is being done since we fear that addicted prostitutes may be a link in the spread of HIV to the general population (van der Perre et al. 1984; Piot et al. 1984).

Needle and Syringe Exchange

The needle and syringe exchange started in the summer of 1984. The fact that a pharmacist in the inner city area stopped selling syringes and needles to about 200 addicts caused concern among workers in the field and addicts themselves. Since an outbreak of hepatitis B was feared, the Junky Union (a league of drug addicts) proposed to start a needle exchange program (Kools and Buurman 1986). Although at first health authorities were not very keen on this idea, it was decided that a small experiment within the Junky Union would be set up. The Municipal Health Service bought disposable syringes and needles in large quantities, delivered them once a week to the Junky Union, and picked up the used ones for disposal. At the onset, approximately 1,000 syringes and needles were exchanged weekly.

In 1985, AIDS became a major item of concern, and more institutions decided to participate in the exchange system (Werkgroep AIDS en druggebruik 1986). In 1986, the Municipal Health Service decided to make the exchange of syringes and needles available on the methadone buses as well. At the end of 1987, approximately 600,000 syringes and needles will have been exchanged at 14 different locations (see table 1) (Buning 1987).

TABLE 1. *Number of needles and syringes exchanged in Amsterdam*

Year		Number
1984		25,000
1985		100,000
1986		400,000
1987	expected	600,000

Dilemmas. Of course, the needle and syringe exchange is not without controversy. Although Amsterdam already had a tradition of harm reduction projects with rather pragmatic approaches, still workers in the helping system came up with objections, such as:

- IV drug abuse is encouraged, and incentives to "kick the habit" are taken away;
- addicts should be responsible for buying their own equipment–it should not be given free;
- needles and syringes from the exchange system will be sold on the black market to get money for illegal drugs;
- workers in the drug field are supposed to "help," not hand out equipment that is harmful to people;
- pharmacists will have an excuse to stop selling syringes and needles;
- time that professional staff spend on the needle and syringe exchange would be better spent on more meaningful activities.

People in favor of the syringe and needle exchange summed up the following advantages:

- IV drug addicts will reduce needle sharing, which could slow down further spread of HIV infection;
- IV drug addicts will pay more attention to "injecting hygiene";

- the needle and syringe exchange will provide a good opportunity to give addicts information about AIDS;

- since used syringes and needles are brought back, the risk that people might inadvertently prick themselves with carelessly discarded syringes and needles will be reduced.

The facts. To get a better picture of the actual functioning of the needle and syringe exchange, Buning, Hartgers, van Santen, and Verster, all employed by the Amsterdam Municipal Health Service, set up an exploratory study to evaluate this system (Buning et al. 1987). A total of 150 IV drug users will be interviewed, 75 recruited at places where the exchange takes place, and 75 recruited at places independent of the exchange (police stations, hospitals, a medical clinic for addicts from other European countries, etc.).

The questionnaire designed covers drug history, contacts with the helping system, needle-sharing practices, use of the needle and syringe exchange, and diseases that are related to injecting. Finally, the arms of users are examined for inflammation, bruising, and abscess. Besides interviews with IV drug users, there will be interviews with staff people who carry out the exchange as well as with people who live in areas with a high concentration of addicts.

An interim report on the results of the first 150 interviews is expected to be published in July 1987. In the fall of 1987, 50 IV drug addicts will be interviewed again, and all the collected data will be thoroughly analyzed. Publication of this exploratory study is expected in the beginning of 1988.

To date, we have interviewed 78 IV drug addicts. Although profound statistical analyses have not yet been carried out, we would like to present some preliminary findings.

Of the 78 IV drug addicts interviewed, 56 (72 percent) said that they ever shared syringes and needles. Thirty-six (47 percent) still shared in the last 2 years, and 20 (26 percent) continued sharing needles in the month prior to the interview. Among the IV drug addicts who share needles and syringes, 12 (15.4 percent) report that they do this exclusively with their sexual partner. Figure 5 shows the percentage of IV drug addicts who share needles and syringes.

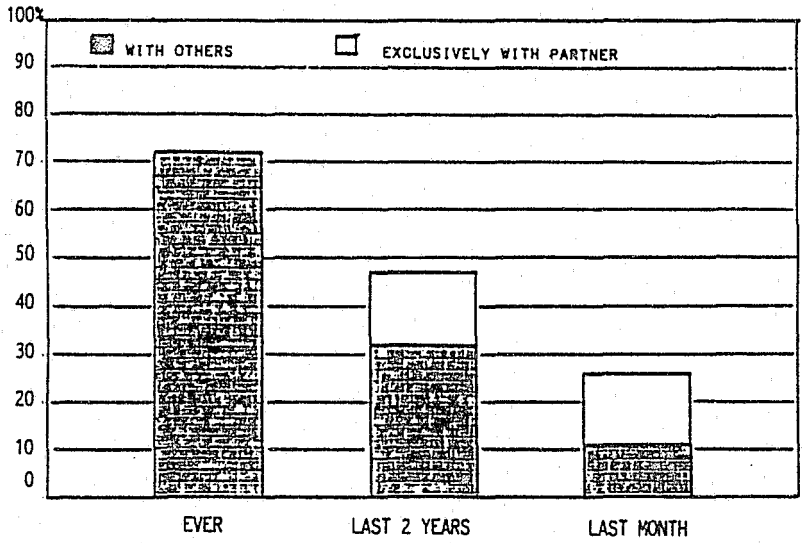

FIGURE 5. *Percentage of IV drug addicts sharing needles*

SOURCE: GG & GD Amsterdam: Buning, Hartgers, van Santen, and Verster, May 1987.

Fifty-four of the interviewed IV drug addicts were recruited at exchange locations. Of the other 24, 8 (33 percent) appeared to make use of the needle and syringe exchange. So, in total, 62 made use of the needle and syringe exchange. When "exchangers" were compared with "nonexchangers," it appeared that there was a considerable difference in percentages of needle sharing between the two groups. About 50 percent of the "nonexchangers" were still sharing needles in the month prior to the interview, while this percentage was 19.3 percent for "exchangers." Figure 6 gives an overview of needle-sharing practices among "exchangers" and "nonexchangers."

The average number of years that drugs (such as heroin or cocaine) were used was 11.4. A third of the interviewees said that their drug abuse was quite stable over the last half year, 30 percent said they were using more, while 36 percent now use less than they did half a year ago. Within the group of "exchangers," this trend was even more clear: 39 percent of the "exchangers" are now using less and only 26 percent, more. By contrast, 27 percent of

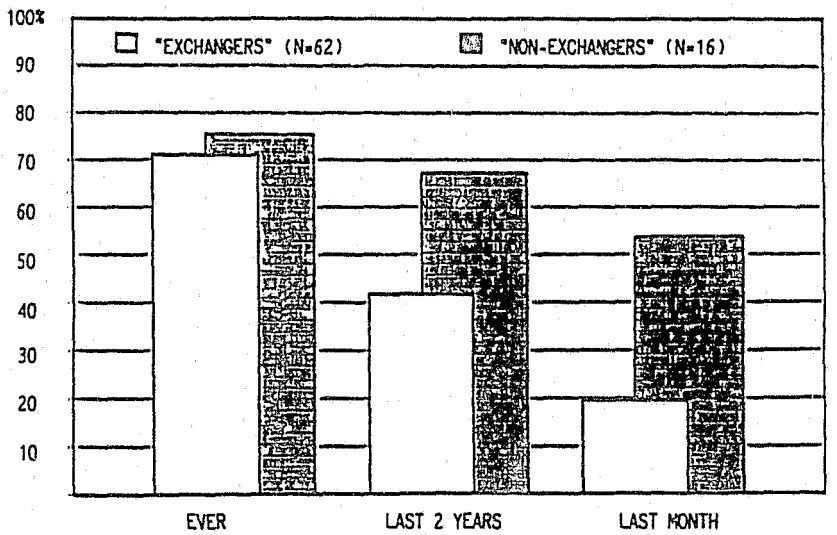

FIGURE 6. *Percentage of IV drug addicts sharing needles ("exchangers" vs. "nonexchangers")*

SOURCE: GG & GD Amsterdam: Buning, Hartgers, van Santen, and Verster, May 1987.

"nonexchangers" were using less, while 44 percent were using more (see table 2). Therefore, the suggestion that the needle and syringe exchange stimulates addicts to use more than before cannot be supported.

TABLE 2. *Drug abuse over last half year (n=78)*

Drug Use	"Nonexchangers" (N=16)	"Exchangers" (N=62)	Total (N=78)
More	44%	26%	30%
Same	27%	35%	36%
Less	27%	39%	34%

SOURCE: GG & GD Amsterdam: Buning, Hartgers, van Santen, and Verster, May 1987.

The condition of the arms of the interviewees who used the exchange system was surprisingly good (we found recent abscesses in only three cases). We learned from the "exchangers" that utilizing a needle only once helps minimize damage to their veins.

Summarizing the preliminary findings of this exploratory study, we can see the following trends:

- Needle sharing still occurred during the last 2 years, although the majority of interviewees said they had changed their sharing behavior due to fear of AIDS.

- IV drug addicts who participate in the exchange do less sharing than those who do not participate.

- There seems to be no support for the hypothesis that an exchange system stimulates addicts to inject. The remark of a director of a Public Health Service that "providing someone with a fork doesn't make him eat more" seems to be appropriate.

After completing the 150 interviews and doing the necessary statistical analyses, it will become clear if these trends stand and if they are statistically significant.

CONCLUSIONS AND DISCUSSION

Over the last decade, Amsterdam has developed a system with a wide variety of helping modalities, and about 70 percent of the city's drug addicts are in touch with this system.

The presence of low-threshold programs did not keep addicts away from drug-free treatment. On the contrary, in the period 1981-85, the patient load of drug-free helping modalities doubled.

The mean age of addicts has gone up and was 29.6 years in 1986. The percentage of addicts under 22 years has dropped from 14.4 percent in 1981 to 5.1 percent in 1986. Since the total number of addicts is quite stable, this may suggest that heroin is becoming less attractive to young people.

The evaluation of the effects of the measures taken on account of AIDS (information, condom distribution, needle and syringe

exchange) is difficult, since there is a lack of control groups. Preliminary findings of an evaluative study of the needle and syringe exchange indicate that addicts who make use of the needle exchange do less sharing than IV drug addicts who do not make use of this exchange. Further research should confirm this trend. Evidence to support the suggestion that a needle and syringe exchange encourages addicts to inject more could not be found.

A needle and syringe exchange is seen by many policymakers as an instrument to slow down the spread of HIV infection among IV drug addicts. However, this exchange becomes even more important for society in general as more addicts are infected. Without an exchange, there is considerable risk that people might prick themselves with carelessly discarded needles. This risk should be zero. A needle and syringe exchange can contribute to reducing this risk. Last summer, sandbanks in the downtown area of Amsterdam were reopened. Children can play again without fear of an accident caused by contaminated needles.

FOOTNOTES

1. Jellinekcentrum: Jaarverslag 1981, Jaarverslag 1982, Jaarverslag 1983, Jaarverslag 1984.

2. Stichting Progein: Jaarverslagen 1981-1985.

3. Stichting Maatschappelijk Herstel Voorzieningen: Jaarverslagen 1983-1985.

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AUTHORS

Ernst C. Buning, Psychologist

Giel H.A. van Brussel, M.D.

Gerrit van Santen, M.D.

Drug Department GG & GD
Valckenierstraat 2
1018 XG Amsterdam
The Netherlands

The Influence of AIDS Upon Patterns of Intravenous Use—Syringe and Needle Sharing—Among Illicit Drug Users in Britain

Robert Michael Power

INTRODUCTION

This paper will look at patterns of injecting as well as needle- and syringe-sharing patterns among illicit drug users in Britain. Drawing principally from research carried out at the Drug Indicators Project (DIP), the influence of AIDS upon injecting and sharing behavior is examined. Throughout the paper, all the direct quotes from drug users (under assumed names) and all unreferenced observations originate from recent fieldwork and other studies undertaken at DIP.

PATTERNS OF INJECTING AND SHARING AMONG REGULAR DRUG USERS

The first point to make is that British research on this matter is partial and sketchy. No nationwide studies have been undertaken, and such work that has been accomplished has been conducted on regional or local levels. Even less is available on drug users' behavior with respect to the cleaning of injection equipment or patterns of sexual behavior. Although the Home Office produces annual figures of notified drug addicts, no statistics are available regarding routes of administration of the relevant drugs. However, the Department of Health and Social Security has commissioned an evaluation of the recently initiated needle exchange schemes.

For now, what we have to rely on is a series of localized studies. This has its advantages and disadvantages. Whereas no overall picture is available, such local and ethnographic studies point to the significance of cultural, social, and regional factors in determining

patterns of routes of administration of various drugs and subsequent sharing behaviors. Before moving to the issue of the effect of AIDS upon injecting and sharing behaviors, it is salutary to address two questions: First, what influences drug users in the choice of their preferred route of administration? And, second, what factors encourage sharing among those who inject? In the British context, in light of past and present research, these two questions can be addressed under the headings of "pragmatism," "socialization," and "circumstance."

Pragmatism

A common reason given for injecting illicit drugs is based on economic grounds. In Britain, over the last 8 years, much of the increase in heroin use has been through people smoking or snorting the drug (Hartnoll 1986). However, once dependence has been established, and individual habits increase, users often turn to injecting. As one heroin user put it, in simple economic terms:

> To stop me being sick I had to smoke a gram and a half. Now that I'm banging it up, I only need half a gram. What would you do?

With respect to heroin, even if smoking is preferred, there are times when the substance available is not suitable. This was the case recently in London, where a number of users reported that they had reverted to injecting because the heroin on the market could not be smoked successfully. On the other side of the coin, and as observed by Pearson et al. (1985) in their study in northern England, the arrival of cheap "brown" heroin from Iran and Pakistan, containing many impurities, led to an increase in smoking, and even a switch from injecting. This resulted partly from the fact that the "brown" heroin had been especially prepared for smoking, and also because the preparation required to purify it deterred a number of injectors.

As well as pragmatic reasons for choosing the route of administration, there are practical factors that influence the proclivity toward sharing. Principally, these are concerned with the relative availability of new needles and syringes and the risks associated with procuring these.

In England and Wales, until recently, it was the exception rather than the rule for a pharmacist to sell syringes to drug users. Although there was nothing illegal about the sale or purchase of this equipment, many chemists were reluctant to stock them for such purposes. Indeed, in London, a small number of chemists, spread throughout the capital, were the main suppliers. In Scotland, where a different legal system prevails, punitive legislation inhibited the provision and sale of clean equipment. The 1982 outbreak of hepatitis B in an area of Edinburgh, reported by Robertson et al. (1986), was attributed to an increase in sharing needles and syringes owing to an acute shortage after the local legal supplier closed, and an unofficial prohibition on the sale of injecting equipment by pharmacists. Of a total sample of 164 drug users, it was discovered that 83 percent had shared or were sharing. On retesting the stored blood samples for human immunodeficiency virus (HIV), it was found that 83 (51 percent) were seropositive, well above the prevalence reported elsewhere in Britain and Europe. In London, Mulleady and Green (1985) have examined the relationship between hepatitis and sharing, and its implications regarding AIDS. They call for a free availability of syringes and needles for drug users.

Haw (1985), in her 2-year study of Glasgow, Scotland, noted that, due to the difficulty of obtaining equipment from legitimate sources, users were forced to adopt a variety of strategies. Syringes and needles were stolen from hospital dustbins and from doctors' surgeries, or else bought "on the street." Alarmingly, it was found that the practice of sharing equipment was most common among recent users, thereby increasing the potential for the rapid spread of infection and disease.

In addition, the real or perceived risk to the drug user of obtaining clean equipment is an important factor. In the past, it has been common practice for the police to monitor the comings and goings of drug users to chemists who were known providers of syringes and needles. This heightened the reluctance of many to make use of their services, as arrests were a regular occurrence. For example, Tom is HIV positive and has a series of convictions for dealing. He always bought his needles and syringes from a well-known chemist in London's West End:

> I'd stopped sharing but still fixed, and I was making a real effort to use clean works. I knew that the police

were watching the place, but there was nowhere else to go. Anyway, I'm coming out with my works, and I'm stopped by this copper. Next thing I know, I'm in a room they've got 'round the corner being strip-searched and charged with possession with intent to supply.

In contrast is the situation prevailing in Liverpool. Since October 1986, Mersey Regional Health Authority's Drug Training Centre has been running a needle/syringe exchange scheme on a new-for-old basis. When local police officers found drug users with equipment for injecting drugs, this was confiscated. The drug users were then given receipts which could be exchanged for fresh equipment back at the Drug Training Centre. In recent months, the local police have been sensitive to the new policies around the issue of needle exchange. If they find traces of illegal substances in a used syringe, their official policy is to confiscate and destroy it but not to prosecute its owner. Indeed, as well as issuing receipts for the equipment they take from drug users, they are also providing leaflets informing drug users where clean equipment can be obtained (Parry 1987a). Such forward thinking should be applauded. Clearly, it is essential that any innovations from government departments not be frustrated by the vagaries of local police policy.

Socialization

Two important factors that influence the preferred route of administration of an illicit drug, and the resultant potential for sharing, are regional and cultural variations. Robertson et al. (1986), Kohn (1986), and Haw (1985) point to the almost exclusive tradition of intravenous drug use in Scotland's principal cities of Edinburgh and Glasgow. A couple of hundred miles southwest in Liverpool, Parry (1987b) notes that the majority of heroin users smoke, or "chase the dragon," rather than inject. This, he comments, is in spite of the fact that many have experimented with intravenous use. Similarly, in their study of the Wirral, Parker et al. (1987) found that the most common route of administration of heroin was by smoking. Of their sample of 652 heroin users, 79 percent smoked the drug. Only 4 percent employed injection as the sole route of administration, whereas 11.8 percent combined injecting with other methods of use. Still in the north of England, Pearson et al. (1985) point to the significance of the traditional route of administering amphetamines in determining injecting patterns of other drugs,

especially heroin. Where the injecting of amphetamines and barbiturates was common practice before the arrival of cheap heroin in the early 1980s, it was likely that the newly available drug would be injected immediately. Such was seen to be the case in areas such as Carlisle, where intravenous use was already the dominant feature among polydrug users of the 1970s. In this context, it is interesting to note the renewed concern for amphetamine users with regard to AIDS and needle sharing. A recent Home Office conference, attended by customs officers, senior police officers, and health experts noted the high rates of injecting among these drug users and the potential for the spread of infection (*The Independent* 1987).

In London, fieldwork suggests that injecting is still the predominant mode of administration among heavy opiate and polydrug users. Smoking and snorting heroin have been commonly observed in casual and less heavy users, as well as among recent adolescent users. Amphetamines are both snorted and injected; cocaine, when not combined with heroin as a "speedball," is predominantly snorted.

Aside from regional variations, it must be noted that Britain is a multiethnic society, and that cultural forces will bear upon injecting and sharing patterns. Very little research has been conducted around this issue, mainly because most drug research in Britain has relied on samples drawn from the helping services, where ethnic minorities are severely underrepresented. However, such information as exists points to the importance of this issue. Interviews with a number of black heroin users in London bear out Pearson et al. (1985) in their contention that, although cannabis is commonly used as a social drug within the Afro-Caribbean community, there appears to be a cultural opposition to heroin. Moving further from this, the interviews suggest a cultural barrier to injecting. Discussions with a small number of black heroin users indicate that the Afro-Caribbean community and culture sees heroin, and especially the injecting of heroin, as part of the "white drug problem." Black heroin users who inject the drug report being ostracized from their peers, as they are deemed to be turning their backs on their cultural heritage. As Derrick put it:

> If you smoke herb, you're fine. If you snort coke, that's cool. If you mess with smack, you're bad. If you shoot the junk up, you're a white man.

On the other hand, fieldwork in London's West End indicates high levels of injecting in the Italian population of drug users, without any clear information regarding specific cultural opinion on this matter. In general, information on the injecting and sharing patterns among Britain's ethnic minorities is extremely sparse. Plainly, what is required is indepth research among the various groups to identify the extent of injecting and sharing behavior so that appropriate responses can be devised.

Circumstance

Situational and circumstantial contexts play important roles in the injecting and sharing process. Perhaps the most common route into sharing is through initiation. Unlike other routes of administering illicit drugs (smoking, inhaling, or snorting), injecting not only requires specific technology and equipment but also necessitates a level of expertise. Often an individual's first experience of injecting will also be the first experience of sharing. Early results from Hart et al. (unpublished) have shown that 73 percent of their sample shared needles and syringes on the first occasion of injecting, and Robertson et al. (1986), in their sample, point to the near monopoly that dealers had on injecting equipment. Significantly, many drug users interviewed by DIP report that their first successful injection experience was assisted by another person, most commonly a partner or close friend. This is partly because he/she will have the expertise, but also because he/she will have the necessary equipment. In such circumstances, the likelihood of sharing is high. Naturally, there is an often expressed feeling of confidence and trust in partners and close friends. Comments like "I'd known her for years, and it just seemed right to ask her to help me fix that first time," or "I have sex with him, so what's the difference if I share works with him?" are common.

Aside from initiation, other circumstantial factors apply when considering the potential for sharing. Perhaps the classic dilemma facing the injecting drug user in this respect is the "hit or no hit" syndrome. Time and again, drug users being interviewed refer to "desperation" as a circumstance in which they would be tempted to share. Of course, definitions of desperation depend on the individual, but, in general terms, it usually refers to something very immediate. The user is desperate for the drug, either because of withdrawal or craving. Clean equipment is not readily available, and the individual is vulnerable to sharing. As Jack put it:

> You ask me how has AIDS influenced my sharing? I'll tell you I won't share with anyone. But I know in the back of my mind that if I'm sick and someone offers me gear, and I ain't got a works, then I'll take my chance. Any junkie will say the same. They'll tell you all this AIDS business scares them to death, but if it's a hit or no hit, then we'll all take the hit.

Another common circumstance in which drug users report being especially open to sharing is when they are heavily under the influence of the drug, or "stoned." In fact, in some interviews, heroin users have said that they take the drug partly because it alleviates their fears about AIDS. As one stated:

> When I'm stoned, nothing can touch me. It's like being in a cocoon. When I'm straight, I'm terrified of catching AIDS, but I've been stoned and used another guy's works and known what I'm doing, and felt okay about it. It's totally crazy, but that's the way it goes.

Along with circumstantial factors, the situational context in which drug use is taking place will influence sharing patterns. Interviews with drug users in prison have made it clear that both drugs and injecting equipment are smuggled in. From prisoners' accounts, it is the latter that is in shortest supply, making sharing of needles and syringes inevitable, even among some of those adamantly against this practice.

In London's itinerant and often homeless West End drug-using population, the locations for injecting are still the toilets in fast-food shops, poolrooms, and other such locations where users congregate, and sharing of available equipment has been commonly observed. There is an added danger here, in that such situations and locations are hardly conducive to the cleaning of equipment between use. At best, needles and syringes are rinsed out; at worst, there is not even a tap available to facilitate this. Often individuals believe what they are doing is sufficient to safeguard them against the AIDS virus, particularly if they pour boiling water over used needles and syringes. In this sense, it could be argued that a "little knowledge" can be extremely dangerous.

Similarly, and consistent with Brambill and Maslansky's (1986) observations regarding the lack of opportunity and motivation to

thoroughly clean injecting equipment in "shooting galleries" in New York, was the situation that prevailed in the Edinburgh study by Robertson et al. (1986). At times, equipment was rinsed in tap water, but no serious attempt was made at sterilization. A further risk of infection resulted from the routine practice of "washout" between injections, which has also been observed during fieldwork in London. This entails drawing blood back into the syringe after injection, so as to flush out any remaining heroin.

AIDS, INJECTING, SHARING, AND CHANGE

Since September 1986, DIP has been asking regular drug users questions regarding their injecting and equipment-sharing behavior and their response to AIDS. The time period involved coincided with an increased public and media interest in the AIDS issue, as well as a government public awareness campaign, which included television and newspaper advertisements plus nationwide leafleting.

Methods

A sample of 81 regular drug users was drawn from a larger study that is looking at help-seeking patterns among illicit drug users in an area of inner London. The sample consisted of roughly equal numbers of those currently in contact with the helping services (41) and those not in contact with services (40). By means of "snowballing" and participant observation, contacts were made, and indepth structured and semi-structured interviews were accomplished.

Injecting behavior was investigated, paying special attention to the last 12 months. Questions were then asked about changes in injecting and needle-sharing patterns and whether or not AIDS had influenced these. There was also an open-ended question without probing, which asked about the ways in which individuals had responded to the virus. The purpose of this was to gain a preliminary idea of the extent to which drug users concentrate upon drug-related issues to the exclusion of others.

Results

An important general point to make is that the majority of respondents concentrated on the dangers of AIDS with exclusive regard to their drug use. For instance, when asked how concern

over the issue of AIDS affected them, of the total sample, only nine (11 percent) gave answers that referred to sexual behavior. With this observation made, table 1 presents the results with regard to AIDS, injecting, and sharing:

- Of the 60 still injecting: 45 had shared needles and syringes in the last 12 months; 13 had not shared in the last 12 months and reported that concern about AIDS had not altered their behaviors. For the remaining two, no information was available.

- Of the 45 who had shared in the last 12 months, two-thirds (30) had modified their sharing behaviors: 10 had stopped sharing altogether, and 20 said that they share less often or with fewer people.

- Of the total sample, 14 had been tested for the AIDS virus (10 reported negative results, 4 reported positive results). Interestingly, comparing the "agency contact" with the "not in contact" sample, it was seen that those in the former were over twice as likely to have been tested than those in the latter (1 in 4, as compared to 1 in 10).

- All those who were identified as HIV positive had modified their habits. Of those that had stopped injecting altogether, three were HIV positive. The other HIV-positive individual injected but no longer shared.

- Among those who were tested as negative, none had stopped injecting. Of the 10, 4 said that they did not share anyway, another 4 stated that they only shared with their partners, and the remaining 2 shared with drug acquaintances and others.

- Of the 68 (84 percent) who injected, 8 had stopped: 5 as a direct result of concern about AIDS, and 3 for other reasons.

- Of the total sample, 13 (16 percent) had never injected, and it was found that the likelihood of injecting was similar between the "agency contact" sample and the "not in contact" sample.

It is interesting to note the reasons why people had altered their behaviors. Not surprisingly, the effect that AIDS could have upon the future possibilities of starting a family was one issue mentioned by several respondents. The most common issue was actual fear of

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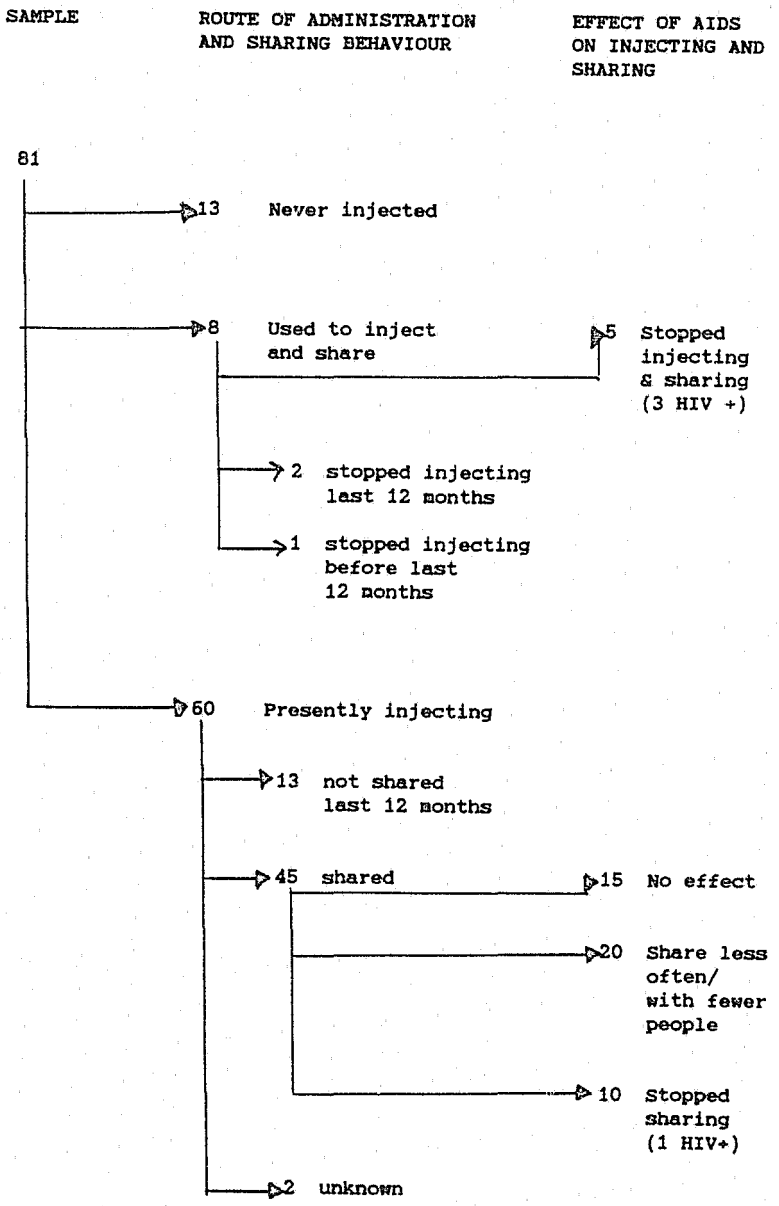
TABLE 1. *Injecting and sharing patterns and the effect of AIDS*



the virus and its potential fatal consequences. Others referred to previous experiences of infections contracted through sharing. Another influence mentioned was the effect of witnessing a drug using friend develop the syndrome. As Chris put it:

> I never took much notice of all the ads and posters. I thought it was just the Government's way to turn the people against us junkies. But when Jim got it, it blew me away.

DISCUSSION

Perhaps the first point to note is that drug users change their behaviors for a whole variety of reasons. Without doubt, concern about the AIDS issue is a significant factor. This will be increasingly so in the future. However, as Strang et al. (in press) found in their followup study of 55 drug users in Manchester who had been turned away from treatment, individuals are capable of moderating their behavior. This study did not straddle the time period when the risk of HIV infection was becoming more widely recognized. However, the authors report that 42 percent had reduced the frequency of injecting, and another 20 percent had abstained from intravenous use altogether. Similarly, DIP research at London's University College Hospital shows that, at any given time, drug users modify their injecting behavior for a number of reasons. A sample of 125 individuals who had been in and out of treatment between 1981-86 was examined. It was observed that, whereas 58 percent continued to inject throughout this period, 15 percent had changed from other routes to injecting, and 10 percent had moved from injecting to other routes of administration.

As already noted, a number of cases from the sample outlined in table 1 had altered their behavior as a result of previous experience with infectious diseases. Of the 30 people who still injected but had reduced their needle-sharing practices or stopped sharing altogether, 9 said that the concern over AIDS reinforced their own experiences regarding the dangers of sharing. Hepatitis was the most commonly stated infection, but septicemia, abscesses, and gangrene were also mentioned. As one drug user put it:

> I've been really careful since I got hepatitis from sharing with a friend. All this scare about AIDS has got me

really worried, and now I'll only share with my boyfriend.

This point acknowledged, the information that we have about injecting and sharing behaviors in Britain leads to two main conclusions regarding appropriate responses. First, and as highlighted by existing studies, the regional and cultural variations in both injecting and sharing habits must be taken into account when devising preventative or risk reduction strategies. Different approaches are needed in an area or among groups where smoking or snorting illicit drugs is the common practice, as opposed to another context where injecting and sharing are firmly established. It is essential to glean reliable knowledge about the behaviors and patterns among specific groups of drug users so that appropriate responses can be employed.

This is especially the case among ethnic minority groups in Britain, where little is known about drug use and patterns of injecting. Individuals who would be freely accepted by these groups should be employed to work in both a research and AIDS health outreach capacity. None of this is to deny that, with regard to AIDS and patterns of injecting, there are central messages to convey and habits common to many illicit drug users to alter. Rather, it is to highlight the need for sensitivity to regional and cultural variation.

Second, it should be recognized that some people will not only continue to abuse illicit drugs but will also continue to inject and share equipment. It is important to note that, in Britain, there is no ritualism associated with the sharing of needles and syringes. Unlike reports (such as Newmeyer et al. (1987)) in the United States, sharing in Britain results from the shortage of freely available needles and syringes. Even the observations of Robertson et al. (1986) regarding the regular sharing practices of groups of early seroconverters in Edinburgh can be explained in terms of pragmatism: the sharing resulted from scarcity of injecting equipment.

Therefore, in the British context, although education around sterilization of injecting equipment is important, the priority must be to improve access to needles and syringes. Recent research at St. Mary's Hospital, London, among 114 drug users in treatment, investigated the main reasons for sharing. The issue of availability of needles and syringes was the principal one given. Of those who

were HIV positive, 64 percent gave this answer. Among the HIV-negative sample, 72 percent mentioned this as their prime reason for sharing (Mulleady, unpublished). To such an end, the need for practical outreach work is paramount, especially if those most at risk and least likely to present themselves to any form of service are to be contacted.

To conclude, intervention should be two-pronged. Among drug users, there needs to be appropriate education that covers all aspects of the risks of AIDS to them as individuals, while taking into account cultural and regional differences in patterns and behaviors. In this context, outreach work should be given high priority. On the other hand, clean needles and syringes should be made as freely available as possible. Given that some will continue to inject and share, it is essential that, alongside established schemes for needle exchange, outreach programs be devised that provide injecting equipment for those least likely to use such centers.

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AUTHOR

Robert Michael Power, Ph.D.
Research Fellow
Drug Indicators Project
Department of Politics and Sociology
Birbeck College
University of London
16 Gower Street
London, WC1, England

Injecting Equipment Exchange Schemes in England and Scotland

Gerry V. Stimson

INTRODUCTION

The government of the United Kingdom has recently launched a number of schemes to attempt to reduce the spread of human immunodeficiency virus (HIV) infection among injecting drug users (IDUs). These schemes make injecting equipment available to IDUs together with advice on drug use and safer sex.

This new policy marks a change of direction with regard to the desirability of distributing injecting equipment to drug users. Only 12 months ago, early in 1986, there was not much support for making syringes and needles freely available (Short 1986). However, the policy has been implemented at great speed, taking approximately 4 months from government decision to launch of the schemes.

BACKGROUND TO THE POLICY DECISIONS

The government took this step following reports of high levels of HIV infection among some groups of IDUs. The highest rates of HIV antibody seropositivity have been reported in Edinburgh, Scotland, where, in one group of patients attending a general practitioner between 1983 and 1985, 51 percent were seropositive (Robertson et al. 1986). We must be cautious about the interpretation of seropositivity rates because of variable coverage and differences in sampling, but, on present knowledge, parts of Scotland continue to have higher rates than elsewhere in the country. As is the case in other countries, there is wide regional variation in HIV infection rates among IDUs. For example, in other large cities, known rates appear to be much lower; in Glasgow, Scotland, a rate

of 4.5 percent was recorded in 1985 (Follett et al. 1986), and rates of less than 1 percent have been recorded in Liverpool (Marks 1987) and London (no test date, probably 1985/1986) (Webb et al. 1986). If these rates do give a good indication of actual rates, then, while the potential for a serious HIV problem exists, in many areas there is still time for preventive action.

This potential for preventive action is also indicated from current evidence of nationally known AIDS cases and reported HIV seropositivity cases. IDUs still make up a small proportion of total AIDS cases in the United Kingdom. To the end of April 1987, there were 12 cases of AIDS among heterosexual IDUs, with another 8 who were homosexual IDUs, together making 2.6 percent out of a cumulative total of 750 AIDS cases in the United Kingdom.

As for those identified as HIV antibody positive, our data are based on information voluntarily notified by doctors (HIV notification is not compulsory in the United Kingdom). In England, Wales, and Northern Ireland, there were 280 antibody positive, heterosexual IDUs, with another 28 who were homosexual IDUs, together making 6.8 percent out of a cumulative total of 4,471 cases. In Scotland, the picture is markedly different, with drug users making the largest single group among those identified as HIV positive. In Scotland, there were 659 heterosexual IDUs and 2 homosexual IDUs who were HIV positive, making 60 percent of the total number of 1,100 (Scottish figure to end of February) (Department of Health and Social Security 1987). The Scottish data point to the urgent need for intervention to control the spread of HIV.

The McClelland Report on HIV Infection in Scotland

Reports of high levels of HIV infection among Scottish drug users (Peutherer et al. 1985; Robertson et al. 1986) were significant in the decision of the Scottish Home and Health Department (SHHD) to establish a committee which met early in 1986. It reported in September 1986 (the "McClelland Report" (Scottish Home and Health Department 1986)) that no drug user in Scotland was known to have detectable HIV antibody before mid-1983 and that the number of HIV-antibody-positive drug users rose rapidly during 1984 and 1985. The committee considered that factors important in the

spread of HIV in Edinburgh included, first, police activity discouraging the sale of syringes and needles:

> The resultant nonavailability of sterile equipment in the city appears to have contributed to extensive sharing of equipment. (Scottish Home and Health Department 1986, p. 7)

Second was the low level of investment in treatment services, which may have led many drug users to avoid seeking professional help. Among the many recommendations was that steps be taken to provide sterile injecting equipment to addicts who are unwilling to stop injecting, coupled with counselling.

Syringe Availability

In fact, syringes should be reasonably available. In the United Kingdom, syringes are available for retail purchase from pharmacy shops, and pharmacists use their discretion regarding syringe sales. In 1982, in an attempt to help reduce the increase in the number of drug users, pharmacists were advised by their professional society to restrict sales to bona fide patients for therapeutic purposes. In effect, this was a recommendation not to sell to drug users (though not all pharmacists followed this advice). In 1986, in view of the new evidence on AIDS and drug use, this restriction was withdrawn (*Pharmaceutical Journal* 1986), and pharmacists have been encouraged to reconsider their role in helping drug users and give consideration to sales of syringes (National Pharmaceutical Association 1986). In practice, however, some retail pharmacists are apparently unwilling to sell syringes to drug users, mostly because they fear IDUs may deter other customers.

In Scotland, the position regarding syringe sales by pharmacists is less clear, because there is a common law offense of reckless conduct. This legislation has been used against shopkeepers selling glue products to glue sniffers. I do not think it has been used against pharmacists; however, it is clear that police in some parts of Scotland have been active in dissuading pharmacists from selling syringes.

Changes in Government Policy

The issues raised by the McClelland Committee and concern about the spread of HIV were subsequently taken up by officials in both SHHD and the Department of Health and Social Security (DHSS), which is responsible for health care in England and Wales. In December 1986, the Secretary of State for Social Services announced first the provision of £1 million in 1987-88 to enable drug agencies to enhance their counselling services on AIDS and drug misuse, and second, the establishment of a number of special syringe exchange and counselling schemes (Department of Health and Social Security 1986).

This is not the place to go into too much detail about recent trends in British drug policy, except to note that, in recent years, there has been an increased centralism in policy making in general, and particularly in the drug field where, to some extent, the traditional forms of policy making and advice from professional workers have been displaced (Stimson 1987). Government policies in the drug field have been implemented for the most part by advisory statements and by monetary incentives in the form of short-term 'pump priming,' after which, responsibility for funding successful projects shifts to other agencies. This has enabled a quick response to drug problems, and the response to AIDS and drug use is a good example.

The first public announcements about the proposed injecting equipment schemes came in December 1986. DHSS invited existing drug agencies to establish schemes on a 1-year pilot basis, with offers of some financial support for that first year. The invitation went to agencies in the National Health Service (NHS), such as drug dependency clinics, and other drug agencies outside the NHS, such as information and advisory agencies. In Scotland, SHHD asked health boards to set up the schemes.

DHSS asked potential participating agencies to meet the following requirements:

- Injecting equipment should be issued on an exchange basis to drug misusers already injecting and unable or unwilling to stop;
- assessment of and counselling for clients' drug problems should be provided;

- advice on safer sex and counselling on HIV testing should be offered; and

- agencies should provide records of activity in a common format and collaborate with the government-run monitoring/evaluation project.

THE INJECTING EQUIPMENT EXCHANGE SCHEMES

Although some syringe exchange schemes were established prior to the "official" response and have now been included in it, the formal start of the schemes was in April 1987.

Fifteen agencies in England and Scotland have been recruited to run injecting equipment exchange schemes. To date, seven of the schemes are running, with the rest due to start soon. (There are also some other schemes outside the "official" ones.)

The mode of operation varies. Some are based in, or linked to, outpatient drug dependency clinics. Others are outside the NHS in "street" drug advice and information agencies. Most are office based, but other models include one that involves local pharmacists in distribution, after the client has been screened by the drug agency. One agency is considering a mobile system to visit clients at several hospital sites, and another operates in the accident and emergency department of a large city hospital. Most are open during office hours, but not all are open every day.

Operating costs are relatively small, beginning with the cost of injecting equipment and condoms. Then there is staff time, which ranges from a part-time post to two posts, depending on the scale of the scheme. Staff are community psychiatric nurses, general nurses, or drug workers. Accommodations are minimal–there may be a corner of a room that has other uses, or a small room set aside for the purpose.

The basic system is that new clients must show evidence of injecting drug use and an unwillingness or inability to stop injecting. Once drug users are accepted for the scheme, they are given injecting equipment. On subsequent visits, they return used injecting equipment; this is counted and placed in a safe container for later destruction, and new equipment is issued, approximately on a one-to-one basis. There is a record of the transaction. In England,

the number of needles and syringes issued varies but is probably in the region of 5 to 10 at a time. In Scotland, a maximum of three syringes is issued on one occasion. There is counselling for clients on drug use and sex, but not on every visit. Condoms are provided in some schemes. In all but one agency the service and equipment are free to the client.

LEGAL ISSUES

I have covered some legal issues for the schemes in my discussion of syringe availability. One problem for staff and clients is that possession of used syringes with drug traces can be used by police in prosecutions for illegal possession of drugs. It was thought this problem might deter clients from returning used syringes. The Government has consulted with chief constables, and agencies have consulted with local police, and, in general, police have agreed to cooperate with the schemes subject to their obligation to uphold the law. The Government has also attempted to influence prosecution policies. The Attorney General recently announced that:

> When reaching decisions in cases relating to misuse of drugs, the Crown prosecution service, where relevant, will have proper regard to public interest considerations arising out of the measures brought in to halt the spread of the AIDS virus. (Hansard 1987, Issue 1410, Column 37)

In Liverpool, police finding someone in possession of a used syringe from the scheme will confiscate the syringe and give the user a receipt.

In Scotland, agency staff might have been subject to prosecution for the common law offense of reckless conduct. However, the Lord Advocate has indicated that doctors and staff participating in the schemes will be immune from prosecution if they follow the procedures approved for the schemes.

SCHEMES IN LIVERPOOL AND PETERBOROUGH

Two schemes have been in operation since before the "official" start in April 1987 and give an indication of how syringe exchange operates.

Liverpool

Liverpool is a large urban area with a declining economic base and high unemployment. It has high levels of heroin use and drug-related crime (Parker et al. 1987). Liverpool's syringe exchange scheme was one of the first to start, in October 1986. It was launched by a local drug training and information service which does not normally involve itself in client work (Parry 1987). The service operates during office hours on the ground floor near the main entrance to the building, in a converted bathroom. One member of staff is a nurse. Clients are seen by the receptionist, who then calls one of the available drug workers (they do not do this work full time, but in addition to their other activities). New clients are asked to show evidence of injection sites.

At first, most of the clients were patients receiving treatment at the drug dependency clinic next door. The drug clinic prescribes both injectable and noninjectable drugs. News of the syringe exchange service offered by the drug training and information service has spread by word of mouth and media advertising. Now about half the clients of the syringe exchange service are in treatment, and half are not. Leaflets on AIDS and injecting drugs are distributed, and there is individual counselling on safer drug use and injecting practices and safer sex. There are plans for group counselling with visual aids. It has developed into a "consumer advice" service for drug users with an operating philosophy of harm reduction.

Between December 5, 1986, and March 27, 1987, 318 clients had been through the scheme, totalling 1,111 visits. Most were heroin users. Regular contact (two or more visits) had been made by 52 percent. By March, there was an average of 14 exchanges per day, and the number was rising. An average of seven syringe barrels are issued, with extra needles, and both are offered in a choice of three sizes. Clients are also given swabs, condoms, and spermicides.

In this 16-week period, nearly 9,000 barrels and 10,000 needles were issued with as many, or possibly more, returned, suggesting that clients have returned syringes not distributed by the scheme (Newcombe 1987). Returning clients show staff their used syringes and then place them in a safe container. Clients wanting HIV testing are referred to the Genito-Urinary Medicine Clinic. As of

April, the scheme was attracting an average of 17 new clients each week (it is estimated that there are 1,500 potential clients in Liverpool). There have been no difficulties with the police.

Peterborough

Peterborough is a much smaller town, a provincial center in a rural part of England with an expanding economic base. It has a much smaller proportionate drug problem than Liverpool. The main drugs injected are heroin and amphetamine.

The District Health Authority has operated a syringe exchange scheme since February 1987. The service operates at the local general hospital, in a small room off the entrance to the psychiatric day clinic. It is open three afternoons a week and is run by two community drug counsellors. A choice of syringes is available, and clients are supplied with personal safe containers for the return of used syringes and needles. There is counselling on safer drug use and safer sex, information packs for clients, and pre- and posttest HIV counselling. One worker is also an AIDS counsellor. Clients wanting HIV testing are referred to the Genito-Urinary Medicine Clinic.

The scheme has been publicized by posters and by letters to local professional workers. Some of the clients are in treatment at the drug dependency clinic and are being prescribed injectable drugs. The scheme has approximately 25 clients, and 17 or 18 attend regularly. Some come from other towns and outlying rural areas. Local clients are expected to visit every week. Those for whom transport is difficult are given up to 1-month's supply--in one case, this was 180 syringes.

RESEARCH AND EVALUATION

In many parts of the United Kingdom, the current known low rates of HIV antibody seropositivity among IDUs suggest that effective schemes may make an impact on the spread of HIV.

The final test of the success of syringe exchange schemes is whether they can halt or control the spread of HIV infection among IDUs. The evidence from other countries which have syringe exchange, or where syringes are easily available, is not yet clear-cut.

There are several issues raised by the schemes. At the level of the schemes themselves:

- Can the schemes attract drug injectors, and if so, what sort of people are attracted?
- Can such schemes bring about changes in drug using and sexual practices? In particular, do they reduce syringe sharing or encourage switching from injecting to other modes of administration?
- What is the best model of service delivery for reaching and helping IDUs?
- What are the best methods of counselling IDUs in safer drug use and safer sex?
- What is the character of the relationships between staff and clients?
- Can the schemes be run safely for staff, clients, and others?
- How do the schemes relate to other services offered by the agency or by other local drug services?

At the level of the local community:

- Do the schemes affect the prevalence of injecting drug use?
- Why do some eligible clients not attend?
- What is the community response? How do local residents, community groups, media, police, pharmacists, and so on view the schemes?

At the level of national policy:

- What are the implications of syringe exchange for drug policy? For example, will syringe exchange imply a move away from confrontation and treatment toward harm reduction at a national level? Can a government sustain an antidrug campaign and pursue a harm reduction model?

DHSS and SHHD have commissioned research to monitor and evaluate these schemes. The research team, which started work at the beginning of April, will be looking at some of the issues listed above. In particular, the research will describe the implementation of the schemes, including organization, nature of treatment and counselling provided, numbers and characteristics of clients, reasons for participation, and numbers of needles and syringes issued and returned. The impact of the schemes will be examined, including changes in numbers and characteristics of clients presenting to agencies, changes in clients' knowledge of and attitudes toward AIDS/HIV, reported changes in drug use and injecting behavior, and reported changes in sexual behavior.

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AUTHOR

Gerry V. Stimson, Ph.D.
Director, Monitoring Research Group
Sociology Department
University of London Goldsmiths' College
New Cross, London SE14 6NW
England

Sharing Needles and the Spread of HIV in Italy's Addict Population

Enrico Tempesta and Massimo Di Giannantonio

INTRODUCTION

Drug dependence in Italy occurred in the 1970s as an epidemic phenomenon which, in the following years, gradually evolved into an established pattern of use. Various factors, such as changing cultural models and norms, a different outlook toward health action policies, and a progressive change in people's attitudes toward drugs, contributed to the stabilization of the phenomenon.

Results yielded by studies conducted in recent years (Progetto TO.DI 1981; Progetto TO.DI 1982; CENSIS 1984; Ministero dell'Interno, unpublished information) provide a somewhat contrasting picture of Italy's population of drug addicts. In 1984, the Department of the Interior established a Surveillance Center with the task of supplying data every 4 months on the number of drug addicts referred to the National Health Service's public drug abuse treatment centers as well as to public and private therapeutic communities. According to the epidemiological studies available (which, in most cases, have implemented different methodologies), estimates of today's drug-abusing population range from 100,000 (TO.DI) to 200,000 (CENSIS) persons.

The Surveillance Center's official data mainly relate to opiate addicts and indicate that approximately 24,000 to 24,500 persons turn to treatment centers seeking clinical attention per year. Although it is quite hard to assess that part of the addict population which is not directly detectable, it is reasonable to estimate that there are approximately 60,000 opiate users. This estimate does not

take into account the abuse of other substances such as cocaine, since, to date, there is no reliable information available.

Table 1 shows the data recorded by the Surveillance Center for the 1983-86 period. As indicated, the number of drug addicts turning to public services has been rather stable--approximately 20,000 people per year in the period under consideration. During this time period, there has been a marked increase in the availability of diversified psychotherapeutic tools, e.g., psychotherapeutic treatments, day hospitals, and alternative therapies, contributing to upgrade the quality of the services. There has also been a decrease recorded in the proportion of individuals treated with methadone (59 percent vs. 46.9 percent). There has been a simultaneous increase in the number of drug addicts undergoing protracted residential treatment in public and private therapeutic communities (from a total of 4,400 in 1983 to approximately 6,000 individuals today).

We believe that this set of data indicates a substantial stabilization in the number of drug addicts. Age at admission has been increasing (figure 1), which suggests a progressive aging of this population.

EVOLUTION OF THE ADDICT POPULATION IN ITALY

Special mention is to be made of the social and behavioral changes that have recently characterized drug users. An early attitude toward drug abuse can be traced back to the end of the 1960s, at the dawn of the so-called "youth protest" triggered by the 1968 crisis, when small, elitist groups of intellectuals started to use psychotropic drugs. In this respect, we should be mindful of the peculiarity of that movement, i.e., a clear-cut detachment from the adults' world. It is precisely this attitude of detachment which is most helpful in order to better understand the following course of events.

In the mid-1970s, Italy experienced an upsurge in addiction. The young explicitly exhibited disruptive behaviors such as rejecting and criticizing the mainstream society. The profound social changes under way brought about serious imbalances--mass urbanization, domestic migration, and economic recession. Moreover, the parties responsible for primary socialization, i.e., the family and the school, experienced a generalized two-way crisis of identity affecting both parents and children.

TABLE 1. *Drug addicts under treatment in Italy (public and private services, 1983-86)*

Year	Public Services			Therapeutic Communities (TCs)		
	Number of Services (Ex./Ev.)*	Number of Subjects	Treatment With Methadone (Percent)	Number of TCs (Ex./Ev.)*	Number of Subjects	Total Number of Subjects
1983	417/382	18,483	59	207/207	4,373	22,856
1984	436/424	20,747	57.5	222/219	4,476	25,223
1985	455/440	19,919	49.2	301/290	5,028	24,947
1986	469/460	20,137	46.9	326/318	5,927	26,064

*Ex.=existing; Ev.=evaluated.

SOURCE: Ministero dell'Interno, unpublished information.

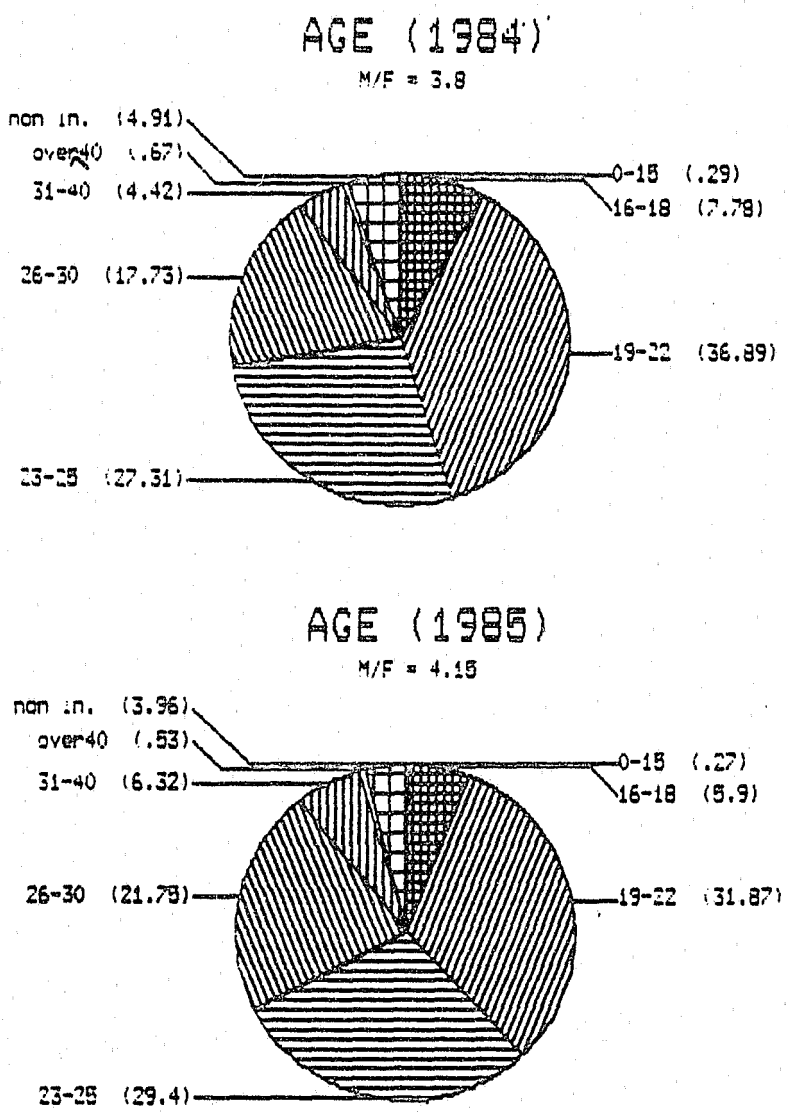

FIGURE 1. *Age of admission to drug abuse treatment*

SOURCE: Ministero dell'Interno, unpublished information.

Up to this time, youth had been engaged in a participatory culture which promoted social commitment and mutual solidarity. Use of psychotropic drugs was limited to drugs such as marijuana. The rebellion against mainstream society that emerged in the mid-1970s was generated by decreased expectations and hope in the future. The rebellion was accompanied by widespread use of a variety of drugs, which, in turn, engendered feelings of isolation, detachment, and solitude.

By the beginning of the 1980s, drug use and alienation were widespread, and the situation has since reached a pandemic level. For these individuals who are marginal to the established social fabric, drug abuse reflects the so-called "amotivational syndrome" (CENSIS 1984). Drug use has become a simple act of consumerism, no longer tied to ideological or political factors.

DRUG ABUSE AND HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION

It is precisely among drug abusers that the highest rate of HIV infection has been recorded in Italy. This, in turn, has led to a high incidence of AIDS cases among drug addicts.

Italy's first recorded AIDS cases in addicts appeared in 1982. Since then, the number of cases among intravenous (IV) drug abusers reported to the national surveillance system has sharply increased, and, by March 1987, the total was 395 cases with 219 deaths (table 2) (Ministero della Sanita, unpublished information). In Italy, IV drug abusers account for over 50 percent of the total number of AIDS cases (figure 2). As of March 1987, 27 out of 29 children with AIDS were born to female drug addicts.

The Department of Health is carrying out a seroepidemiological survey to assess the prevalence rates of anti-HIV antibodies in drug abusers who contact drug abuse treatment centers. Preliminary results show a high prevalence of infection in Lombardy (54.9 percent–95 percent confidence interval is 51.3 to 58.4), Sardinia (61.4 percent–confidence interval 57.4 to 65.2), and Emilia Romagna (48.5 percent–confidence interval 45.5 to 51.5) (see table 3). Lower seroprevalence rates have been found in southern Italy, where there also is a large proportion of nonresponding centers. The overall prevalence rate in Italy is about 40 percent; differences found from

region to region could be related to the concentration of drug addicts and/or to the patterns of addict behavior.

TABLE 2. *AIDS in Italy: Cases reported as of March 31, 1987*

Risk Group	Number of Cases	Percent	Number of Deaths	Percent
IV Drug Abusers	363	55.7	200	55.1
Homosexuals	163	25.0	106	65.0
Homosexual IV Drug Abusers	32	4.9	19	59.4
Hemophiliacs	24	3.7	14	58.3
Transfusion Recipients	14	2.1	9	64.3
Heterosexual Intercourse	10	1.5	2	0.2
Children Born to Addicted Mothers	27	4.1	13	48.1
Children Born to Mothers Infected Through Heterosexual Intercourse	2	0.3	2	100.0
Risk Factor Unknown	17	2.6	8	47.0
Total	625	100.0	373	57.2

SOURCE: Ministero della Sanita, unpublished information.

It is rather difficult to find an explanation for the high prevalence of AIDS in IV drug abusers, since Italy is one of the few countries where sterile syringes and needles, together with ampules of sterilized, distilled water, are available without restriction at drugstores. Consumption of sterile syringes by addicts is very high. Table 4 illustrates the trend recorded in the sale of disposable syringes at drugstores throughout the country.

The data now available indicate that there has been a gradual increase in the sale of insulin-type syringes (the type that addicts primarily use). During the period 1983-86, sales of insulin-type syringes to diabetics have remained almost unchanged. Thus, the increased sales are related primarily to increased consumption among addicts.

The liberalization of the sale of syringes (which now may be purchased without a medical prescription) is to be viewed as a result of specific health policy provisions issued in the mid-1970s as a

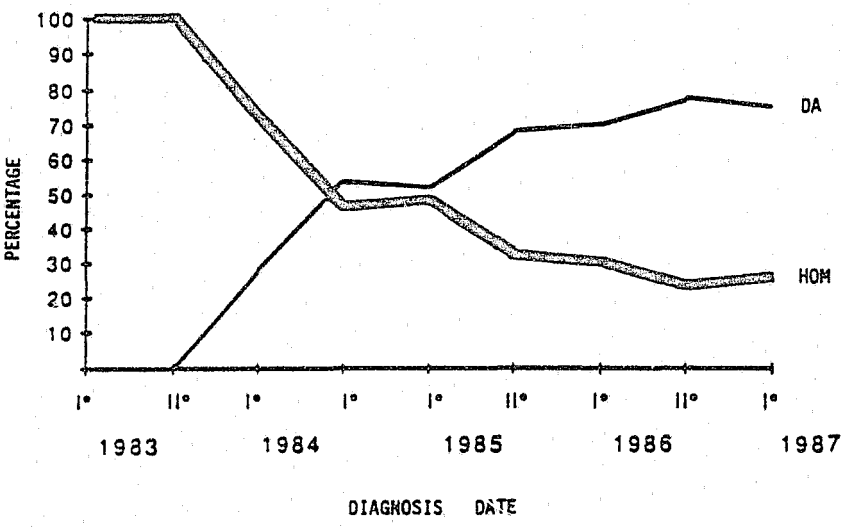

FIGURE 2. *Drug addicts and homosexuals among AIDS cases in Italy (March 31, 1987)*

SOURCE: Ministero della Sanita, unpublished information.

preventive tool, when public authorities were faced with fast-growing heroin abuse paralleled by an increase in the number of hepatitis cases. Needles and syringes are now readily available at low cost. An insulin-type syringe costs approximately 20 to 25 cents, and drugstores are open 24 hours per day. Availability of needles and syringes is, therefore, not the only factor to be taken into consideration in the issue of needle sharing and the transmission of HIV infection. Other potentially relevant factors include the following:

- ritual and special patterns of behavior, especially in the largest cities, and
- lack of knowledge concerning the consequences of needle sharing and sexual promiscuity.

TABLE 3. *Prevalence of anti-HIV antibodies in drug addicts attending assistance centers, and AIDS incidence*

Region		Number HIV Positive	Number of Tested Subjects	Percent	Confidence Interval	Number of AIDS Cases in IVDAs* as of June 3, 1987	Cumulative AIDS Incidence Per 100,000 (17-29 Years Old)
North	Valle d'Aosta (1986)	8	131	6.1	2.9-12.1	-	-
	Piemonte (1986)	382	1,172	32.6	29.9-35.4	24	3.4
	Liguria (1985)	913	2,447	37.3	35.4-39.3	27	9.3
	Lombardia (1985)	432	787	54.9	51.3-58.4	144	8.6
	Veneto (1985)	343	878	39.1	35.8-42.4	23	2.7
	Friuli V. G. (1986)	27	242	11.2	7.6-16.0	3	1.4
	Trentino A. A. (1986)	37	160	23.1	17.0-30.6	2	1.1
	Emilia R. (1985)	528	1,089	48.5	45.5-51.5	43	6.3
Central	Toscana	Not available		-	-	14	2.3
	Umbria (1985)	59	174	33.9	27.0-41.5	3	2.2
	Marche (1985)	41	94	43.6	33.4-54.2	5	2.0
	Lazio (1986)	560	1,804	31.0	28.9-33.2	27	2.8
South	Abruzzi (1986)	28	110	25.4	17.8-34.8	2	0.9
	Molise (1985)	5	22	22.7	7.8-45.4	-	-
	Campania (1986)	62	813	7.6	5.8-9.7	8	0.7
	Basilicata (1985)	8	36	22.2	10.1-39.2	3	2.4
	Puglia (1985)	282	625	45.1	41.2-49.1	7	0.9
	Calabria (1985)	27	104	26.0	18.1-35.6	2	0.5
Islands	Sicilia (1985)	9	72	12.5	5.9-22.4	19	1.9
	Sardegna (1985)	375	611	61.4	57.4-65.2	16	4.7
	Total	3,327	8,928	37.3	36.3-38.3	372	3.45

*IVDAs = Intravenous drug abusers.

SOURCE: Ministero della Sanita, unpublished information.

TABLE 4. *Sales of disposable syringes in Italy*

Type of Syringe	1983	1984	1985	1986
Insulin-Type (Unit X 000)	66,496	75,890	87,377	97,619*
Percent**		+14.1	+15.1	+11.7
All Types (Unit X 000)	287,561	310,342	321,836	340,559
Percent**		+7.92	+3.7	+5.82

*Number of syringes sold in drugstores = 97,619; number of syringes used by diabetics = 74,500; number of syringes used by others = 23,119.

**Percentage change over previous year.

SOURCE: Ministero della Sanita, unpublished information.

Studies Evaluating Correlations Between HIV Infection and Drug Addiction Patterns

Bearing in mind these aforementioned aspects, we have selected a group of 268 opiate addicts who have attended the Drug Dependence Unit of the Università Cattolica del Sacro Cuore (UCSC) since May 1986, who have been screened for HIV. Subjects were administered a questionnaire aimed at evaluating the correlations existing between HIV infection and drug addiction. In particular, we have focused on the possible correlation between HIV infection and the duration of addiction, needle sharing practiced in the past, sexual behavior, and health education.

The average age of the subjects in this group was 28 years. Ninety-nine subjects were HIV positive–36.9 percent of the sample. A later, in-depth study was carried out on a smaller group of 60 subjects whose patterns of abuse, such as routes of administration and syringe sharing, and knowledge of how the infection spreads were to be monitored. No significant differences were recorded between seropositive and seronegative patients as to their socioeconomic brackets (55 percent of the patients had steady jobs). On average, they had been addicted for the previous 8.6 years. The main drug used was heroin, followed by methadone (taken both legally and illegally). As indicated in table 5, females were somewhat more likely to be seropositive than males. Of the patients

TABLE 5. *HIV screening in clients of the UCSC Drug Dependence Unit, Rome: A survey on patterns of addiction*

Client Characteristics	Total (n=60)	HIV Positive (n=20, 33.3%)	HIV Negative (n=40, 66.6%)
	Percent	Percent	Percent
Sex			
Male	78.0	65.0	85.0
Female	22.0	35.0	15.0
Stable Occupation	55.0	65.0	58.0
Years of Addiction	8.6	8.6	8.5
Shared Syringe and Needle	76.7	85.0	72.5
Change in the Pattern of Use	68.3	70.0	67.5
Motivation for Sharing		Habit/ritual	Temporary lack of availability

interviewed, 76.7 percent admitted that, many times in the past, they had shared a needle when using heroin. The remaining 23.3 percent said that they had never indulged in such a habit. Needle sharing was common among both seropositive patients (85 percent) and seronegative patients (72.5 percent). Of the subjects who acknowledged needle sharing, 37 percent were seropositive. Moreover, even among those who maintained that they had never shared a needle, 21 percent were seropositive.

Turning now to the reasons why needle sharing was practiced, most seropositive subjects stated that it was because of an almost ritual and habitual use of the syringe. The difficulty sometimes encountered in finding a syringe was the explanation given by the seronegative group.

As to sexual behaviors, homosexuality proved to have a limited incidence, while 40 percent of the subjects interviewed admitted that

they had changed sexual partners often (table 6). In this respect, it is worth pointing out that no significant difference between the two groups was recorded. It should be noted that 88.3 percent of the subjects declared that they had never used condoms.

TABLE 6. *HIV screening in clients of the UCSC Drug Dependence Unit, Rome: A survey of sexual behavior and HIV infection concern*

Client Characteristics	Total (n=60)	HIV Positive (n=20, 33.3%)	HIV Negative (n=40, 66.6%)
	Percent	Percent	Percent
Sex			
Male	78.0	65.0	85.0
Female	22.0	35.0	15.0
Changed Partners Often	40.0	45.0	37.5
Homosexual/Bisexual	15.0	20.0	12.5
Use of Condom	11.7	15.0	10.0
Information on HIV Transmission	87.0	90.0	85.0
Source of Information			
Health Services	38.3	65.0	25.0
Mass Media	53.3	30.0	65.0
Other	8.4	5.0	10.0
Change in Habits*	56.6	65.0	52.5

*Subjective evaluation.

As to knowledge of high-risk behaviors, 87 percent of patients said that they knew how HIV was transmitted, and the seropositive and seronegative patients did not differ significantly with regard to knowledge of transmission (table 6). The source of information for most seropositive patients (65 percent) was health services, while

most seronegative patients depended on the mass media for information.

Today there is a wider concern about and awareness of the HIV infection, although both seropositive and seronegative subjects continue to show some reluctance to change their behavior as the situation demands. According to the data from our preliminary study conducted on only a small number of subjects, we may conclude that HIV infection primarily affects chronic addicts. Social concern and awareness and actions to reduce risk have come about at too late a stage--a large number of addicts are already infected with HIV.

Our study clearly identifies two different types of "fixers": A first group that is heavily conditioned to the ritualistic use of drugs in which needle sharing has a symbolic meaning (promiscuity is also common, almost ritualistic behavior in this group); and a second group that, following the 1970 hepatitis epidemic, has grown more aware of the hygienic measures required in preparing and injecting the fix. Needle sharing and promiscuity in this second group seem to be due to circumstantial reasons.

It is precisely this second group that can benefit from easier access to syringes, while the same does not apply to the subjects belonging to the first group, for their peculiar psychopathology prevents them from being sensitive to prevention-promoting campaigns. Moreover, for this group, every injection is a symbolic challenge to death. Thus, these subjects feel a drive for drugs which is stronger than any other consideration.

The sharing of needles and syringes is not the only serious problem we are confronted with. The more we study the patterns of use and the ritual syringe practices, the more we realize that attention should also be paid to every other aspect of preparing a fix that may cause contamination. In particular, the spoon and other tools used in preparing a dose may be major vehicles of transmission.

OBSERVATIONS AND SUGGESTIONS

Something has started to change among drug addicts. They have grown more concerned about the spread of infection. However, mass screening triggers a stress-inducing response which tends to increase the addict "hunger," thus worsening his drug dependence.

According to a study conducted by the High Institute of Health, the recorded trends of AIDS among drug addicts turned out to be substantially less than the estimated growth curve (figure 3). We can say that this risk group has shown a decrease in the spread of the disease. The high incidence so far recorded may be due to subjects who, in the 1980s, were either not concerned with the danger of AIDS or were not properly informed about it.

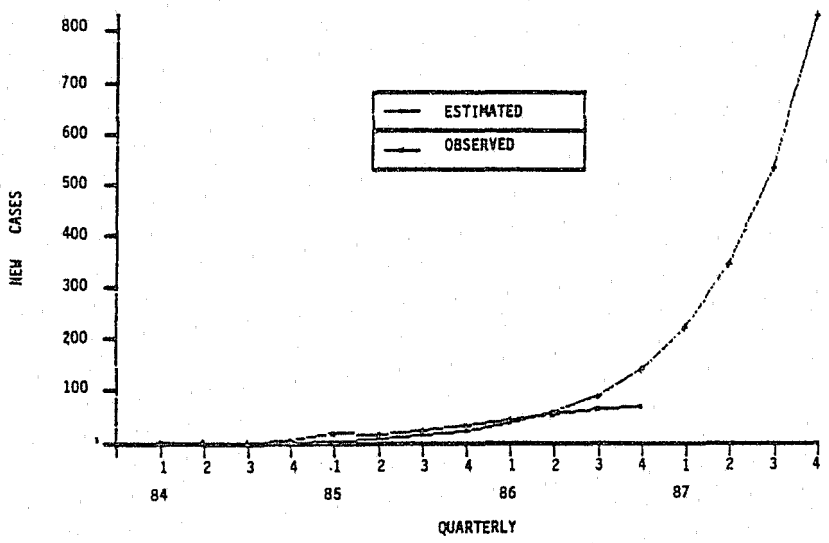

FIGURE 3. *AIDS cases in the Italian addict population*

*Regression log.-lin.

NOTE: Values: Observed (1984-86) and estimated * (1984-87).

SOURCE: Ministero della Sanita, unpublished information.

Italy's AIDS policy toward drug abusers was aimed at: (1) mass screening to determine HIV infection; (2) identifying services necessary to ensure followup of seropositive subjects; and (3) strengthening territorial drug dependence centers. As for a regional approach, local action plans have been devised by the worst-stricken regions, i.e., Piemonte, Lazio, Lombardia, and Emilia

Romagna. It should be noted, however, that the general philosophy underlying the national approach focuses on fostering demand for treatment that would spur drug addicts to seek the assistance of territorial services, therapeutic communities, and general practitioners. Specific proposals advocating the free distribution of syringes were put forth in a number of regions but were disregarded due to concern that, by granting new ways of accessing and distributing syringes in a highly liberalized system such as ours, we would only contribute to making the drug addict feel even more alienated.

The lack of preventive sexual measures among drug addicts is quite alarming. In the light of an almost total absence of defense against sexual transmission of the virus, much thought should be given to devising and implementing an effective health policy.

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AUTHORS

Enrico Tempesta, M.D.
Massimo Di Giannantonio, M.D.

Alcohol and Drug Dependence Unit
Università Cattolica Sacro Cuore
Facoltà di Medicina
Lg. Gemelli 8
00168 Rome, Italy

Drug Addiction and AIDS in France in 1987*

Claude Olievenstein

INTRODUCTION

Despite numerous meetings and the creation of a government-level emergency task force, the spread of AIDS among drug addicts in France has been and continues to be surprising.

The progress of the battle too often remains tied to individual or local initiatives. Moreover, the subject of AIDS still involves too many unknowns. To give just one example, we might ask whether minor epidemics of infections once classified as *Candida albicans* might not be linked to the AIDS virus.

In the end, we must remember that the drug addict population is by nature undisciplined and resistant to controls, often escaping systematic and institutional followup.

In France, as elsewhere, the areas of concern in the absence of effective treatments and real vaccines are:

- the speed at which the epidemic is spreading;
- the influence of multiple reinfections;
- differences between the resistance thresholds of drug addicts and those of other risk groups;

*This paper was submitted following the conference by Dr. Claude Olievenstein, who was unable to attend.

- children and spouses of drug addicts; and
- the organization and limitations of prevention systems.

SPEED AT WHICH THE EPIDEMIC IS SPREADING

We are struck by the rapid increase in the number of human immunodeficiency virus (HIV)-infected intravenous (IV) drug addicts (remember that, in France, heroin is the most widely injected substance). In 1983, AIDS among IV drug addicts represented only 2 percent of reported AIDS cases; in 1985, it was 8 percent. It now exceeds 20 percent of the reported cases. More striking are the screenings done in drug abuse treatment centers and prisons, out of which 50 to 70 percent of the samples examined are positive for HIV (Brunet et al. 1986; Lovenstein, no date).

INFLUENCE OF MULTIPLE REINFECTIONS

Although the data do not go back far enough, and scientific controls are far from perfect, it appears to us that multiple reinfections as well as a history of hepatitis play a role in the development of the critical cases. At the Marmottan Center, where more than 50 percent of those hospitalized who test positive for HIV show significant lymphadenopathies, nearly all the subjects are needle sharers.

DIFFERENCES BETWEEN THE RESISTANCE THRESHOLDS OF DRUG ADDICTS AND THOSE OF OTHER RISK GROUPS

Up to now, we clinicians thought that drug addicts testing positive for HIV or even showing lymphadenopathies had a less rapid development of AIDS-related conditions than other populations, but this is just an impression and should be verified through systematic data analysis.

CHILDREN AND SPOUSES OF DRUG ADDICTS

One of our major concerns is the spread of the virus to drug addicts' sexual partners (particularly their spouses) and/or their children. Maternity hospitals in the Paris region are seeing an increase in the cases of mothers who are infected with the AIDS virus, and the current opinion of many hospital staff is that the

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great majority of virus-infected mothers will give birth to HIV-infected children. About half of the children will develop fatal illness within 18 months. This means that the problem of AIDS in drug addicts goes far beyond the users themselves.

Sexual transmission of HIV infection from IV drug abusers to occasional users who do not inject drugs is evident in prisons and health care institutions. These occasional users can in turn infect their spouses and children. The possibility of HIV infection among occasional drug users requires that we rethink our antidrug strategy in relation to AIDS-risk reduction.

ORGANIZATION AND LIMITATIONS OF PREVENTION SYSTEMS

No contaminated population lives in isolation; it contaminates in its turn, and no means of segregation eliminates this risk. Where AIDS among IV drug addicts is concerned, both drug-related transmission and sexual transmission are serious problems. A policy of prevention oscillates between two risks: on the one hand, minimizing the problem and treating it as commonplace; on the other hand, creating a campaign of hysteria and panic unlike any other.

The limitations of a prevention system are obvious: not only are our populations already marginal and rebellious themselves, but, in addition, any systematic policy of repression, such as segregating IV drug abusers, runs the risk of driving a large part of the contaminated and contaminating population into a dangerous secrecy. The following sections will examine the strategies adopted in our country and briefly present some proposals.

THE FRENCH STRATEGY

Up to the end of 1986, over-the-counter sale of syringes was prohibited. Likewise, advertising of condoms was prohibited, and there were no vending machines set up in public places anywhere in the country. Moreover, even if some isolated AIDS-prevention attempts were made, no real program of prevention or education had been organized. Only a few medical personnel tried to access the media and supported the efforts of an organization, comprised mostly of homosexuals, called AIDES.

At that time, several polls were taken. All of them indicated that, even without a prevention policy or any education campaign, about

half of the drug addicts were willing to stop exchanging syringes if they were given the means to do so.

In 1987, awareness of the problems created by AIDS has resulted in great strides. In the drug addict population, this awareness is seen in an increased demand for information and in the progressive adoption of safety measures. Much to our surprise, more and more drug addicts are boiling syringes and needles or soaking them in alcohol or bleach. Unfortunately, we realize that, even among these aware people, many errors are still made which allow the virus to be transmitted (for example, sharing the same water container or not disinfecting long enough). Injecting drugs for the first time is a special problem, since a young, first-time user will typically use a friend's syringe.

To combat this situation, the French Government has just liberalized the sale of syringes and at the same time launched two vast information campaigns on the use of condoms and prevention of AIDS in general.

The open sale of syringes meets with three major obstacles:

- Many pharmacists (who have a monopoly on the sale of syringes) refuse to sell them to addicts--some for ethical reasons, others because they do not wish to have addicts coming into their shops.

- Many addicts hesitate to purchase syringes due to fear of repression, since possession of a syringe is a crime.

- Saving used syringes and lending them to friends is a well-established practice among drug addicts.

The present situation is nevertheless encouraging insofar as the interest of the drug addict population is aroused, and, contrary to popular opinion, this population is relatively accessible to some forms of education as indicated by the fact that our information brochures, made available to users in physicians' and hospital centers' waiting rooms, are taken and read.

PROPOSALS FOR THE FUTURE

Today we must quickly go further to provide:

- ongoing education of the IV drug addict population, their sexual partners, and everyone who treats drug addicts or occasionally encounters them, e.g., social workers and general practitioners; and

- reeducation of care-providing staff and drug addicts' close associates in the basic rules of hygiene.

Finally, and above all, we need to have a systematic policy to withdraw used syringes from circulation. To this end, we find the example of some Dutch institutions, which give out new syringes for used ones, to be interesting.

We know how to prevent contamination. We must now be as practical as possible in implementing prevention initiatives, even if it means discarding certain established ideologies.

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AUTHOR

Claude Olievenstein, M.D.
Medical Chief
Marmottan Hospital
17 rue d'Armaillé
75017 Paris
France

Intravenous Drug Abuse and AIDS Transmission: Federal and State Laws Regulating Needle Availability

Chris B. Pascal

INTRODUCTION AND PURPOSE

The Centers for Disease Control (CDC) report that 17 percent of all heterosexual adult AIDS patients in the United States are current or previous intravenous (IV) drug abusers, and an additional 8 percent are homosexual or bisexual men with a history of IV drug abuse (Centers for Disease Control 1987). Thus, IV drug users are the group second most at risk (behind homosexual and bisexual men) of contracting the human immunodeficiency virus (HIV). They are also a primary source of virus transmission to the heterosexual community.

The principal risk factor for the spread of HIV among IV drug users appears to be the sharing of nonsterile drug injection equipment (Des Jarlais et al., in preparation). Therefore, discussion on how to stop the spread of the disease among the drug-using population, and subsequent transmission to non-drug-users, has focused largely on removing the HIV-contaminated needle and syringe as a means of transmission. The role that legal restrictions on the availability of hypodermic needles and syringes might play in the spread of the disease has also been considered.

In this regard, Switzerland is reported to have removed prescription requirements for needles and syringes as an AIDS-prevention measure (Des Jarlais and Friedman, unpublished). Needle exchange programs (where sterile needles are swapped for used needles) have also been instituted in Holland and Dublin (Des Jarlais and Friedman, unpublished), and most recently in Scotland and England (Stimson, this volume). Although the author is not aware of any

similar efforts in the United States that have actually been implemented, New York is considering the issue (Des Jarlais et al., this volume; Association of the Bar of New York City, unpublished).

In order to assist in the scientific and public policy debate of this issue, this paper will review the current state of the law governing the sale and use of hypodermic needles and syringes when these items are intended for use in injecting illicit drugs. Initially, brief mention will be made of the constitutional framework for these laws. Next, the different Federal and State roles will be considered. Finally, the paper will discuss the role that prosecutorial discretion might play in this matter.

CONSTITUTIONAL FRAMEWORK

In 1962, in the case of *Robinson* v. *State of California*,[1] the Supreme Court struck down a State law which made the "status" of drug addiction a criminal offense on the grounds that it violated the Eighth Amendment prohibition against cruel and unusual punishment. However, in rendering its opinion, the Court acknowledged the "broad power of a State to regulate the narcotic drugs traffic within its borders."[2] Quoting from an earlier decision, it stated that "there can be no question of the authority of the state in the exercise of its police power to regulate the administration, sale, or prescription and use of dangerous and habit forming drugs..."[3] Nevertheless, in subsequent years, challenges were made to certain narcotic laws in an attempt to define the parameters of the *Robinson* decision.

In one such case, *Wheeler* v. *United States*,[4] a challenge was made to a conviction for possession of narcotics paraphernalia[5] on the grounds that an addict could not control his need for illegal drugs and, thus, should not be subject to criminal punishment for the incidents of their use. The court clearly rejected the argument, finding that the conviction did not violate the Eight Amendment and that *Robinson* did not require that the conviction be overturned.[6]

Following resolution of this issue by the courts, it was clear that, constitutionally, individuals could be barred from using drug paraphernalia, including needles and syringes, in injecting illicit drugs. However, other constitutional issues were raised by governmental attempts to broadly regulate drug paraphernalia before it reached

the drug addict, including regulation of its manufacture, sale and distribution, and advertisement. These issues have been resolved only recently in favor of such laws.

In 1982, the Supreme Court, in *Village of Hoffman Estates* v. *Flipside, Hoffman Estates*,[7] upheld a local drug paraphernalia law against a facial challenge of vagueness and overbreadth.[8] A principal challenge to the law was that it encompassed items with legitimate uses as well as illegitimate ones (for example, a needle and syringe), and, thus, a potential violator could not have adequate notice that any particular conduct was unlawful. In finding the law constitutional, the Court relied heavily on the intent requirement of the statute, finding that, in order to be covered by the statute, a potential violator would have to knowingly design or market drug paraphernalia for use with illicit drugs.[9] Following *Flipside*, a number of courts have upheld drug paraphernalia statutes, and governmental attempts to regulate this area appear to be on firm constitutional footing.[10]

Passing mention will also be made of another type of statute that has withstood constitutional challenge. A number of States have laws prohibiting the sale or possession of hypodermic needles and syringes without a prescription. Unlike the drug paraphernalia laws, no showing of criminal intent is required. In the case of one such law in New York, the statute was challenged on the grounds that criminal intent must be shown because of the legitimate uses for needles and syringes—a position which was rejected by the court.[11] There was no question of whether the statute was vague nor whether the accused had adequate notice of the prohibition. The court concluded that, while the soundness of the prohibition might be subject to argument on policy grounds, the choice was one for the legislature and not the courts. While a Louisiana court reached the opposite conclusion,[12] there seems to be little serious debate in most States regarding the constitutionality of this type of statute.

FEDERAL AND STATE LAWS

Until just recently, the regulation of hypodermic needles and syringes for use in injecting illegal drugs has been strictly the province of State and local law.[13] However, on October 27, 1986, the Federal Government enacted the Mail Order Drug Paraphernalia Control Act as sections 1821-1823 of the Anti-Drug Abuse Act of

1986, Public Law 99-570.[14] Depending on how expansively this new legislation is interpreted and how aggressively it is implemented, the Mail Order Drug Paraphernalia Control Act (hereinafter the "Act") has the potential for dramatically inserting the Federal Government into the regulation and control of drug paraphernalia, including hypodermic needles and syringes. The Act prohibits the sale or transport of drug paraphernalia as follows:

> (a) It is unlawful for any person--
>
> (1) to make use of the services of the Postal Service or other interstate conveyance as part of a scheme to sell drug paraphernalia;
>
> (2) to offer for sale and transportation in interstate or foreign commerce drug paraphernalia; or
>
> (3) to import or export drug paraphernalia.
>
> (b) Anyone convicted of an offense under subsection (a) of this section shall be imprisoned for not more than three years and fined not more than $100,000.[15]

The Act also authorizes the seizure and forfeiture of drug paraphernalia involved in any violation of these prohibitions.[16] The Act broadly defines "drug paraphernalia" to mean, *inter alia*, the following:

> Any equipment, product, or material of any kind which is primarily intended or designed for use in manufacturing, compounding, consorting, concealing, producing, processing, preparing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance in violation of the Controlled Substances Act (Title II of Public Law 91-513).[17]

Although hypodermic needles and syringes are not explicitly included in this definition (as is the case with many drug paraphernalia laws[18]), the definition seems clearly broad enough to encompass these items when they are "primarily intended or designed for

use...in injecting...a controlled substance in violation of the Controlled Substances Act."

Although the title of the Act--"Mail Order Drug Paraphernalia Control Act"--suggests that the Act focuses on the mail order business, the literal language used in the Act would seem to support a much broader coverage.[19] The legislative history of the Act when it was first introduced in Congress (as an amendment to the Anti-Drug Abuse Act) clearly indicates the Act's concern with prohibiting the mail order of drug paraphernalia.[20] However, the original version was later expanded to include a prohibition on the import and export of drug paraphernalia and the use of "other interstate conveyance," in addition to the Postal Service.[21] In addition, the legislative history in the Senate states that the Act prohibits the sale and transportation of drug paraphernalia through the Postal Service "or interstate commerce."[22]

In any event, the literal language of the statute would appear to support an interpretation prohibiting any offer of drug paraphernalia for "sale and transportation in interstate...commerce" or the use of the Postal Service or any "other interstate conveyance" to sell drug paraphernalia.[23] While the gap left by State and local drug paraphernalia laws may, as a practical matter, be filled by asserting Federal jurisdiction over the mail order business alone, the statutory language would appear to provide a basis for asserting jurisdiction over any interstate sale or transportation of drug paraphernalia should the Federal Government so choose.

As stated earlier, prior to the enactment of the Mail Order Drug Paraphernalia Control Act in 1986, the control of hypodermic needles and syringes for the use of illicit drugs had been strictly the province of State and local governments. State regulation has gone back a number of years, at least to the 1950s.[24] The early laws in this area generally prohibited the possession of any instrument or paraphernalia intended for the use of any narcotic drugs[25] or required a prescription for possession of a needle or syringe.[26] The principal difference between these types of laws is that the former required a showing of criminal intent,[27] while the latter did not.[28] While comprehensive drug paraphernalia laws have replaced many of the other statutes in this area,[29] quite a few States still have prescription laws for needles and syringes.[30]

New York law prohibits selling hypodermic needles or syringes to the general public, or possession thereof, without a prescription;[31] violation of the law is a misdemeanor.[32] Massachusetts has a similar law.[33] While the California statutory scheme is quite a bit more complicated, it also generally requires a prescription for the sale or possession of a hypodermic needle or syringe and provides penalties for statutory violations.[34] As with the other laws, certain exceptions are provided for the medical profession and others.

The modern trend for governmental regulations in this area is to enact a comprehensive drug paraphernalia law that covers a wide variety of drug-related items, including needles and syringes.[35] This trend largely began with the development of the Model Drug Paraphernalia Act (hereinafter the "Model Act") in 1979 by the Drug Enforcement Administration,[36] and the 1982 Supreme Court decision upholding the constitutionality of a broadly worded drug paraphernalia statute.[37]

Information provided to the author by the Drug Enforcement Administration indicates that 38 States and the District of Columbia have passed laws based on the Model Act, and an additional 9 States have passed similar laws.[38] Thus, a total of 48 jurisdictions have drug paraphernalia laws, probably all of which include hypodermic needles and syringes within their scope.[39] Because of its broad adoption, review of the Model Act will provide a good idea of what most State statutes encompass.[40]

The Model Act is designed as an amendment to the Uniform Controlled Substances Act which has been enacted in most States. The Model Act provides a comprehensive definition of the term "drug paraphernalia"[41] which specifically includes, in enumerated paragraph 11, "hypodermic syringes, needles, and other objects used, intended for use, or designed for use in parenterally injecting controlled substances into the body." The Model Act sets out separate criminal offenses intended to prohibit the manufacture or delivery, possession or use, or advertisement of drug paraphernalia. It also creates a special offense for delivery of paraphernalia to a minor.

This section has reviewed the Federal and State laws governing the use of needles and syringes for injection of illegal drugs. It is hoped that this review will assist scientists and public health officials who wish to consider the effects of these laws on HIV infection rates in differing jurisdictions.[42] Changes in existing law are

usually accomplished by amendment or repeal. However, sometimes laws are left on the books but are not enforced due to disinterest or, occasionally, due to a deliberate decision not to enforce the laws. This concept and how it might affect the enforcement of existing laws on the use of needles and syringes is discussed in the next section.

DISCRETION NOT TO PROSECUTE FOR CRIMINAL OFFENSES

Historically, the prosecutor has had broad discretion to decide whether to initiate prosecution for an offense, what charge to file, and whether to continue with a prosecution that has already begun.[43] The traditional scope of judicial review of prosecutorial discretion is limited. As stated by the Supreme Court, "[w]ithin the limits set by the legislature's constitutionally valid definition of chargeable offenses, the conscious exercise of some selectivity in enforcement is not in itself a Federal constitutional violation 'so long as' the selection [was] not deliberately based on an unjustifiable standard such as race, religion, or other arbitrary classification."[44]

Lezak and Leonard (1984) list six reasons justifying exercise of prosecutorial discretion: overcriminalization, limited resources, severity of criminal sanctions, weakness of case, law enforcement considerations (such as having the accused turn State's evidence), and public opinion. At least three of these elements could arguably support a decision not to prosecute for violations of laws governing needles and syringes.[45]

It is possible to argue that overcriminalization applies here, because many of the needle and paraphernalia laws are redundant in that there are other laws prohibiting the sale, possession, and use of controlled substances. These other laws would appear to go directly to the heart of the problem--society's desire to prohibit the sale and use of controlled substances, a problem to which needles, syringes, and paraphernalia are only tangentially related. While needle and paraphernalia laws certainly provide prosecutors with another tool for charging pushers and users with a criminal offense (such as where no direct evidence is available on the sale or use of the controlled substance itself), it can be argued that the public health need to reduce the transmission of HIV among drug users and, subsequently, the general population, weighs the balance on the side of not enforcing these laws.[46]

Similar arguments could be made regarding the limited resources of most prosecutors' offices. Certainly, there are more serious offenses, including drug offenses, than those involving needles and syringes.[47] Since available resources are never sufficient to prosecute all crimes, this is a rationale that could be applied here.

Lastly, public opinion is a possible basis for deciding not to enforce the laws in this situation. Certainly, many people will object on the grounds that the authorities are soft on drugs. However, as the public becomes more aware of the risk of the spread of HIV infection by dirty needles and syringes, opinion could swing the other way. In fact, a prosecutor could publicly take a hard line on drugs, vigorously enforcing the other drug laws but announcing that, because of public health considerations, he will not enforce laws involving needles and syringes. Such a public position might have the added benefit of educating the IV-drug-using population about the health risks posed by dirty needles.

Although it is quite speculative to believe that prosecutorial discretion might be relied on in this country on a large scale, it is being used in Scotland and England as a component of the Governments' needle exchange programs (Stimson, this volume). In addition, prosecutorial discretion apparently is being considered on a small scale as part of a proposed experimental needle exchange program in New York City (Des Jarlais et al., this volume). Because of the possibility that the exercise of prosecutorial discretion might be adopted in one or more jurisdictions in the United States as a non-legislative approach to removing legal sanctions for the sale and possession of hypodermic needles and syringes, some of the practical problems of pursuing this approach will be discussed.[48]

First is the problem of overlapping jurisdiction. There may be State, local, and now, Federal laws that apply. Certainly, there are separate prosecutors for Federal, State, and local laws.[49] Although one prosecutor might choose not to prosecute for violation of the needle and syringe laws, another with overlapping jurisdiction might, thus making this aspect of an HIV infection control policy unworkable. However, this problem might not arise in all situations.

For example, because the Federal law (21 U.S.C. 857) only governs interstate commerce in needles and syringes, including the use of

the mail and other interstate conveyances, it would probably not apply at all if the supply were intrastate. Thus, in many cases, State attempts to remove legal restrictions from the supply of needles and syringes would not raise questions of Federal jurisdiction. In those situations, there would be only one source of prosecutorial discretion to contend with.

Another potential problem is the lack of a uniform policy in applying legal restrictions involving needles and syringes if prosecutorial discretion is relied on not to enforce the laws. At this time, a uniform national approach is out of the question, and a statewide approach may also not be feasible.[50] However, adoption of a non-enforcement approach by even a single prosecutor, or a group of prosecutors in a single jurisdiction, might be possible and would have certain benefits to the public debate on the issue.

For instance, an individual prosecutor might decide not to enforce legal restrictions on needles and syringes on a short-term, experimental basis. If the experiment proceeds well, from both the public health and law enforcement perspectives, the policy decision not to enforce these laws could be made permanent, at least while the particular prosecutor remains in office. One or more successful experiments such as this might provide a basis for seeking legislative solutions at the State or national levels.

SUMMARY AND CONCLUSION

This paper has surveyed the laws restricting the use of hypodermic needles and syringes for injection of illegal drugs. It has reviewed the constitutional basis for these laws and concluded that they are on sound footing. There is a new Federal law regulating needles and syringes in interstate commerce, but it is too early to tell how expansively it will be implemented. A large majority of States have drug paraphernalia laws that govern needles and syringes, and a smaller number have laws that require prescriptions for the sale and possession of needles and syringes. Some local jurisdictions also have laws, but these were not specifically reviewed. Altogether, a breadth of relevant laws govern the manufacture, sale, use or possession, advertisement, and interstate commerce of needles and syringes intended for use with illegal drugs.

Any attempt by scientists or public health officials to accurately study the effect of these legal restrictions on the HIV infection

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rates in differing jurisdictions must comprehensively consider the applicable laws. Likewise, attempts at legislative change must also identify each law that would apply.

Prosecutorial discretion has been discussed as it relates to the decision not to prosecute offenses involving the illegal use of needles and syringes. While prosecutorial discretion is most likely to be used by prosecutors in individual cases, it provides a legally sound approach for a prosecutor who decides not to enforce the needle and syringe laws across the board as part of an HIV infection control program. Although this approach has not yet been adopted in this country, a prosecutor's decision not to enforce these laws might allow the establishment of an experimental program, such as one for needle exchange, that could serve as a laboratory for legislative initiatives.

FOOTNOTES

1. 370 U.S. 660, 82 S. Ct. 1417 (1962).

2. 370 U.S. at 664, 82 S. Ct. at 1419.

3. *Id.*

4. 276 A. 2d 722 (D.C. App. 1971).

5. Paraphernalia is usually defined, explicitly or by construction, to include hypodermic needles and syringes. See discussion, *infra.*

6. *Accord, People* v. *Nicholson*, 134 Cal. Rptr. 623, 64 Cal. App. 3rd Supp. 31 (1976). See also *Powell* v. *Texas*, 392 U.S. 514, 88 S. Ct. 2145 (1968) (distinguished *Robinson* in upholding conviction for crime of intoxication in a public place against an Eighth Amendment challenge).

7. 455 U.S. 489, 102 S. Ct. 1186.

8. The statute regulated "any items, effect, paraphernalia, accessory, or thing which is designed or marketed for use with illegal cannabis or drugs." 455 U.S. 500, 102 S. Ct. 1194.

9. 455 U.S. 500-502, 102 S. Ct. 1194-1195.

10. See, e.g., *Levas and Levas* v. *Village of Antioch*, 684 F. 2d 446 (7th Cir. 1982); *Camille Corp.* v. *Phares*, 705 F. 2d 223 (7th Cir. 1983); *Garner* v. *White*, 726 F. 2d 1274 (8th Cir. 1984); *Stoianoff* v. *Montana*, 695 F. 2d 1214 (9th Cir. 1983); *People* v. *Nelson*, 218 Cal. Rptr. 279, 171 Cal. App. 3d Supp. 1 (Super. 1985) (list of cases at n. 11).

11. *People* v. *Bellfield*, 33 Misc. 2d 712, 230 N.Y.S. 2d 79, aff. 183 N.E. 2d 230 (1962).

12. *State* v. *Birdsell*, 235 La. 396, 104 So. 2d 148 (1958).

13. Although this paper does not specifically review local laws, it is clear that several jurisdictions have them. The law reviewed by the Supreme Court in *Village of Hoffman Estates* v. *Flipside, Hoffman Estates*, *supra* n.7, was a local ordinance. See also *Bamboo Bros.* v. *Carpenter*, 183 Cal. Rptr. 748, 133 Cal. App. 3rd 116 (1982) (local drug paraphernalia ordinance not preempted by State law).

14. 21 U.S.C. 801 note, 857.

15. 21 U.S.C. 857.

16. 21 U.S.C. 857(c).

17. 21 U.S.C. 857(d). The complete definition of "drug paraphernalia" and the factors established by the Act for assistance in determining what items are covered thereby is as follows:

> (d) The term 'drug paraphernalia' means any equipment, product, or material of any kind which is primarily intended or designed for use in manufacturing, compounding, converting, concealing, producing, processing, preparing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance in violation of the Controlled Substances Act (Title II of Public Law 91-513). It includes items primarily intended or designed for use in ingesting, inhaling, or otherwise introducing marijuana, cocaine, hashish,

hashish oil, PCP, or amphetamines into the human body, such as–

(1) metal, wooden, acrylic, glass, stone, plastic or ceramic pipes with or without screens, permanent screens, hashish heads, or punctured metal bowls;

(2) water pipes;

(3) carburetors, tubes, and devices;

(4) smoking and carburetion masks;

(5) roach clips: Meaning objects used to hold burning material, such as a marijuana cigarette, that has become too small or too short to be held in the hand;

(6) miniature spoons with level capacities of one-tenth cubic centimeter or less;

(7) chamber pipes;

(8) carburetor pipes;

(9) electric pipes;

(10) air-driven pipes;

(11) chillums;

(12) bongs;

(13) ice pipes or chillers;

(14) wired cigarette papers; or

(15) cocaine freebase kits.

(e) In determining whether an item constitutes drug paraphernalia, in addition to all other

logically relevant factors, the following may be considered:

(1) instructions, oral or written, provided with the item concerning its use;

(2) descriptive materials accompanying the item which explain or depict its use;

(3) national and local advertising concerning its use;

(4) the manner in which the item is displayed for sale;

(5) whether the owner, or anyone in control of the item, is a legitimate supplier of like or related items to the community, such as a licensed distributor or dealer of tobacco products;

(6) direct or circumstantial evidence of the ratio of sales of the item(s) to the total sales of the business enterprise;

(7) the existence and scope of legitimate uses of the item in the community; and

(8) expert testimony concerning its use.

18. See discussion, *infra.*

19. In this regard, the title of Subtitle O, Public Law 99-570, which sets forth the Act is "Prohibition on the Interstate Sale and Transportation of Drug Paraphernalia."

20. *Cong. Rec. H6655-56 (daily ed. Sept. 11, 1986).*

21. For the original version, see section 671 of the House bill. *Cong. Rec. H6649 (daily ed. Sept. 11, 1986).*

22. *Cong. Rec. S13780 (daily ed. Sept. 26, 1986).*

23. 21 U.S.C. 857 (a) (1) and (2).

24. See generally, "Possession of Narcotics Instruments," *92 ALR 3d 47* (1979) (includes a comprehensive list of State cases).

25. *Id.*; *Keith* v. *United States*, 232 A. 2d 92 (D.C. App. 1967) (defendants found with needles and syringe convicted of possession of implements of a crime, D.C. Code Ann. §22-3601); *McKay* v. *United States*, 263 A. 2d 645 (D.C. App. 1970) (Case #1); *McKay* v. *United States*, 263 A. 2d 649 (D.C. App. 1970) (Case #2).

26. *92 ALR 3d 47*, *supra* n. 24; *People* v. *Bellfield*, 33 Misc. 2d 712, 230 N.Y.S. 2d 79, aff. 183 N.E. 230 (1962).

27. *Taylor* v. *State*, 256 Ind. 170, 267 N.E. 2d 383 (1971) (mere possession of needle insufficient; intent to commit crime must be shown); *State* v. *Dunn*, 245 N.C. 102, 95 S.E. 2d 274 (1956) (criminal intent is a required element of offense).

28. *People* v. *Bellfield*, *supra* n. 26.

29. Although several States have had prohibitions on drug paraphernalia for a number of years, the development of comprehensive paraphernalia laws in almost all States did not occur until the 1980s. See discussion, *infra*.

30. One source cites the figure as 11 (Des Jarlais and Friedman, unpublished (p. 7)).

31. N.Y. Public Health Law §3381 provides, *inter alia*:

> 1. It shall be unlawful for any person to sell or furnish to another person or persons, a hypodermic syringe or hypodermic needle except:
>
> (a) pursuant to a written prescription of a practitioner; or
>
> (b) to persons who have been authorized by the commissioner to obtain and possess such instruments.

2. It shall be unlawful for any person to obtain or possess a hypodermic syringe or hypodermic needle unless such possession has been authorized by the commissioner or is pursuant to a written prescription.

32. N.Y. Penal Law §220.45.

33. Mass. Gen. Laws Ann., Chp. 94C, §§27 and 38.

34. Cal. Bus. and Prof. Code §4140, *et seq.*

35. Some States have added a comprehensive paraphernalia law while retaining earlier laws as well. See, e.g., Cal. Bus. and Prof. Code §4140, *et seq.*, and Cal. Health and Safety Code §11014.5; Mass. Gen. Laws Ann., Chp. 94C, §§27 and 32I; *Doswell* v. *State*, 53 Md. App. 647, 455 A. 2d 995 (1983); 66 *Op. Atty. Gen.* (MD) 125 (1981) (prior prohibition not repealed by new drug paraphernalia law).

36. "Model Drug Paraphernalia Act," Drug Enforcement Administration, U.S. Department of Justice (August 1979), reprinted in 16 *Ga. L. Rev.* 137 (1981).

37. *Village of Hoffman Estates* v. *Flipside, Hoffman Estates, supra* n. 7.

38. Letter to the author from the Drug Enforcement Administration (April 14, 1987). The DEA reports that the following jurisdictions have adopted drug paraphernalia laws based on the Model Act: Alabama, Arizona, Arkansas, California, Connecticut, Delaware, Dist. of Columbia, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, Washington, and Wyoming.

These additional States are reported to have adopted laws similar to the Model Act: Alaska, Colorado, Hawaii, Illinois, Iowa, New York, Ohio, Oregon, Tennessee, West Virginia, and Wisconsin.

39. The Model Act explicitly covers "hypodermic syringes and needles," and the author believes that other drug paraphernalia laws would likely be broad enough to include them as well, even if they are not specifically mentioned.

40. States that have adopted the Model Act have sometimes only adopted portions of it. See, e.g., Md. Ann. Code, Art. 27, §287A; *Mid-Atlantic Accessories Trade Assn.* v. *Maryland*, 500 F. Supp. 834, 840 (D. Md. 1980) (Maryland law omits the Model Act's ban on the advertisement of drug paraphernalia).

41. In many respects, this definition is similar to the Federal definition at 21 U.S.C. 857(d). See n. 17, *supra*.

42. One attempt to compare State prescription laws and HIV infection rates among IV drug users in differing jurisdictions found no simple relationship (Des Jarlais and Friedman, unpublished (p. 7)). However, the full range of legal restrictions discussed in this paper was not considered, possibly confounding the results.

43. "[A]s a general rule, if a prosecutor has probable cause to believe that the accused committed an offense defined by statute, the decision whether or not to prosecute, and what charge to file or bring before a grand jury, rests entirely in his discretion. In other words, the duty to prosecute is not absolute, but qualified, requiring of the prosecuting attorney only the exercise of a sound discretion..." *63A Am. Jur. 2d,* Prosecuting Attorneys §24.

44. *Bordenkircher* v. *Hayes*, 434 U.S. 357, 364, 98 S. Ct. 663, 668 (1978) (holding that due process is not violated when a prosecutor carries out a threat to have the defendant reindicted on more serious charges if he does not plead guilty to a lesser charge).

45. A decision not to charge anyone under a particular law appears to be virtually totally within the prosecutor's discretion and rarely subject to judicial review. See *Heckler* v. *Chaney*, 470 U.S. 821, 105 S. Ct. 1649, 1656 (1985). Judicial challenges typically involve allegations of discriminatory enforcement, where one individual or group is charged and not others. See

generally, Vorenberg, J., "Narrowing the Discretion of Criminal Justice Officials," 1976 *Duke Law Journal*, 651, 678-683.

46. This, of course, need not affect the enforcement of paraphernalia laws with respect to items other than needles or syringes.

47. Penalties for violation of the needle and syringe laws generally range from 1 to 3 years' imprisonment and sometimes include a fine. Mass. Gen. Laws Ann., Chp. 94C, §§27 and 38; 21 U.S.C. 857(b).

48. Some prosecutors' offices have policies that provide guidance on the exercise of prosecutorial discretion. One such set of policies has been adopted by the Department of Justice to guide the exercise of discretion in Federal prosecutions. U.S. Department of Justice, *Principles of Federal Prosecution* (July 28, 1980).

49. The local State prosecutor, usually located at the county or similar level, is typically vested with authority to prosecute violations of both State and local law. *63A Am. Jur. 2d*, Prosecuting Attorneys §1.

50. Although all prosecutors in a given State may be State officials, their jurisdiction within the State is usually based on geographical boundaries. Therefore, a number of separate offices would have to be involved in developing any uniform statewide approach.

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AUTHOR

Chris B. Pascal, J.D.
Legal Advisor
Alcohol, Drug Abuse, and Mental Health Administration
Office of the General Counsel
Department of Health and Human Services
Parklawn Building, Room 4A-53
5600 Fishers Lane
Rockville, MD 20857

Combining Ethnographic and Epidemiologic Methods in Targeted AIDS Interventions: The Chicago Model

W. Wayne Wiebel

INTRODUCTION

Recent reports addressing the public health threat posed by the acquired immunodeficiency syndrome (AIDS) have expressed a disconcerting consensus in their interpretations of the epidemic's severity and in their conclusions regarding the scope of responses which are currently warranted. Projections from the Public Health Service, the National Academy of Sciences, and the Surgeon General in 1986 all highlight the catastrophic potential of the epidemic in progress and urge an unprecedented mobilization of resources to check the spread of the virus.

INTERVENTIONS

Until a large-scale medical intervention becomes available, prevention campaigns promoting adherence to risk reduction measures remain the primary means available for moderating the epidemic's impact. Such interventions have been demonstrated to be effective in altering the sexual behavior of gay males (McKusick et al. 1985; *Journal of the American Medical Association* 1986) and have contributed to a decline in the rate of increase for new cases among gays in New York and San Francisco (*American Medical News* 1986). Although intervention efforts targeting the intravenous (IV) drug abuser risk groups have lagged substantially behind those for gays (Marmor et al. 1984), preliminary evidence from New York and San Francisco has begun to suggest that this type of programming may also hold promise for the IV-drug-using population (Friedman and Des Jarlais 1986; *American Medical News* 1987). Yet, unlike the gay community, which has assumed much of the responsibility for

such initiatives internally, IV drug abusers are widely recognized to present a more difficult and challenging intervention target (Des Jarlais et al. 1985; National Institute on Drug Abuse 1986; Wiebel 1986b; Chaisson et al. 1987).

Substance abuse is both directly and indirectly associated with the AIDS epidemic. Directly, it is an established mode of transmission through the sharing of hypodermic paraphernalia. Indirectly, it is suspected to accelerate the emergence of AIDS symptoms among the infected through the immunosuppressive effects of abused substances. Further, the impaired judgement associated with intoxication is believed to reduce adherence to risk reduction measures (Ginzburg 1984; Ginzburg et al. 1985; Friedland et al. 1985; Cohen 1985).

Currently, IV drug users rank second to homosexual and bisexual males in prevalence among AIDS cases. National statistics from the Centers for Disease Control (CDC) through April of 1987 reveal IV drug use to be a sole risk factor in 17 percent of AIDS cases, with an additional 8 percent including IV drug use among multiple risk factors. The rapidly escalating incidence of cases (Marmor et al. 1984; Des Jarlais et al. 1985; Friedland et al. 1985) has led to an increased recognition of the IV-drug-using population as representing a "second wave" of the AIDS epidemic (Kotulak 1985). In addition to their significance in ongoing patterns of epidemic progression, IV drug users pose a further threat in the future course of the epidemic as a potential vector of transmission to the general population (Des Jarlais et al. 1985; Ginzburg et al. 1985; Redfield et al. 1985; Van de Perre et al. 1985; Winkelstein et al. 1986; Nichols 1986). Further, infected female IV drug users and the female sexual partners of male IV drug users risk transmitting the virus to their offspring.

To date, the majority of IV risk factor AIDS cases in this country have come from the metropolitan region including New York City and northern New Jersey (Cohen et al. 1985; Selwyn 1986). Their experience can offer insight into what may be expected in other metropolitan areas if the epidemic is allowed to progress unabated. For those areas fortunate enough to be at a relatively early stage of epidemic progression, there is a "window of opportunity" which offers the potential for preventing or minimizing further spread of the epidemic (Wiebel 1986b).

Perhaps the most widely accepted strategy for containing the spread of AIDS in the IV-drug-using population is to encourage addicts to stop injecting drugs and to enter treatment (Marmor 1984; National Institute on Drug Abuse 1986; National Academy of Sciences 1986). Yet, even under the best of circumstances, only a minority of addicts can be expected to voluntarily give up their use of drugs at any given time, and much of the existing treatment system is already operating over capacity.

A greater promise of intervention potential for this group is suggested in San Francisco's experience with educational campaigns which began in 1983, before AIDS cases in this risk group became a major problem. Since early 1986, their MidCity Consortium to Combat AIDS has pursued one of the country's most aggressive interventions to target active IV drug users (Newmeyer, this volume). Community health outreach workers are assigned to establish a visible presence in the public areas commonly frequented by IV drug users. Through personal contact, as well as the extensive distribution of literature, condoms, and bleach, substantial segments of the high-risk population are actively engaged in a campaign to prevent the spread of AIDS. Individuals are provided with both basic AIDS information and the prevention "tools" needed to accomplish risk reduction (*American Medical News* 1987). Current statistics from this region of the nation show, like New York, a decline in the rate of increase for new cases among the gay and bisexual risk group but, unlike New York, no dramatic increase in the rate of cases from the IV risk group (Newmeyer 1985; *American Medical News* 1986; Chaisson et al. 1987).

CHICAGO COMMUNITY OUTREACH INTERVENTION MODEL

Chicago's long-established tradition of innovative community-based programming evolved, during the early 1970s, to include a new approach for research and intervention in localized heroin epidemics (Hughes and Crawford 1972; Hughes et al. 1972). Based on a multimethod approach combining the basic principles of medical epidemiology (deAlarcon and Rathod 1968; deAlarcon 1969) with community ethnography (Lindesmith 1947; Becker 1953; Finestone 1957; Feldman 1968) as applied to the study of substance abuse, the model contributed to major advances in understanding and intervening in community outbreaks of heroin addiction (for summary, see Hughes 1977). Subsequently, the model was extended in application to

address other types of drug abuse (Shick et al. 1978; Shick and Wiebel 1981).

Key features of the Chicago model appear to be of direct relevance in addressing the epidemic of AIDS among IV drug abusers. First, the model offers a systematic and efficient methodology for identifying and accessing social networks of active IV drug users in the community setting. Second, the model provides an integrated framework for targeting interventions based on an analysis of the dynamic patterns of epidemic progression. (Specifically, the communities and populations targeted for intervention are selected based on an analysis of epidemiologic patterns in order to ensure the greatest potential intervention impact and the most efficient utilization of resources.) Third, the model includes integrated procedures for needs assessment and service referral. Finally, the model offers specific procedures to encourage and facilitate the entry of active drug users into treatment.

Given the apparent promise of this research and intervention strategy within the context of the new epidemic, a proposal was submitted to the City of Chicago's Department of Health in the summer of 1986. Funded later that fall as a demonstration project within the CDC's Comprehensive AIDS Prevention Education Program (CAPEP), the AIDS Community Outreach Intervention Project has since begun to establish the data base which will be required to formally assess the model's efficacy as a means of moderating further spread of HIV within targeted populations. The remainder of this paper will address the steps which have been taken in implementing this project, as well as the objectives which have been formulated in adapting the original model to the current realities of the local AIDS epidemic.

Epidemiologic Parameters

A review of the AIDS epidemic within the IV-drug-using population of Illinois shows that this risk group is presently at a relatively early stage of progression. Through April 1987, CDC statistics show that Illinois accounts for only 2.6 percent (903) of the nation's total AIDS cases (35,219). Within the State, only 11 percent (98) of diagnosed AIDS patients reported histories of IV drug use. Of these, over half (50) also reported homosexual or bisexual risk factors. As one would anticipate from the geographic distribution of IV drug users in the State, AIDS cases with IV risk factors

have heavily represented the Chicago metropolitan area (96 percent). Approximately 88 percent of these cases come from Cook County; 8 percent, from collar counties; and 4 percent, from downstate. To date, 58 percent of the IV risk factor cases have been white; 31 percent, black; and the remainder, Latino (12 percent).

Given the fact that blacks have historically represented over half of Chicago's admissions to treatment for problems relating to IV drug dependence, the racial distribution of AIDS cases with IV risk factors to date would appear to reflect an underrepresentation of blacks within this high-risk group. It is suspected that this may be attributed to a progressing pattern of HIV infection which originated among individuals having both homosexual and IV risk factors who became a vector of transmission to heterosexual IV drug users through needle-sharing practices within drug distribution and user social networks. The fact that IV risk factor cases so far have disproportionately represented males (96 percent) and individuals also reporting homosexual or bisexual risk factors (58 percent) adds some weight to the plausibility of this interpretation. It is anticipated that blacks, females, and individuals with only IV risk factors will increase in prominence over the coming years.

Although a number of seroprevalence studies are being planned and implemented in the Chicago area, to date, insufficient data have been collected to accurately estimate rates of infection within the IV risk population. However, rough projections based on a pool of approximately 70,000 IV drug users and a doubling of diagnosed AIDS cases every 10 to 12 months suggest a saturation of infection among IV risk groups within the next 5 or less years. As a consequence, a mobilization of resources focusing on intervention programming for this high-risk population was determined to be most appropriate to Chicago's current epidemic stage and to hold promise for moderating further spread of infection within this State.

Ongoing monitoring of patterns and trends of substance abuse in Chicago and Illinois (Wiebel 1986a) has shown the city's high-risk IV-drug-using population to be composed of social networks which can be distinguished based upon community of residence, race, age, and preferred drugs. Although most Chicago drug users, including those who favor the IV route of administration, engage in patterns of multiple drug consumption, the use of a primary or preferred drug most often dictates the consumption patterns for additional

intoxicants. Patterns of combined drug use include the consumption of secondary substances to: (1) potentiate the effect of a primary drug (as is the case with heroin addicts who take depressants to "boost" the effect of low-purity heroin); (2) counteract unpleasant effects of a primary drug (as is the case with compulsive cocaine abusers who take opiates to moderate the overstimulating effects of chronic cocaine administration); and (3) produce unique interaction effects (as in the case of Talwin and pyrabenzamine or "T's and Blues"). In rank order of frequency of use, the most commonly injected substances in Chicago are: heroin, cocaine, Preludin or Ritalin (pharmaceutical stimulants), Dilaudid or other pharmaceutical opiates, PCP, and MDA.

Referring back to the epidemiologic profile of IV risk factor AIDS cases in the city to date, the highest residential concentration of gays in the city occurs on the north side. Individuals who are both gay and drug injectors are most often marginal to the mainstream homosexual community and commonly include male prostitutes (hustlers) and transsexuals or cross-dressing gay males (queens). Ethnographic monitoring of these groups has shown Preludin, heroin, and MDA to be the most prevalent drugs injected. These groups were believed to have spearheaded the spread of AIDS through the intravenous mode of transmission, since gay and heterosexual addicts from various social circles may come into contact with each other within drug distribution networks and may share needles as part of the typical injection ritual. Therefore, the AIDS Outreach Intervention Project targeted the city's north side in the initial phase of its implementation schedule. Subsequently, the Project was expanded to include the primarily heterosexual IV-drug-using networks on the city's south and west sides.

Intervention Model Objectives

The primary goal of the intervention model being demonstrated is to reduce the spread of AIDS among IV drug abusers and their sexual partners. Through adapting the Chicago Community Outreach Intervention Model to the specific requirements of the AIDS epidemic, the Project is implementing a range of strategies promising to address this goal. Specific objectives deemed crucial to the success of the Project's community-based AIDS intervention model are: (1) to identify and access target populations; (2) to increase awareness of AIDS and knowledge of high-risk behaviors; (3) to encourage individual risk assessment and offer a range of viable

alternatives to high-risk behaviors; (4) to reinforce the adoption of risk reduction measures; and (5) to extend the Project's impact by enlisting members of target populations as prevention advocates willing to further disseminate AIDS information and promote prevention measures.

(1) Identifying and Accessing Target Populations. This step is an obvious prerequisite to any effective intervention. Yet, simply contacting active IV drug users can be problematic given the covert nature of their activities and their relatively disorganized social structure. As a practical solution to this problem, various types of outreach strategies have been adopted by many of the country's existing intervention programs. Consistent with the Chicago Community Outreach Intervention Model, this demonstration employs indigenous field-workers, i.e., staff who are current or former high-status members of the communities targeted for intervention, as a part of its community-based outreach and social networking strategy. Indigenous staff function as "AIDS-prevention advocates" within targeted networks and deliver intervention services at the congregation sites where IV users gather, e.g., parks, bars, pool halls, drug "copping" areas, and "red-light" districts.

In addition to offering an efficient means of accessing IV drug users and their associates, outreach has the advantage of providing personal contact with targeted populations. Conveying a message in person can be much more convincing than relaying it by other means. Further, issues can be discussed and questions answered. By employing indigenous leaders as members of community outreach teams, prevention/education information can be conveyed in a manner which is readily understood by the intended audience. Finally, by virtue of their familiarity with targeted social networks, indigenous staff are able to appeal to common frames of reference with intervention subjects and are likely to be more persuasive in promoting the adoption of risk reduction measures.

(2) Increasing AIDS Awareness. This objective establishes the foundation of knowledge required to promote the adoption of risk reduction measures. This project's second, third, and fourth intervention objectives form a staged educational sequence. Together they provide a cumulative acquisition of information which is logically cohesive and developmentally supports the adoption of risk reduction measures.

In our preliminary efforts to provide AIDS education to IV drug users in the Chicago area, we encountered a surprising degree of resistance. Not only were current levels of knowledge about AIDS found to be low among many active IV drug injectors, but many addicts were found to be denying the relevance of AIDS to their lives. For those individuals using denial as a defense mechanism, attempts to offer information regarding risk reduction were rejected, and the potential to promote behavioral change was severely limited. Thus, in high-risk populations that are not fully aware of the threat posed by AIDS, the relevance of AIDS to the individual must first be established before risk reduction strategies are considered.

In promoting increased levels of awareness about AIDS and associated risk factors, this demonstration first confronts targeted groups with the basic evidence required to convince them that the threat of AIDS is a very real and present danger. Then, once individuals acknowledge AIDS as a problem, basic AIDS information sharing can proceed in an attempt to foster a growing level of concern which will eventually serve to prompt behavioral change.

(3) Encouraging a Realistic Assessment of Individual Risk and Offering a Viable Range of Alternatives to High-Risk Behavior. This objective intends to provide individuals with the interpretative framework needed to translate basic AIDS information and risk reduction alternatives into a concrete and personal context. Specifically, individuals must be offered a means to systematically examine their personal habits and lifestyles in a manner which enables them to identify all behavior patterns which may place them at significant risk. Then, by considering the adoption of various risk reduction alternatives, individuals can begin to evaluate the relative merits and implications of these options in terms which are personally meaningful.

In assisting subjects to determine their individual risk status, intervention staff thoroughly explain the conditions which must be met in order for the virus to be transmitted from one individual to another. This simple and straightforward risk assessment formula is intended to provide individuals with the means to evaluate the relative risk of any given behavior on an ongoing basis. Thus, in addition to encouraging subjects receiving targeted interventions to evaluate their previous and current behavior patterns in relation to risk factors, we also provide them with a risk assessment technique

which includes the criteria and conditions necessary for the virus to be spread. This formula is explained to subjects by outreach staff who then guide them in applying it to assess the risks of various behaviors they have engaged in. After reviewing the relative risks of previous behavior patterns, subjects are encouraged to use the technique whenever they find themselves in a situation which may pose a threat. In contrast, the approach of most other programs to risk assessment includes a categorization of specific practices within a classification scheme of high, medium, or low risk. In reviewing behaviors classified as high risk, individuals can identify those that should be of concern to them, but the inclusion of many other practices which may be foreign to personal consideration hinders attempts to commit the scheme to memory.

The risk assessment technique incorporated in this intervention model is believed to offer significant advantages over standard practice in at least two respects. First, it involves the subject as an active participant in the process of risk assessment. In addition to determining specific behavior patterns which need to be changed to reduce risk, it fosters an understanding of the factors involved in contributing to risk. Through integrating the very basic and easily understood principles and formula, the subject is elevated from the status of passive recipient of information about what he should not do, to that of active participant in an evaluation process which is understood and can be independently applied. Second, in providing subjects with a conceptual framework which enables them to assess the relative risk of any behavior independently, this approach encourages subjects to continue using the model in the future. If targeted populations are expected to assimilate a sustained concern about the threat of AIDS, then it is important to provide them with the means to evaluate and control their risk on an ongoing basis. Given the fact that some degree of risk is an inevitable component of everyday life, this approach empowers individuals to control their AIDS risk status through conscious and calculated decisions.

A crucial component of this strategy requires that individuals be provided with a range of viable options to the high-risk behaviors they engage in. The more risk reduction alternatives that are made available to an individual for consideration, the more likely it is that at least one of the options will be adopted. To the extent that AIDS intervention strategies are reliant on voluntary compliance in attempting to encourage the adoption of risk reduction

measures, it is imperative to identify and promote options which are both practical and appealing from the perspective of targeted populations. Risk reduction alternatives which are not compatible with the social norms and values of target groups in a community setting cannot be expected to receive significant endorsement.

Consequently, the specific risk reduction messages to be promoted in this demonstration are not to be a fixed set of options, uniformly applied to all target populations. Rather, they include a flexible assortment of alternative methods and behaviors which are designed to achieve the primary goal of moderating further spread of the virus. The selection of specific messages and methods of promoting them within various target populations are the subjects of ongoing review and refinement. By attempting to identify new risk reduction options and modifying existing prevention approaches over time, we hope to establish an effective mix of options which are most amenable to adoption within the various groups targeted for intervention. Once compliance with any of the risk reduction alternatives has been accomplished, efforts are directed toward encouraging subjects to adopt further measures offering greater degrees of protection.

Based on experience to date, this approach is particularly well received by addicts because it relies on their own interpretative framework, first to identify unacceptable risks and then to determine the risk reduction alternatives which are most compatible with personal requirements. As a consequence, it is anticipated that this approach will increase the adoption of risk reduction behaviors by maximizing voluntary compliance and by offering a structural flexibility which is culturally sensitive to the needs of minority populations.

(4) The Reinforcement of Risk Reduction Measures. This is the fourth overall intervention objective and the final component of our staged educational sequence. To attain the highest possible levels of compliance with risk reduction measures and to sustain these over time, it is necessary to follow up on initial interventions with an ongoing campaign that serves both to maintain high levels of awareness and to reinforce intended behavioral change.

A major thrust in our efforts to reinforce risk reduction includes encouraging individuals to adopt further measures which offer greater degrees of protection against infection. Given initial

emphasis on identifying any means of risk reduction which can be accepted by subjects, subsequent efforts attempt to establish these gains as a foundation for the consideration of further measures.

To prevent target populations from becoming bored with or simply "turning off" to repeated messages, the content of specific information and risk reduction techniques being promoted is subject to ongoing revision and change. Thus, an evolving series of complementary prevention messages will be presented in multiple contexts in order to both maximize exposure and reinforce content.

(5) Extension of Intervention Impact. This is the final objective of our intervention model. While it is expected that the direct influence of Project initiatives will be responsible for generating a significant momentum within target populations to support the adoption of risk reduction measures, it is neither necessary nor desirable to confine efforts to direct intervention. By encouraging intervention subjects to help in supporting risk reduction measures within their social networks, it is possible to both reinforce and extend the influence of direct interventions.

Accumulating experience to this point suggests that fostering a sense of "prevention advocacy" among targeted populations is one of the most promising approaches available for extending intervention impact. It is this same type of prevention advocacy, whereby risk group members advocate behavioral change, that has been so effective within the gay community. While IV drug users and other nonaffiliated risk groups lack the fully developed social structure and network of social institutions which have contributed to the success of this response in the gay community, the potential influence of advocacy within less organized risk groups should not be totally dismissed. In fact, we have found that, as addicts become aware of the threat that AIDS poses, they are quite capable of assimilating a strong sense of social responsibility which can be readily channeled to include an assumed role of prevention advocacy. The sphere of influence upon which any given individual can be expected to have impact is, quite naturally, limited to established social networks. Yet, the cumulative effect of promoting prevention advocacy within target populations is expected to contribute significantly toward achieving this intervention model's primary goal of risk reduction.

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AUTHOR

W. Wayne Wiebel, Ph.D.
Principal Investigator
AIDS Outreach Demonstration Project
Epidemiology and Biometry Program (M/C 925)
School of Public Health
University of Illinois at Chicago
Box 6998
Chicago, IL 60680

Why Bleach? Development of a Strategy To Combat HIV Contagion Among San Francisco Intravenous Drug Users

John A. Newmeyer

INTRODUCTION

As of May 1987, the two largest AIDS risk groups in San Francisco, as in most other American cities, are gay men and intravenous drug users (IVDUs). AIDS has hit the former group much worse than the latter: diagnosed cases now total 3,089 gay men but only 36 heterosexual IVDUs in the city. Some 13 percent of the gay AIDS cases also reported a history of IV drug use, but it is likely that being gay was more of a factor than using needles for these men: nearly 13 percent of healthy gay men in San Francisco also report a history of IV drug use.

Gay men are likely to continue to dominate the AIDS caseload in San Francisco well into the 1990s. Data from various sources (the Men's Health Study, the Alternative Test sites, etc.) indicate a human immunodeficiency virus (HIV) infection rate in the 40 to 45 percent range for gay men, but only around 15 percent among heterosexual IVDUs. In addition, there are far more gay men (approximately 60,000) than straight IVDUs (perhaps 12,000) now living in San Francisco. Thus, the number of gay seropositives is around 25,000, while the IVDU seropositives probably number fewer than 2,000. This situation contrasts sharply with that for New York City, where the gay male and IVDU populations do not differ greatly either in overall numbers or in HIV infection rates. In New York, the gay male and IVDU populations each have about 100 new cases of AIDS reported each month.

The critical issue, however, is that new HIV infection may still be raging on among IVDUs at a time when it has nearly stopped

among gay men. For both groups, we can speak of a hypothetical "saturation level of HIV infection" that would have been reached had no risk reduction measures been adopted. These levels can be estimated by reviewing surveys of gay male and IVDU practices, and calculating (for the gay men) percentages of those whose patterns are characterized by celibacy, reciprocal monogamy, and/or a rarity of unsafe sexual practices, or (for the IVDUs) percentages of those who rarely or never engage in unsafe needle practices. These percentages are roughly 35 percent for gays and 25 percent for IVDUs, making the "saturation levels" about 65 percent for the former and 75 percent for the latter.

What has taken place in San Francisco is that gay men have sharply reduced their risky sexual activities. This is evidenced by a 1982 to 1986 drop of more than 85 percent in the reported incidence of rectal gonorrhea, and by a drop to approximately 1 percent per year in the incidence of HIV infection among seronegative gay males. It is plausible that the city's gay male seropositive rate will asymptotically approach a maximum level of around 45 or 50 percent. Thus, by changing their habits, many thousands of gay men who would otherwise have become HIV infected will now remain free of the virus. The tragedy is that HIV will infect from two-thirds to three-quarters of all the San Francisco gay men that it would have, absent any behavior changes. The hope is that this catastrophic experience will motivate us to promote effective behavior changes in at-risk populations that are just beginning their epidemic cycles. Such an opportunity still exists for San Francisco's IVDU population, but that opportunity could be lost in as little as 6 months or a year. The experiences of other cities--Edinburgh and New York in particular--suggest that an HIV contagion, once well established in an IVDU population, can explode to a 50 percent level in a year or two.

RISK REDUCTION MEASURES FOR IVDUS

Fortunately, the risk reduction message for IVDUs is even simpler than that for sexually active persons. It consists of three exhortations:

(1) "Stop shooting drugs."

(2) "If you must shoot drugs, get your own rig and don't share it."

(3) "If you must share a rig, disinfect it between users."

The first exhortation is to be emphasized above all: it is desirable that as many people as possible stop injecting drugs. Indeed, some individuals might welcome the AIDS epidemic as a means of providing extra motivation to cease intravenous usage. But IV drug use is generally an addictive behavior, sometimes strongly reinforced by peer group or other pressures, and San Francisco lacks the treatment capacity to assist even half the IVDUs now active there. Hence, it is important to realize that a large number of users will continue their practices and will remain outside treatment programs. For this reason, the second and third exhortations have been an important part of San Francisco's strategy, as practiced by the Haight-Ashbury Free Medical Clinic, the San Francisco AIDS Foundation, the MidCity Consortium to Combat AIDS, and other agencies.

DISINFECTION OF INJECTION EQUIPMENT

Selection of the Method

Syringes and needles are not available over the counter in California, and unauthorized possession can be grounds for arrest. Thus, rigs are scarce. To obtain sterile equipment, and not share, requires the money and know-how to purchase it, either legally or illegally. Many users do not have the wherewithal to accomplish this. To counsel, "Get your own rig and don't share" is often akin to giving "let them eat cake" advice. Furthermore, even if rigs are abundant, there remain social and psychological reasons for sharing (for example, the expression of interpersonal trust or bonding).

For a substantial number of IVDUs, then, it is vital to use the third, last-ditch exhortation: "Clean between users." Ethnographic studies conducted in San Francisco during 1984-85 revealed that a worthwhile disinfection method has five desiderata: (1) it should be quick, preferably taking less than 60 seconds; (2) it should be cheap; (3) it should use materials conveniently available; (4) it should be safe to the user and his injection equipment; and (5) it should be effective at neutralizing viruses.

A large number of good laboratory disinfectants, viricides, and other sterilization methods were available, but most of them did not meet the criteria of convenience and cheapness. Four candidates did meet these two criteria: boiling water, alcohol, hydrogen peroxide, and bleach. However, boiling water was rejected because the recommended way of using it–immersion for 15 minutes–did not satisfy the desideratum of quickness. Isopropyl alcohol (70 percent), hydrogen peroxide, and household bleach (5.25 percent sodium hypochlorite) seemed to meet all five criteria, including the essential one of effective virus neutralization (Resnick et al. 1986; Martin et al. 1985.)

Strategists at the MidCity Consortium to Combat AIDS discussed the relative virtues of alcohol, hydrogen peroxide, and bleach at great length during February and March of 1986. They concluded that alcohol was not suitable because of the ease with which "street equivalents" such as gin, wine, or beer might be judged adequate substitutes by IVDUs. There would be too much difficulty in getting across the message that full-strength isopropyl alcohol was the preferred form. As for hydrogen peroxide, it was felt that the potentially short shelf life of that reagent, i.e., if the bottle is exposed to sunlight or the cap is left off, could compromise its effectiveness without the user being aware. So, by elimination, bleach was selected.

Resnick et al. (1986) provided data as to the effectiveness of bleach in a 10:1 dilution with water. Their data noted a reduction in virus activity by seven orders of magnitude after a 60-second exposure to diluted bleach. The MidCity strategists inferred from this data that a comparable reduction in virus activity could be accomplished by a few seconds' exposure to full-strength bleach. They judged that it would be easier, too, to instruct IVDUs about use of ordinary, full-strength household bleach than to instruct them in the subtleties of a 10:1 dilution. However, there remained the problem of extrapolating from the "good laboratory procedure" of Resnick et al. to the rough-and-ready methods likely to be used by IVDUs in the real world.

Delivery of the Materials and the Message

During the first several months (April to September 1986) that the MidCity Consortium promoted the use of bleach as a viricide, observations on the impact of that message were made by the

Consortium's Community Health Outreach Workers (CHOWs). These observations enabled the MidCity group to make a number of improvements in the method and the message:

- Cartoon illustrations were prepared so that the message could be projected visually as well as verbally. This proved helpful for IVDUs with short attention spans or limited literacy.

- The message was translated into Spanish to enable communication with monolingual speakers of that language in San Francisco.

- The method recommended was *two* flushings with bleach, to increase the likelihood of complete exposure of residual fluids to the viricide. Also, two subsequent flushings with water were recommended to prevent injection of any bleach.

- The verbal message and cartoon illustration were altered to show full immersion of the needle portion of the rig. This was important because of the possibility of microscopic quantities of virus-infected fluid remaining on the *outside* surface of the needle.

- The verbal and cartoon messages were also altered to show the syringe's plunger being drawn back fully during the bleach and water rinses. This was vital to insure that all of the inside surfaces of the equipment were washed by the viricide and subsequent rinse.

- The written and illustrated messages showed the bleach being squirted away, rather than back into the container, after usage. Although the same bleach could be effective for many disinfections, there is an upper limit to this. Also, there is an increased likelihood of clogging needles with residues.

- A number of different containers were tried in a search for maximum convenience and safety. Finally, a 1-ounce plastic bottle manufactured by the Acon Company of southern California was selected by the MidCity group. This bottle was small enough to fit easily into a pocket or purse, and the cap fit tightly enough to prevent leakage even with many days' carrying and use. Experimentation showed that 1 ounce of bleach was sufficient for about 20 disinfection cycles, i.e., 40 flushings of a

typical syringe, and that refilling from a household bleach bottle would be both conceptually and physically easy for the user.

- The desideratum of safety to the user and his equipment was a major hurdle for bleach. A survey of the literature by Froner (1987) revealed that bleach, if injected, was not as destructive as some had feared. Herrman and Heicht (1979), for example, cite the case of a woman who recovered from an injection of 1.8 ml of full-strength bleach. The question of safety to injection equipment was resolved by experiment: a syringe and needle were soaked in full-strength bleach for 2 days, with no adverse consequences to any part of the equipment or its seals other than an erosion of part of the numbering on the body of the syringe.

- The MidCity group took pains to consult with the local manufacturer of bleach (Clorox Corporation) to insure that their use of 5.25 percent sodium hypochlorite would not meet with objections.

In spite of the care with which the MidCity staff refined their "bleach education method," there remains a need for further research and development. Of particular importance is research into the efficacy of bleach disinfection under realistic IV drug use situations, i.e., the less-than-adequate cleaning procedures likely to be used even by "educated" IVDUs. Also very important–and the focus of ongoing research by the MidCity staff–is the question of how consistent IVDU behavior change toward "safe practices" is.

THE COMMUNITY HEALTH OUTREACH WORKER (CHOW) EFFORT IN SAN FRANCISCO

During the summer and fall of 1986, several thousand 1-ounce bottles of bleach were prepared by the MidCity Consortium. The actual process of getting information and bottles to the IVDUs was entrusted to the CHOWs. The initial teams of CHOWs were trained by two experienced urban ethnographers, Harvey Feldman and Pat Biernacki. The teams were based at the Haight-Ashbury offices of the MidCity Consortium and assigned to work with the five community agencies which comprised the Consortium. The CHOWs were selected for their ability to work within user subcultures, which, in San Francisco, vary according to ethnicity, sexual orientation, and drug of choice. The CHOWs were trained so as to maximize the

clarity and consistency of their risk reduction message as well as their effectiveness in producing behavior change. The CHOWs, with their multifaceted educational capabilities, and not the bleach bottles, were the linchpin of the MidCity outreach effort. Three elements of their work were especially emphasized: (1) enhancing their ability to appear credible and trustworthy to the IVDUs; (2) employing repeated contacts with the same IVDUs to monitor compliance with risk reduction measures; and (3) addressing sexual transmission as well as parenteral transmission, and providing condoms and other means to encourage less risky sexual behavior patterns.

From June 1986 to May 1987, from four to seven full-time CHOWs worked the streets of San Francisco. They worked in five of the seven districts shown (by treatment admission data) to have the highest concentrations of IVDUs: the Tenderloin, Polk Street, South of Market, the Inner Mission, and the Haight-Ashbury. The CHOWs' numbers were insufficient to cover these areas properly, and the two other high-IVDU areas (the Western Addition and the Outer Mission) received no CHOW outreach at all. Nonetheless, an evaluation (Watters et al., unpublished report) conducted in CHOW-targeted districts in December 1986 showed that IVDUs had by then generally come to regard bleach as an effective AIDS-prevention measure, and about three-quarters of those interviewed had actually used bleach at least once for that purpose.

It is important to stress the need to educate IVDUs about sexual transmission as well as needle transmission of HIV. It is possible that the bleach method could totally halt needle transmission, but the significant minority (15 percent or so) of IVDUs who are already infected may continue to spread the virus to their sexual partners, male and female. The CHOWs have noted that straight male heroin users, in particular, find it much harder to accept condoms than bleach into their behavior patterns.

RECOMMENDATIONS

As a very rough estimate, a single full-time CHOW can provide outreach services effectively for 600 to 800 IVDUs. The expense of maintaining a CHOW in the field for 1 year, including personnel costs, supervision costs, and materials (primarily bleach and condoms), is approximately $25,000. A full-scale outreach education effort targeted to the 12,000 straight and 4,000 gay IVDUs of San

Francisco would require some 20 CHOWs, at an annual cost of $500,000. Such an effort should be sustained for at least 2 years to assure that the desired behavior changes become an integral part of the San Francisco IVDU subculture. A 2-year program, then, would cost some $60 per IVDU now residing in the city. This is a splendid bargain, considering that per person treatment costs of AIDS cases now average $47,000.

If we apply the above cost estimates to the Nation as a whole, and if we accept 1 million as a rough approximation of the number of American IVDUs now active, then a nationwide CHOW, bleach, and condom campaign will cost around $60 million. To this must be added the costs of other elements of a campaign against IVDU contagion: increased treatment slots, needle-exchange programs, etc. Again, however, it adds up to a wonderful bargain when compared against even the most optimistic projections of the societal costs of an unchecked AIDS epidemic. It would seem that all possible measures should be taken, with the greatest alacrity, to institute a nationwide CHOW effort. Objections to such a step, which usually take the form of "We should be getting these folks into treatment, not teaching them how to continue their illicit behavior safely!" can be overcome if we reach a consensus that all measures that have shown any efficacy against contagion should be instituted simultaneously, promptly, and strongly.

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AUTHOR

John Newmeyer, Ph.D.
Epidemiologist
Haight-Ashbury Free Medical Clinic
529 Clayton Street
San Francisco, CA 94117

213-382 0 - 88 - 7

The Sharing of Drug Injection Equipment and the AIDS Epidemic in New York City: The First Decade

Don C. Des Jarlais, Samuel R. Friedman, Jo L. Sotheran, and Rand Stoneburner

INTRODUCTION

Through April 29, 1987, there were 3,464 cases of AIDS among intravenous (IV) drug users in New York City. There were an additional 201 cases of AIDS among persons who did not inject drugs themselves but were heterosexual partners of IV drug users, and 154 cases in children of IV drug users (New York City Department of Health 1987). These 3,825 cases in which IV drug use was involved as a potential source of HIV infection account for 38 percent of the 10,116 cases in the City through that date. The number of cases of AIDS among IV drug users in New York City is roughly comparable to the total number of cases in San Francisco and is approximately three quarters of the total number of cases in all of Europe.

In addition to the current cases, approximately 50 percent (Marmor et al. 1987) of the estimated 200,000 IV drug users in New York City (New York State Division of Substance Abuse Services, unpublished data) have been exposed to human immunodeficiency virus (HIV). Given the estimates that from 20 to 50 percent of HIV-exposed persons will develop AIDS (National Academy of Sciences 1986), the number of new cases will be increasing for the next several years.

Table 1 shows the (self-reported) sexual orientation and ethnic composition of the adult IV-drug-use AIDS cases in New York City. Male homosexual IV drug users are undoubtedly overrepresented among the AIDS cases. Based on our studies in New York, we

would estimate that only 5 percent of IV drug users regularly engage in male homosexual activity (Marmor et al. 1987).

TABLE 1. *Sexual orientation and ethnicity among IV drug users with AIDS in New York City*

Sexual Orientation/Ethnicity	Number	Percent
Sexual Orientation		
Heterosexual Male	2,365	68
Female	628	18
Homo/bisexual Male	469	14
Total	3,462	100
Ethnicity		
Black	1,540	44
White	626	18
Hispanic	1,289	39
Other/Unknown	7	–
Total	3,462	99
Ethnicity (Homo/bisexual Males Excluded)		
Black	1,383	46
White	437	15
Hispanic	1,167	39
Other/Unknown	6	–
Total	2,993	100

Females are underrepresented among the IV-drug-use AIDS cases, even if the male homosexual cases are removed. Based on data from heroin users entering treatment in the City, 27 percent of the IV drug users are female (Des Jarlais et al. 1984). After removing male homosexual IV drug users, females account for only 21 percent of the AIDS cases among IV drug users in New York. No studies of HIV exposure among IV drug users in New York show a significantly lower seropositivity rate among females, so it is unlikely

that the underrepresentation of females is the result of differences in exposure. The underrepresentation of females among the AIDS cases may be the result of a possible gender-related cofactor in the progression of HIV infection (Des Jarlais and Friedman, in press).

There is also underrepresentation of non-Hispanic whites among the IV-drug-use AIDS cases in the City. Based on entry-into-treatment data, non-Hispanic whites comprise 25 percent of the IV drug users in the City (New York State Division of Substance Abuse Services, unpublished data). Two studies (Schoenbaum et al. 1986; Marmor et al. 1987) have shown higher HIV seropositivity among blacks and Hispanics in the City, so that the underrepresentation of whites among the cases probably reflects HIV exposure rates and underlying patterns of association within the ethnic groups.

In this paper, we will review the history of the AIDS epidemic among IV drug users in New York City, hoping to identify what may be the critical factors that have led to the present situation. The major sources of data used in this paper come from our ongoing studies of AIDS among IV drug users in New York (Des Jarlais et al., in press), the AIDS surveillance system of the New York City Department of Health, studies conducted at Montefiore Hospital in the Bronx, and studies of IV drug users in New Jersey. The paper will review the pre-AIDS drug injection situation in New York City, behavioral factors associated with the sharing of injection equipment/transmission of HIV, and changes in the behavior of IV drug users since they became aware of AIDS.

PRE-AIDS SHARING OF INJECTION EQUIPMENT

The social organization of the IV-drug-use subculture in New York is a good starting point for understanding the economic forces and interpersonal relationships involved in the sharing of drug injection equipment. This social organization contributed to the rapid spread of HIV among IV drug users in New York and provides the framework in which AIDS risk reduction among IV drug users will operate.

Because there are very few formal organizations of IV drug users, there is a common misperception of IV drug users as not organized. A multibillion-dollar industry does not persist over time without social organization. Sociologists and anthropologists have conceptualized the organization of IV drug users as a "deviant subculture"

(Des Jarlais et al. 1986; Agar 1973; Johnson and DeHovitz 1986) with shared values, a common argot, and rules for allocating status. The primary value is "getting high," and the primary basis for having high status within the group is the ability to obtain and use large quantities of high-quality drugs while minimizing adverse social, legal, and health consequences of such drug use.

There is strong, often brutal, competition within the IV-drug-use subculture. There is competition for customers among persons distributing the illicit drugs for injection, and conflict of interest between dealers and customers over the price and quality of the drugs being sold. Among IV drug users, there is competition for the money needed to purchase drugs, for the very limited supply of drugs, and sometimes even for the equipment needed to inject the drugs. The illegal status of the drugs keeps prices high, reinforcing economic competition and often leading to a reliance on illegal methods of obtaining money to purchase drugs. The illegal nature of IV drug use also leads to a reliance on threatened or actual violence as a means for resolving disputes.

The IV-drug-use subculture would not be able to persist over time without some positive social relationships to balance the mistrusting, often violent, interactions associated with the illegal nature of IV drug use. There is some degree of common identity as persons allied against "straight" (conventional) society. This encourages the sharing of information about drug availability, actions of the police, and new developments that affect the group. This sharing of information is almost totally oral, with very little communication through written or broadcast material. The oral information network often spreads inaccurate news but is efficient enough to maintain the substantial economic scale of IV drug use in the United States, Europe, and several developing countries.

The primary positive social relationship within the IV-drug-use subculture is the small friendship group. The high price/limited supply of drugs makes it effective for many IV drug users to work together in pairs or small groups to obtain money and drugs. Teamwork provides more opportunities for obtaining money and protection against others who might use force against one. Sharing resources within a friendship group provides a greater likelihood that an individual IV drug user will be able to obtain drugs on any given day.

The social structure of the IV-drug-use subculture promotes the sharing of equipment for injecting drugs in two ways: (1) the ethic of cooperation within small friendship groups is applied to the sharing of equipment for injecting drugs; and (2) a refusal to share drug injection equipment within the small friendship group (without a socially legitimate reason) would call into question the reliability of the person with respect to other cooperative actions within the group.

Limited supplies of drug injection equipment can also lead to sharing between casual acquaintances or complete strangers. Legal restrictions on the sale of needles and syringes, refusal of pharmacists to sell them even when they are permitted to do so, and laws against the possession of narcotics paraphernalia all serve to reduce the availability of sterile equipment for injecting illicit drugs. Even where there are no legal restrictions on drug injection equipment, sterile equipment is often not available at the times and places where IV drug users want to inject.

Persons who have drugs to inject but do not have injection equipment readily available may borrow equipment from acquaintances, sometimes in trade for a small quantity of the drug. Such sharing contains elements of both social solidarity and economic cooperation.

The widest sharing occurs through the use of "shooting galleries" or "house works." Shooting galleries are places where one can rent drug injection equipment for a small fee (typically $1 or $2 in New York City). After use, the equipment is returned to the proprietor of the shooting gallery for rental to the next customer. The needle and syringe are used until they become clogged or the needle becomes too dull for further use. Shooting galleries are typically located in or near "copping areas" (places where illicit drugs can be easily purchased). "House works" are an extra set of drug injection equipment that a small-scale "dealer" (drug distributor) will maintain for lending to customers. These works are then returned to the dealer for lending to the next customer who may want to borrow them.

Both shooting galleries and house works provide the opportunity to inject very soon after the drugs have been obtained. This temporal proximity may be a critical obstacle to reducing the sharing of drug injection equipment. Addicted heroin users often have entered

withdrawal by the time they obtain their next dose of the drug (the duration of action of injected heroin in an addicted person is typically 4 to 6 hours). Through classical conditioning, the possession of heroin can in itself trigger withdrawal symptoms in a very experienced heroin user (Wikler 1973). Withdrawal from heroin is not life threatening but is extremely unpleasant both physically and psychologically. Relief from this distress is almost instantaneous with the injection of heroin. IV drug users report that almost all of them will use whatever injection equipment is readily available when possessing heroin and experiencing withdrawal (Des Jarlais et al. 1986).

Although shooting galleries and house works provide injection equipment near in time to obtaining drugs, they unfortunately lead to the sharing of equipment with large numbers of anonymous other IV drug users. This breaks the limited protection that would occur if sharing drug injection equipment were confined to friendship groups.

Prior to concern about AIDS, the sharing of drug injection equipment was normal behavior among IV drug users. There were multiple reasons for sharing, from the social norms within the small friendship groups to greater availability of used equipment when a person had drugs to inject. While there was some concern about hepatitis, there were no overriding reasons not to share drug injection equipment.

In addition to the social and economic considerations surrounding the sharing of drug injection equipment, the number of persons who want to inject drugs and the availability of drugs to be injected obviously affect the frequency of drug injection, and, prior to awareness of AIDS, the frequency of sharing drug injection equipment. New York City, along with the United States as a whole, experienced an epidemic level increase in heroin injection during the late 1960s and early 1970s. During the middle 1970s, there was a general community reaction against heroin injection that reduced recruitment into drug injection. Production was essentially halted in the Turkish opium fields during this time, leading to very poor quality heroin available in New York and lower frequencies of drug injection among persons with histories of drug injection (Des Jarlais and Uppal 1980). Persons who had become confirmed heroin users often injected heroin on an irregular basis during the middle 1970s, interspersing a wide variety of non-injected-drug use

with their injections of heroin (Johnson et al. 1985). During this time, there were an estimated 200,000 IV drug users in New York City.

During the late 1970s, the production of opium in Southwest Asia (primarily Iran, Pakistan, and Afghanistan) greatly increased, leading to much greater availability of heroin in New York City (Frank 1980). There was some recruitment of new heroin users, maintaining an estimated number of 200,000 heroin injectors in the City during the early 1980s. The primary use of this increased heroin, however, was by previous heroin injectors who increased their frequency of injection.

Shortly following this increased availability of heroin, there was a substantial increase in the popularity and availability of cocaine. This was, of course, not confined to New York City, but was a nationwide phenomenon. Unfortunately for the coming AIDS situation, persons in New York with a history of injecting heroin preferred to use cocaine by injection, often combined with heroin in a "speedball." This cocaine epidemic may have severe consequences for the spread of HIV since, at present, we have no wide-scale treatment program to reduce cocaine injection among those addicted to cocaine. Additionally, many IV heroin users inject cocaine on an infrequent basis and see no reason to eliminate this use of the drug.

INTRODUCTION AND SPREAD OF HIV AMONG IV DRUG USERS

HIV was probably introduced into the IV-drug-use group in New York City during the middle 1970s. The first physical evidence of HIV infection comes from three maternal-transmission pediatric AIDS cases. In 1977, three children who developed AIDS were born to mothers who were IV drug users (New York City Department of Health 1987). Historically collected sera from IV drug users in New York show the first seropositive sample from 1978 (Novick et al. 1986). Men who engaged in homosexual activity as well as injecting drugs appear to have been the bridge group to spread the virus from homosexuals who did not inject drugs to heterosexual IV drug users. The first cases of AIDS in New York have been retrospectively diagnosed as occurring in 1978, with the first cases in IV drug users appearing in 1980 (Novick et al. 1986). There were 10 cases of AIDS among IV drug users in 1980, of whom 4 also reported male homosexual activity as a risk factor (New York City

Department of Health 1987). Approximately 5 percent of male IV drug users in New York report regular homosexual activity (Des Jarlais, in preparation), so that 4 of 10 cases is a great over-representation. Male homosexual activity has also been shown to be associated with HIV exposure among male IV drug users in Manhattan, independent of drug use behavior (Marmor et al. 1987).

Once HIV was introduced into the IV-drug-use group in New York, there was a rapid spread of the virus among active users. The historically collected serum samples from Manhattan show over 40 percent seropositivity in 1980. In the three studies of risk factors for HIV seropositivity that have been reported from the New York area (Marmor et al. 1987; Schoenbaum et al. 1986/Selwyn et al. 1986; Weiss et al. 1985), two factors were often associated with exposure to the virus. Frequency of drug injection was associated with seropositivity in all three studies (the more frequently a drug user was injecting, the more likely he or she was to share equipment with someone who could transmit the virus). The use of shooting galleries (places where one can rent drug injection equipment) was associated with seropositivity in the Manhattan (Marmor et al. 1987) and Bronx (Schoenbaum et al. 1987) studies.

The rapid spread of HIV among IV drug users in New York is thus likely to be a result of three factors. A relatively large number of homosexual men who injected drugs and shared equipment with heterosexual IV drug users provided multiple entry points for the virus into the IV-drug-use group. The increasing availability of heroin and cocaine in the late 1970s led to a general increase in drug injection–and associated sharing of equipment–just after the virus had been introduced into the area. Finally, the use of shooting galleries permitted rapid dissemination of the virus across friendship groups.

BEHAVIOR CHANGE IN RESPONSE TO AIDS

Despite the popular conception that IV drug users have no concern for health, there is consistent evidence that the majority of IV drug users in New York have changed their behavior in order to reduce the risk of developing AIDS. Data we collected from IV drug users in 1983 (Des Jarlais et al. 1986) and 1984 (Friedman et al. 1987) indicated that essentially all IV drug users in New York City were aware of AIDS by the middle of 1984, and that over half

of them were reporting some form of risk reduction. Data collected in 1985 by Selwyn and colleagues again showed essentially universal knowledge of AIDS and its transmission through the sharing of injection equipment. Over 60 percent of the subjects in the Selwyn study reported changes in drug injection behavior undertaken to reduce the risk of developing AIDS (Selwyn et al. 1986).

In both our and the Selwyn et al. studies, the two most commonly reported forms of risk reduction were increased use of (illicitly obtained) sterile injection equipment and a reduction in the number of persons with whom the subject would share injection equipment. Approximately one-third of the subjects in the studies reported each of these methods of AIDS risk reduction. Reduction of drug injection was a much less common form of behavior change, reported by less than 20 percent of the subjects in the studies. The Selwyn study specifically asked about sterilizing used drug injection equipment. Very few subjects–less than 4 percent–reported this type of AIDS risk reduction.

Evidence for the validity of these self-reported behavior changes comes from findings of better immune system status in those seropositives reporting AIDS risk reduction (Friedman et al., in press(b)) and from studies of the marketing of illicit sterile injection equipment in New York. There was a great increase in the demand for illicitly obtained sterile injection equipment in 1984-85 in New York City (Des Jarlais et al. 1985). The demand became strong enough to support a market for "counterfeit" sterile injection equipment, something that had never occurred prior to AIDS in New York. (The counterfeit equipment consisted of used needles and syringes that were rinsed out and placed in the original packaging, which was then resealed. Careful inspection of these needles and syringes could usually detect the resealing.)

These risk reduction efforts by IV drug users occurred prior to any formal AIDS prevention programs established by health authorities, and indicate spontaneous change occurring within the IV-drug-use subculture in New York around the dangers of sharing drug injection equipment. The risk reduction reported in these studies should not, however, be seen as risk elimination. Increased use of illicitly obtained sterile equipment does not imply exclusive use of that equipment–the situation in which an IV drug user is undergoing withdrawal appears to lead to a willingness to use whatever injection equipment is handy. Reduction in the number of persons with

whom one is willing to share equipment will often not be extended to persons with whom one has a close personal relationship (Des Jarlais et al. 1986). The reduction typically involves refusing to share drug injection equipment with strangers, casual acquaintances, and, especially, persons who "look sick" (Sotheran et al. 1987).

There is also the possibility that some of the efforts to use "clean needles" will not be effective. The methods of cleaning drug injection equipment prior to AIDS were primarily used to prevent blood from clogging the needle and syringe. Thus, they were associated with extended and likely multiple-person use of the equipment. In none of the studies of HIV-exposure risk factors was cleaning injection equipment associated with avoiding exposure to the virus.

PRESENT PREVENTION/RISK REDUCTION EFFORTS

At present, there are a number of AIDS prevention efforts aimed at IV drug users in New York City. These include telephone hotlines, pamphlets and posters, education conducted within treatment programs, additional drug treatment capacity, and face-to-face education conducted by trained ex-addicts for IV drug users who are currently not in treatment. [These, as well as prevention programs in other areas, are reviewed in Friedman et al. (in press(a))].

It is clearly much too early to assess the effectiveness of these AIDS prevention programs, but some preliminary observations can be made. With respect to informing IV drug users about the basics of AIDS, the data cited above indicate that this basic information has been widely disseminated. The current posters, pamphlets, and basic education programs should therefore be assessed in terms of their repetitive effects. The parallel would be to advertising, where repetition is used to create a persuasive effect rather than an informative effect.

As a response to the AIDS epidemic, 3,000 new drug abuse treatment positions are being opened. These are in addition to the 500 additional treatment positions opened over the last few years. The 500 positions have been filled, and there are still waiting lists of approximately 1,000 persons seeking drug abuse treatment in the City. Nevertheless, it does not appear likely that enough new treatment programs can be opened in time to have a large-scale effect on the spread of HIV through the sharing of drug injection

equipment in the City. (There is currently no treatment for injected cocaine abuse that could be applied nationally on a large scale.) This means that the immediate reduction in IV-drug-use transmission will have to be made by reducing the sharing of nonsterile drug injection equipment.

The face-to-face education programs and many of the pamphlets being distributed include information about how to sterilize previously used drug injection equipment. This information appears to be well received and greatly needed by current IV drug users. Data from a 1986 study of IV drug users in treatment indicate that there is still considerable ignorance among IV drug users about how to clean drug injection equipment in a manner that kills HIV (Sotheran et al. 1987). When the subjects were asked, "What is the best way to clean your works?" only 69 percent mentioned ways that might inactivate HIV if done correctly (boiling, soaking in bleach, or soaking in a high concentration of alcohol). Only 8 percent mentioned the use of bleach, which may be the most effective and convenient method of sterilizing drug injection equipment.

In addition to the lack of knowledge among these IV drug users, the subjects who were injecting the most frequently were also those who were least likely to know proper sterilization techniques. Apparently, knowledge of these sterilization techniques was disseminated primarily from drug abuse treatment personnel to IV drug users in treatment (Sotheran et al. 1987). The persons with the highest levels of recent drug injection were those who had been in treatment for the shortest length of time (Abdul-Quader et al. 1987) and, perhaps, were those who were less likely to have formed positive relationships with treatment staff. Thus, the IV drug users most in need of the knowledge of how to sterilize drug injection equipment properly were the least likely to have this information.

The two face-to-face ex-addict AIDS education programs in New York are currently providing information on how to properly sterilize drug injection equipment. One of the programs (ADAPT) has started to distribute bleach and alcohol in order to provide current IV drug users with a relatively easy means of sterilizing injection equipment, and the other program is considering this also. (Implementation of this has been delayed by considerations of liability if Government funds were used to provide for the distribution of bleach for sterilizing drug injection equipment.) The degree to which dissemination of information and/or means for properly

sterilizing drug injection equipment will lead IV drug users to sterilize used equipment remains to be seen. The current best estimate from the ex-addict education programs is that no more than 10 percent of active IV drug users are sterilizing equipment that has previously been used by another person (Mauge 1987). This would represent a significant improvement over the 4 percent found in the Selwyn et al. (1986) study, but clearly is not sufficient to halt the spread of HIV among IV drug users in the City.

Barring a dramatic breakthrough with respect to increased use of proper sterilization techniques, IV drug users must have easy access to noncontaminated injection equipment if the spread of HIV among continuing IV drug users in New York is to be contained. The difficulties in relying upon an illicit distribution system for a significant reduction in the spread of HIV have led to calls by a number of public health officials for increasing the legal availability of sterile injection equipment. The New York City Department of Health has proposed an experimental study of a needle exchange for IV drug users. This is modelled after the system in Holland, in which drug users return used injection equipment and then are given new, sterile equipment at no charge. This proposal has the support of the mayor but has not received approval at the State government level.

CONCLUSION

A final comment on the current AIDS prevention programs in New York City concerns apparent "contradictions" between the different efforts. Teaching IV drug users how to sterilize equipment--and actually providing sterile equipment to them--have been opposed by some (often police agencies) as "encouraging" IV drug use. Based on current data from the face-to-face education programs, there appears to be no contradiction between teaching IV drug users how to sterilize drug injection equipment and reducing IV drug use. As part of the AIDS education process, many of the drug users realize that they continue to be at risk for AIDS when they are in a state of strong physical dependence on drugs. These drug users ask for and receive referrals for expedited entry into treatment programs (Mauge 1987). Thus, nonjudgmental programs for AIDS risk reduction--programs that do not tell an IV drug user that he or she must stop injecting drugs--appear to be "discouraging" rather than "encouraging" IV drug use.

The situation with respect to AIDS prevention among IV drug users is changing rather rapidly, as the public concern over IV drug users as a "bridge" to generalized heterosexual transmission grows. New prevention efforts are likely to be established. Attempts will also be made to evaluate the effectiveness of many of these prevention efforts, although historical change during the time in which a prevention program is studied will make interpretation of findings difficult.

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AUTHORS

Don C. Des Jarlais, Ph.D.
New York State Division of Substance
Abuse Services
55 West 125th Street, 10th Floor
New York, NY 10027

Samuel R. Friedman, Ph.D.
Jo L. Sotheran, M.A.

Narcotic and Drug Research, Inc.
55 West 125th Street, 10th Floor
New York, NY 10027

Rand Stoneburner, M.D., M.P.H.
New York City Department of Health
125 Worth Street
New York, NY 10013

Needle Sharing Among Intravenous Drug Abusers: Future Directions

Robert J. Battjes and Roy W. Pickens

INTRODUCTION

The acquired immunodeficiency syndrome (AIDS) is a major public health epidemic throughout the world. In the United States and Europe, intravenous drug abusers have been one of the primary groups at risk for AIDS. Unless massive efforts to prevent the spread of AIDS among intravenous drug abusers are undertaken, rapid spread of the disease throughout this population is a certainty. In the absence of an effective vaccine to prevent the transmission of the human immunodeficiency virus (HIV), behavior change is the only available means of prevention. Definitive action to change the high-risk behaviors of intravenous drug abusers is needed now.

Three modes of HIV transmission are of concern: transmission among intravenous drug abusers through the sharing of drug injection equipment, sexual transmission among intravenous drug abusers and from abusers to their nonusing partners, and perinatal transmission from abusers and their partners to their offspring. The conference "Needle Sharing Among Intravenous Drug Abusers: National and International Perspectives" and this monograph focus on the first of these modes of transmission. The other modes are also important and are addressed through other initiatives of the National Institute on Drug Abuse. This final chapter of the monograph will review the major points that emerged from the conference.

THE AIDS EPIDEMIC

The epidemic of AIDS among intravenous drug abusers is widespread, with the United States and Europe especially hard hit. It is an epidemic that has manifested itself in all 50 States, the District of Columbia, Puerto Rico, and 16 European countries (Haverkos, this volume). Thus, AIDS among intravenous drug abusers is a public health problem that must be addressed on national and international levels.

DRUG USE PRACTICES THAT CONTRIBUTE TO THE SPREAD OF AIDS

Drug use practices differ across the United States. For example, shooting galleries, where addicts can rent injection equipment, are common in New York (Hopkins, this volume), whereas residential hotels are common locales for needle sharing in San Francisco (Feldman and Biernacki, this volume). Among Mexican-Americans in the Southwest, needle sharing tends to occur within established social networks (Mata and Jorquez, this volume). Although there are regional and cultural differences in drug use practices, the sharing of drug injection equipment among intravenous drug abusers is common throughout the United States.

The places where many addicts congregate, purchase, and inject their drugs--street corners, back alleys, abandoned buildings--do not lend themselves to adequate needle cleaning between users. Water may be used to keep the needle from clogging, but this is not adequate protection against the AIDS virus. Thus, intravenous drug abusers seldom take adequate precautions to clean their needles between users.

FACTORS CONTRIBUTING TO NEEDLE SHARING

Needle sharing among intravenous drug abusers occurs because it fulfills both practical and social functions. Sterile needles are not readily available in the United States, and several factors contribute to the scarcity of these needles. In some States (generally those with the largest intravenous drug abuse problem), sterile needles and syringes are not available without a prescription. Even where prescriptions are not needed to purchase needles, pharmacists may be unwilling to sell needles to intravenous drug abusers. Also, the possession of needles for purposes of injecting illicit drugs is

generally prohibited under State paraphernalia legislation (Pascal, this volume). Fearing arrest, addicts are hesitant to carry their own injection equipment with them. Once addicts obtain drugs, there is an urgency to inject, using whatever injection equipment is at hand (Des Jarlais et al., this volume). Thus, needle sharing makes it possible to inject drugs without carrying injection equipment.

Needle sharing also occurs for social reasons. Within small groups, it may reflect a sense of camaraderie and trust. Sharing beyond one's intimates reflects an ethic of cooperation among addicts. Thus, needle sharing has become one of the well-entrenched social mores of addict subcultures, supporting ready access to needles.

RESPONSE OF INTRAVENOUS DRUG ABUSERS TO THE AIDS EPIDEMIC

Intravenous drug abusers in various parts of the country appear to be aware of the AIDS epidemic. In some areas, such as New York City, addicts are concerned about their risk for AIDS, and many are attempting to reduce their risk. However, risk reduction is not risk elimination (Des Jarlais et al., this volume; Power, this volume). Risk reduction efforts are frequently inadequate (e.g., reducing the number of people one shares with, rinsing with water) or inconsistently applied (e.g., cleaning needles some but not all of the time). In other areas, where relatively few intravenous drug abusers have contracted AIDS, many intravenous drug abusers are still denying their personal risk for AIDS, do not know how they can protect themselves, and are not even reducing their risk (Wiebel, this volume).

It is encouraging to note the concern among intravenous drug abusers in New York City and the resulting behavior changes, even though these changes are not always totally effective. This experience provides hope for the prevention of AIDS in this population. However, it is also apparent that a massive prevention effort must be implemented immediately to significantly impact on the spread of the epidemic. Needle-sharing practices are well established and serve a very practical function within addict subcultures, and these practices will not be modified without substantial efforts.

AIDS PREVENTION

Certainly the most effective way to prevent the spread of AIDS among intravenous drug abusers is for abusers to stop using drugs. Drug abuse treatment has been demonstrated to be an effective means to accomplish this goal. Since drug abuse treatment programs across the United States are oversubscribed, it is important that treatment capacity be rapidly expanded to make treatment readily available to all intravenous drug abusers who can be convinced to participate. Outreach programs must also be established to encourage intravenous drug abusers to enter treatment. Steps must also be taken to enhance the attractiveness of drug abuse treatment, especially for drug abusers whose motivation to participate in treatment is minimal. For example, in The Netherlands, "low-threshold" methadone maintenance treatment is available to addicts who are not yet ready to involve themselves in more intensive methadone treatment (Buning et al., this volume).

Helping addicts to quit using drugs is a desirable goal, and drug abuse treatment is an important AIDS prevention strategy. However, the conference participants agreed that this goal and strategy could not be the sole or even primary focus of AIDS prevention efforts with this population. To reach a significant proportion of intravenous drug abusers, drug abuse treatment resources would need to be expanded substantially, and this expansion of treatment capacity would require time. Alternate prevention programs must be provided in the interim. In addition, many intravenous drug abusers will be unwilling to enter drug abuse treatment and will continue to inject drugs. Some users who enter treatment will subsequently relapse and return to drug use.

The conference participants, most of whom have devoted their careers to the reduction of drug abuse, grappled with the conflicting values posed by (1) the goal of reducing illicit drug use and (2) the goal of reducing the negative consequences of such drug use. They concluded that the emergent nature of the AIDS epidemic requires decisive action to reduce the negative consequences of drug use. An effective AIDS prevention strategy must help individuals who continue to inject drugs reduce their risk for contracting or transmitting the AIDS virus.

The conference participants agreed that information is the basis for AIDS prevention. Intravenous drug abusers must be provided with

accurate information regarding their personal risk of HIV infection, how the virus is transmitted, and how they may reduce their risk. These messages must be provided in graphic "street" language that is understood by and meaningful to the target audiences. Of special concern are the potential effects of "a little knowledge." Individuals who are taking inadequate precautions may consider themselves safe while unwittingly exposing themselves or others to HIV infection.

As long as sterile injection equipment is in short supply or is not readily accessible when addicts are ready to "shoot up," needle sharing will continue. Thus, the conference participants agreed that AIDS prevention efforts must include clear and explicit instructions for cleaning injection equipment with such agents as alcohol and bleach in order to decrease the likelihood of HIV transmission. The participants were impressed with the approach that has been implemented in San Francisco, where indigenous outreach workers provide intravenous drug abusers with small bottles of bleach and specific instructions for cleaning injection equipment with the bleach (Newmeyer, this volume). Key elements of this prevention program include aggressive outreach by individuals who have credibility among the target population; repeated contacts to assure that information is understood and to reinforce behavior change; and use of a sterilizing agent that is safe, effective, and readily available. (While bleach has been demonstrated to kill the AIDS virus under laboratory conditions, its effectiveness when used by addicts following program instructions has not yet been documented.) AIDS prevention projects that provide information on needle cleaning through aggressive outreach should be implemented widely to reach as many intravenous drug abusers as possible.

Since lack of available sterile needles and syringes is a major factor promoting needle sharing, the conference participants identified the need to reassess public policies that limit availability, including restrictions on the sale and possession of injection equipment. One approach to increasing the availability of needles and syringes to intravenous drug abusers, while controlling their availability to the general population, is needle exchange programs that provide intravenous drug abusers with sterile needles in exchange for used needles in order to reduce needle sharing. A needle exchange program was implemented in Amsterdam, The Netherlands, in 1984 (Buning et al., this volume), and a number of such programs have

been implemented in the United Kingdom more recently (Stimson, this volume).

Preliminary evaluation of the Amsterdam program suggests that the program has been successful in reducing needle sharing among intravenous drug abusers, and it has not resulted in increased drug use among program participants. In fact, drug use declined at a greater rate among addicts using the exchange as compared with addicts not using the exchange.

The conference participants generally considered the needle exchange approach to be promising. In view of the gravity of the AIDS epidemic and the positive experience with this approach in The Netherlands, they suggested that research be conducted to determine the effectiveness of the needle exchange approach within the United States, with careful evaluation of small-scale projects to guard against any possible negative effects.

However, it was also apparent to the participants that simply addressing the issue of needle availability is insufficient. For example, intravenous drug abusers in Italy share injection equipment extensively, even though sterile needles are readily available (Tempesta and Di Giannantonio, this volume). As noted above, needle sharing occurs for social reasons as well as due to lack of availability. Thus, efforts to change social patterns are also important, and information on AIDS was seen as an important part of these efforts, providing motivation for behavior change.

Another approach to the prevention of needle sharing that the conference participants considered promising is the development of single-use, self-occluding needles/syringes. Widespread use of such injection equipment in medical practice might reduce the possibility of needle sharing. The use of self-occluding needles in needle exchange programs would prevent the sharing of dispensed needles.

Public opinion is of special importance in determining future AIDS risk reduction efforts targeted toward intravenous drug abusers in the United States. For example, community support is needed to facilitate the establishment of new drug abuse treatment facilities. Community opposition to the location of drug abuse treatment facilities (the "not in my backyard" phenomenon) can slow or stop the treatment expansion needed to combat the spread of AIDS among intravenous drug abusers. The conference participants also felt

that public support for AIDS risk reduction efforts was important. Just as these drug abuse professionals had broadened their focus from the elimination of illicit drug abuse to include risk reduction for those individuals who continue to inject, they considered public support necessary for widespread, rapid implementation of AIDS risk reduction efforts. Thus, participants recommended that media efforts be undertaken to educate the public and engender public support for AIDS prevention.

The impact of AIDS on racial and ethnic minorities warrants special comment. Blacks and Hispanics have been especially hard hit by the AIDS epidemic associated with intravenous drug abuse, and the large majority of such cases are found in these populations (Haverkos, this volume). The conference participants emphasized the importance of AIDS prevention initiatives that are culturally appropriate for these special populations.

SUMMARY

In summary, the conference focused on one means of HIV transmission among intravenous drug abusers: exposure through the sharing of drug injection equipment. The participants emphasized the urgency of the AIDS epidemic among intravenous drug abusers. A massive effort is needed now to prevent further spread of the disease. The prevention of AIDS requires a multipronged approach to reach intravenous drug abusers, with various motivations for behavior change:

- Communities across the United States should quickly implement programs to educate addicts regarding their risk for AIDS and how they may reduce their risk. Aggressive outreach is a key educational tool.

- Drug abuse treatment is an important means of combating the AIDS epidemic among intravenous drug abusers who wish to quit using drugs and are willing to enter treatment. Resources need to be expanded so that drug abuse treatment is readily available.

- Since a substantial number of intravenous drug abusers will continue to inject drugs, an effective AIDS prevention strategy must encourage these individuals not to share injection equipment and must provide clear and explicit information on how

they can clean their injection equipment to decrease the likelihood of HIV transmission if they continue to share.

- Public policies that restrict the availability of needles and thereby encourage needle sharing should be reexamined. As part of this reexamination, research should be conducted to determine the effectiveness of needle exchange programs that provide intravenous drug abusers with sterile needles in exchange for used needles.

AUTHORS

Robert J. Battjes, D.S.W.
Associate Director for Planning
Division of Clinical Research

Roy W. Pickens, Ph.D.
Director, Division of Clinical Research

National Institute on Drug Abuse
Parklawn Building, Room 10A-38
5600 Fishers Lane
Rockville, MD 20857

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