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THE EPIDEMICS OF INJECTING DRUG USE AND BLOOD-BORNE DISEASE: A PUBLIC HEALTH PERSPECTIVE*

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I. INTRODUCTION

The twin epidemics of injecting drug use and blood-borne disease threaten both public health and social structure. The drug-related health problems of the estimated 1.5 million injecting drug users (IDUs) in the United States¹ range from blood-borne infections to physical deterioration and death.² The most comprehensive longitudinal study among IDUs found staggering seroprevalence rates for blood-borne diseases: hepatitis C virus (85.3%), hepatitis B virus (84%), human immunodeficiency virus (24.1%), and human T-lymphotropic virus type II (7%).³

* This paper is part of a national study on the role of syringes and needles in the HIV/AIDS epidemic undertaken for the U.S. Centers for Disease Control and Prevention, the Carter Presidential Center, and the Association of Schools of Public Health. The research team for the project includes: Lawrence O. Gostin, J.D., LL.D (Hon.) (Principal Investigator); T. Stephen Jones, M.D., M.P.H., Centers for Disease Control and Prevention; Zita Lazzarini, J.D., M.P.H., Harvard School of Public Health; and Kathleen Flaherty, J.D., the Georgetown/Johns Hopkins Program on Law and Public Health. A more extensive version of the matters treated herein is contained in Lawrence O. Gostin et al., *Prevention of HIV/AIDS Among Injection Drug Users: The Theory and Science of Public Health and Criminal Justice Approaches to Disease Prevention*, 46 EMORY L.J. (forthcoming 1997); Lawrence O. Gostin et al., *Prevention of HIV/AIDS and Other Blood-Borne Diseases Among Injection Drug Users: A National Survey on the Regulation of Syringes and Needles*, 277 JAMA 53 (1997); Larry Gostin, *The Interconnected Epidemics of Drug Dependency and AIDS*, 26 HARV. C.R.-C.L. L. REV. 113 (1991). James G. Hodge, Jr. and Kathleen Joann Lester, both of the Georgetown/Johns Hopkins Program on Law and Public Health, made important contributions in the research of this article.

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1. Estimates of IDUs in the United States range from 1.1 to 1.9 million. NATIONAL RESEARCH COUNCIL, PREVENTING HIV TRANSMISSION: THE ROLE OF STERILE NEEDLES AND BLEACH 58-59 (Jacques Normand et al. eds., 1995) [hereinafter NATIONAL RESEARCH COUNCIL, PREVENTING HIV]; NATIONAL RESEARCH COUNCIL, AIDS: SEXUAL BEHAVIOR AND INTRAVENOUS DRUG USE (Charles F. Turner et al. eds., 1989) [hereinafter NATIONAL RESEARCH COUNCIL, AIDS].

2. Drug-induced deaths exceeded 10,000 persons in 1989, a 58% increase over a nine year period. See BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, A NATIONAL REPORT: DRUGS, CRIME, AND THE JUSTICE SYSTEM (1992).

3. Richard S. Garfein et al., *Viral Infections in Short-Term Injection Drug Users: The Prevalence of the Hepatitis C, Hepatitis B, Human Immunodeficiency, and Human T-Lymphotropic Viruses*, 86 AM. J. PUB. HEALTH 655 (1996).

Injecting drug use is the second most frequently reported risk for AIDS.⁴ As of October 31, 1995, of the 501,310 cases of AIDS reported to the Centers for Disease Control and Prevention (CDC),⁵ 184,359 were directly or indirectly associated⁶ with injecting drug use.⁷ This number represents 36% of all AIDS cases reported since the beginning of the epidemic. In contrast, in 1981, only 12% of all reported AIDS cases were associated with injecting drug use.⁸ These data, together with those showing reductions in HIV/AIDS among men who have sex with men,⁹ suggest that injecting drug use is the engine that is driving the modern HIV epidemic.

Blood-borne disease in the drug-dependent population disproportionately strikes the urban poor, African Americans, and Hispanics. Ethnographic studies describe this population as "street drug abusers," the vast majority of whom are homeless, unemployed, or underemployed.¹⁰ In addition, many of these persons suffer from multiple physical dependencies on drugs and alcohol. Studies suggest that the vulnerability of the drug-dependent person often compounds her inability to meet her health needs. Minorities, moreover, generally bear a disproportionately high burden of AIDS cases¹¹ and IDU-

4. CENTERS FOR DISEASE CONTROL & PREVENTION, U.S. DEP'T OF HEALTH & HUMAN SERVICES, HIV/AIDS SURVEILLANCE REPORT, 1995, at 5 (1996) [hereinafter HIV/AIDS SURVEILLANCE REPORT].

5. Centers for Disease Control & Prevention, U.S. Dep't of Health & Human Services, *First 500,000 AIDS Cases—United States, 1995*, 44 MORBIDITY & MORTALITY WKLY. REP. 849 (1995).

6. A direct or indirect association with injecting drug use includes persons who are IDUs (n=161,891), their heterosexual sex partners (n=18,710), and children (n=3758) whose mothers were IDUs or were sex partners of IDUs. Centers for Disease Control & Prevention, U.S. Dep't of Health & Human Services, *AIDS Associated with Injecting-Drug Use—United States, 1995*, 45 MORBIDITY & MORTALITY WKLY. REP. 392 (1996) [hereinafter *AIDS Associated with Injecting-Drug Use*].

7. *Id.*

8. NATIONAL RESEARCH COUNCIL, PREVENTING HIV, *supra* note 1, at 9.

9. *See, e.g.*, Centers for Disease Control & Prevention, *Update: Trends in AIDS Among Men Who Have Sex with Men—United States, 1989-1994*, 44 MORBIDITY & MORTALITY WKLY. REP. 401, 403 (1995); Scott D. Holmberg, *The Estimated Prevalence and Incidence of HIV in 96 Large Metropolitan Areas*, 86 AM. J. PUB. HEALTH 642, 645 (1996) ("In almost all cities, there has been a marked drop in HIV seroprevalence among gay and bisexual men seen at all testing sites in recent years.").

10. Harvey W. Feldman & Patrick Biernacki, U.S. Dep't of Health & Human Services, *The Ethnography of Needle Sharing Among Intravenous Drug Users and Implications for Public Policies and Intervention Strategies*, in NEEDLE SHARING AMONG INTRAVENOUS DRUG ABUSERS: NATIONAL AND INTERNATIONAL PERSPECTIVES 28, 34 (Robert J. Battjes & Roy W. Pickens eds., 1988).

11. Racial and ethnic minorities represent large proportions of newly diagnosed cases of AIDS, due primarily to injecting drug use. In 1993, 51% of new adult and adolescent male AIDS cases, 75% of new adult and adolescent female AIDS cases, and 84% of new pediatric AIDS cases occurred among racial and ethnic minorities. *See* Centers for Disease Control & Prevention, *AIDS Among Racial/Ethnic Minorities—United States, 1993*, 43 MORBIDITY & MORTALITY WKLY. REP. 644 (1994).

associated AIDS cases: 75% of IDU-associated AIDS cases in 1995 occurred among African Americans (50%), Hispanics (24%), and other ethnic communities.¹² The rate of IDU-associated AIDS per 100,000 population is 3.5 for whites and 50.9 for African Americans,¹³ a 14.5-fold difference based on race alone.

Blood-borne transmission of infectious disease has a cascading effect, spreading disease from IDUs to women, and from women to children across the population. Injecting drug users can transmit infection by sharing contaminated injection and drug preparation equipment, primarily syringes and needles.¹⁴ Persons infected through contaminated syringes may in turn infect their sexual partners.¹⁵ Pregnant women can transmit infection to their children during pregnancy, delivery, and breast-feeding.¹⁶

Women in relationships with IDUs face a serious risk of infection. Some women may be unaware that their partners are IDUs; some women may feel trapped in abusive, psychologically or economically-dependent relationships;¹⁷ others may engage in sexual relationships for drugs or money.¹⁸ Women in these relationships may feel powerless to insist that their partner use a condom.¹⁹ Because these women lack control over their partners' behavior, they have few options to protect themselves from the risk of blood-borne infection and sexually transmitted diseases.

Injecting drug use has a catalytic effect on the HIV/AIDS epidemic among women and newborns. Of the 71,818 AIDS cases among women reported through December 1995, nearly 65% were IDUs or had sex with an IDU.²⁰ Further, of the 6256 perinatally-acquired AIDS cases reported through December 1995, 60% were born to mothers who were IDUs or had sex with an IDU.²¹ These data suggest that drug use—the use of crack among women,

12. *AIDS Associated with Injecting-Drug Use*, *supra* note 6, at 392.

13. *Id.* at 396.

14. For a discussion of the mechanism of needle-borne transmission, see *infra* text accompanying notes 33-39.

15. NATIONAL RESEARCH COUNCIL, *PREVENTING HIV*, *supra* note 1, at 28.

16. *Id.* at 29-30.

17. See Karen H. Rothenberg & Stephen J. Paskey, *The Risk of Domestic Violence and Women with HIV Infection: Implications for Partner Notification, Public Policy, and the Law*, 85 AM. J. PUB. HEALTH 1569, 1570 (1995) (noting high levels of depression, physical abuse, and reported feelings of powerlessness among women who use injecting drugs).

18. GERRY PEARLBERG, *WOMEN, AIDS, & COMMUNITIES: A GUIDE FOR ACTION* 61-62 (1991).

19. See generally LAWRENCE O. GOSTIN & ZITA LAZZARINI, *HUMAN RIGHTS AND PUBLIC HEALTH IN THE AIDS PANDEMIC* (forthcoming 1997) (on file with author).

20. HIV/AIDS SURVEILLANCE REPORT, *supra* note 4, at 12-13.

21. *Id.*

trading sex for drugs,²² and needle sharing among heroin, cocaine, and methamphetamine users—is the most potent stimulus for the modern HIV/AIDS epidemic.²³ The CDC estimates that approximately half of the 41,000 new HIV infections reported annually in the United States are occurring among IDUs.²⁴

The dual epidemics of drug use and HIV/AIDS exact a considerable cost from society. Injecting drug use is estimated to cost \$58.3 billion a year in lost productivity, motor vehicle accidents, crime, stolen property, and drug treatment.²⁵ Added to these is the impact of HIV/AIDS. The cost of providing health care to a person living with HIV/AIDS, discounted to determine the present value of future costs, is estimated to be between \$56,000 and \$80,000,²⁶ a figure that is somewhat lower than earlier, non-discounted estimates.²⁷ Although these data significantly underestimate the current lifetime health care costs of HIV/AIDS, they indicate that the population living with HIV/AIDS incurs substantial expenditures. When the conservative lifetime health care costs of persons living with HIV/AIDS are multiplied by the estimated 20,500 new HIV cases each year associated with injecting drug use,²⁸ the total annual expenditure ranges from \$1.15 billion to \$1.64 billion. More important, since HIV/AIDS primarily affects people during their prime work and child-rearing years, the cost of health care does not reflect the overall societal cost of losing productive workers and primary caretakers of minor or elderly dependents.

22. Women who use crack, whether or not they inject drugs or trade sex for drugs, are at an increased risk of becoming infected because of increased sexual activity and loss of inhibitions brought on by the use of crack cocaine. D. Paone et al., *Sex, Drugs, and Syringe Exchange in New York City: Women's Experiences*, 50 J. AM. WOMEN'S MED. ASS'N 109, 112 (1995) (reporting that 30% of female IDUs interviewed (n=907) reported engaging in commercial sex work); NATIONAL COMMISSION ON AIDS, *THE TWIN EPIDEMICS OF SUBSTANCE USE AND HIV* 6 (1991) (quoting a crack dealer who reported trading drugs for sex with 30 different women in the course of one month).

23. NATIONAL RESEARCH COUNCIL, *PREVENTING HIV*, *supra* note 1, at 10 ("The epidemiologic data do indicate that the HIV epidemic in this country is now clearly driven by infections occurring in the population of injection drug users, their sexual partners, and their offspring.").

24. Holmberg, *supra* note 9, at 642.

25. Dorothy P. Rice et al., *Estimates of Economic Costs of Alcohol and Drug Abuse and Mental Illness, 1985 and 1988*, 106 PUB. HEALTH REP. 280, 285 (1991).

26. M.E. Guinan et al., *Estimating the Value of Preventing a Human Immunodeficiency Virus Infection*, 10 AM. J. PREVENTIVE MED. 1 (1994).

27. Fred J. Hellinger, *The Lifetime Cost of Treating a Person with HIV*, 270 JAMA 474, 474 (1993).

28. See Holmberg, *supra* note 9, at 642 (roughly half of the 41,000 new HIV infections each year occur among IDUs).

The interconnected epidemics of blood-borne infection and injection drug use sap society of productive resources, in lost workers, broken families, and costly health care and social services. These economic and social burdens provide a compelling justification for a public health approach to injecting drug use. A public health approach does not require society to abandon criminal penalties for illicit drug use. However, it does require implementation of public health policies that are known to work based on sound scientific studies. Public health research has demonstrated that blood-borne disease among IDUs and their sexual partners is, to a significant extent, preventable. Data exist to demonstrate that implementation of well-established public health programs could markedly reduce morbidity and mortality without undermining criminal justice objectives.

In this Article, I first examine the mechanism by which blood-borne disease is transmitted through sharing of injection equipment. Thereafter, I present a public health strategy for reducing multi-person use of contaminated injection equipment. This strategy includes: repealing or modifying current laws and regulations making possession and distribution of sterile injection equipment a criminal offense; implementing syringe exchange programs to expand access to new syringes for users of injection drugs; and counseling, education, and treatment targeted to IDUs, including those in the prison and health care system. The objective of a public health approach is not to encourage or enable IDUs to obtain and use drugs; public health strategies actively seek to reduce drug use due to its profound adverse effects on physical and mental health. Rather, the public health approach seeks to substantially improve health outcomes for IDUs who cannot or will not stop using drugs.

II. THE PUBLIC HEALTH EFFECTS OF LIMITING THE SUPPLY OF STERILE DRUG INJECTION EQUIPMENT: THE MULTI-PERSON USE OF SYRINGES AMONG IDUS

The primary mode of HIV transmission among IDUs is through multi-person use, often called "sharing," of drug injection equipment.²⁹ The term "sharing," used in the epidemiologic and ethnographic literature,³⁰ does not accurately reflect the motive or the meaning that IDUs ascribe to this

29. NATIONAL RESEARCH COUNCIL, PREVENTING HIV, *supra* note 1, at 24.

30. *Id.* at 24-25. See also NATIONAL RESEARCH COUNCIL, AIDS, *supra* note 1, at 189; James A. Inciardi & J. Bryan Page, *Drug Sharing Among Intravenous Drug Users*, 5 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 772 (1991); Donald C. Des Jarlais et al., *AIDS and Needle Sharing Within the IV Drug Use Subculture*, in THE SOCIAL DIMENSIONS OF AIDS: METHOD & THEORY 111 (Douglas A. Feldman & Thomas M. Johnson eds., 1986).

behavior.³¹ The word “sharing” implies that the transfer of syringes and needles among IDUs is a voluntary act of altruism and social connection.³² Research indicates, however, that sharing is often a pragmatic response to syringe scarcity. This section details the mechanism for the spread of infection through multi-person syringe use, describes the motivations for transfer of syringes among partners or groups, and explicates the legitimate medical purposes behind a policy advocating access to sterile syringes.

A. Mechanism of Blood-Borne Transmission

Multi-person use of drug injection equipment among IDUs is a highly efficient vector for transmitting blood-borne disease.³³ The behavior and motivations for sharing injection equipment are complex, and offer multiple opportunities for contamination. Each of the behaviors reported by IDUs poses separate and cumulative risks of transmitting infection among partners or groups who inject drugs.

The process of injecting drugs involves a number of steps. The first step is “registering,” in which the IDU inserts a needle into a vein in her skin, and to identify proper placement, withdraws the plunger of the syringe to observe for the presence of blood in the barrel of the syringe.³⁴ The IDU then injects the drug. The next step is “booting:” while the needle remains in the vein, the IDU “draws back on the plunger of the syringe to fill the barrel with blood and then reinjects the blood, sometimes repeating this practice several times.”³⁵ “Booting” ensures that the drug solution is fully discharged from the syringe, and increases the “high,” particularly when injecting cocaine. During the injection process, the needle, hub, barrel, and plunger of the syringe all become contaminated with blood. When the injection is complete, the drug paraphernalia—including the “cooker” and “cotton”—are frequently soaked in

31. Stephen K. Koester, *Copping, Running and Paraphernalia Laws: Contextual Variables and Needle Risk Behavior Among Injection Drug Users in Denver*, 53 HUM. ORG. 287, 289 (1994). Injecting drug users themselves often do not consider the multi-person use of syringes as “sharing.” When asked if they “share” syringes, they often answer “no,” but when asked if they allow others to use their syringe, they respond, “yes.” *Id.*

32. Robert G. Carlson et al., *Ethnography, Epidemiology and Public Policy: Needle Use Practices and Risk Reduction Among IV Drug Users in the Midwest*, in ANTHROPOLOGY AND GLOBAL AIDS POLICY (Douglas A. Feldman ed., forthcoming 1997).

33. Gerald H. Friedland & Robert S. Klein, *Transmission of the Human Immunodeficiency Virus*, 317 NEW ENG. J. MED. 1125, 1125 (1987).

34. NATIONAL RESEARCH COUNCIL, PREVENTING HIV *supra* note 1, at 25.

35. *Id.*

the same "rinse water."³⁶ The IDU may then transfer the "works" (the entire set of drug preparation and injection equipment) to the next IDU, who, in re-using the equipment, injects the previous user's blood residue directly into his vein. The method transmits into the current user any blood-borne pathogens carried by the previous user. The more the IDU "mixes" the equipment with others, and the more often he or she injects with contaminated syringes, the greater the risk of infection.

Injecting drug users share works with sexual partners, friends, or strangers. When IDUs are unable to obtain sterile syringes and needles from pharmacists, health care professionals, or public health departments, they procure their equipment from street sellers and "shooting galleries."³⁷ Shooting galleries are locations where IDUs congregate to inject drugs, often sharing works; these galleries are typically situated near a "copping place," an area where drugs can be purchased. On occasion, syringes are included with the drug purchase, or are rented or lent by dealers ("house works"). Syringes tend to be transferred anonymously when selected from a common stock in a shooting gallery (a process called "pooling") or when discovered after another IDU has "stashed" them for later use.³⁸ Drug injection equipment may be used in this way until the needle becomes occluded with blood, is too dull to use, or breaks.³⁹ Shooting galleries and house works are particularly detrimental to the public health because they involve sharing beyond a discrete group of friends or sexual partners.

B. Sharing Drug Injection Equipment: Syringe Scarcity as a Rationale for IDU Behavior

Although multi-person use of syringes is quite complex, it is possible to

36. *Id.* at 26-27. The "cooker" is a small container, frequently a bottle-cap or spoon, used to dissolve the drug, which often is in powder form. *Id.* The "cotton" strains undissolved impurities from the solution prepared in the cooker as the drug is drawn up into the syringe. *Id.* The "rinse water" is used to rinse out syringes and needles before they are reused—not necessarily to decontaminate the equipment—but to prevent clotting and therefore unusable works. *Id.* at 28.

37. See Dale D. Chitwood et al., *HIV Seropositivity of Needles from Shooting Galleries in South Florida*, 80 AM. J. PUB. HEALTH 150 (1990).

38. Koester, *supra* note 31, at 289. See also Bryan J. Page et al., *Intravenous Drug Use and HIV Infection in Miami*, 4 MED. ANTHROPOLOGY Q. 56 (1990).

39. Donald C. Des Jarlais et al., U.S. Dep't of Health & Human Services, *The Sharing of Drug Injection Equipment and the AIDS Epidemic in New York City*, in NEEDLE SHARING AMONG INTRAVENOUS DRUG ABUSERS: NATIONAL AND INTERNATIONAL PERSPECTIVES 164 (Robert J. Battjes & Roy W. Pickens eds., 1988); Anthony Hopkins, U.S. Dep't of Health & Human Services, *Needle Sharing and Street Behavior in Response to AIDS in New York City*, in NEEDLE SHARING AMONG INTRAVENOUS DRUG ABUSERS: NATIONAL AND INTERNATIONAL PERSPECTIVES 18, 24 (Robert J. Battjes & Ray W. Pickens eds., 1988) (discussing a study in which some users reported using the same drug injection equipment more than 20 times).

ascertain what motivates IDUs to re-use equipment. When the issue was first studied, some researchers attributed “sharing” of drug injection equipment in part to the drug subculture and its unfathomable routines; IDUs were thought to transfer their drug preparation and injection equipment as a social convention or as a means of communal reinforcement.⁴⁰ Increasingly, however, researchers have identified a scarcity of sterile injection equipment—rather than a culturally-created norm—as a leading factor in many IDUs’ use of contaminated equipment.

When asked, IDUs express a preference for new syringes and needles, and cite compelling reasons: the risk of blood-borne infection witnessed among their friends and partners; used plungers are ineffective; used needles are blunt and clog easily; and new needles are easier to insert, particularly for IDUs who are “hard to hit” or who want to protect their remaining “good veins.”⁴¹ Injecting drug users, moreover, perceive the possession of drug paraphernalia as significantly increasing the possibility of detection by law enforcement.⁴² Unlike small quantities of drugs, syringes are difficult to hide or discard. The IDU’s reluctance to possess syringes means that he must borrow them when he injects, creating the very risk of blood-borne infection that public health seeks to prevent. When IDUs experience a psychological or physiological craving for the drug, they are likely to use whatever works are readily available.⁴³ It is essential, therefore, that sterile syringes are easily accessible at the time of injection so the IDU does not borrow, share, or pool injection equipment.

C. *The Legitimate Medical Purpose of Sterile Syringes*

Decontamination efforts, such as flushing drug equipment with bleach, can reduce the risk of exposure, but are not as safe as using a new, sterile syringe for each injection.⁴⁴ Limiting the circumstances in which IDUs are likely to re-use equipment lowers the probability of spreading disease. Consequently, experts in preventive medicine and public health advise IDUs to utilize new sterile equipment for each injection.⁴⁵

40. See John L. Black et al., *Sharing of Needles Among Users of Intravenous Drugs*, 314 *NEW ENG. J. MED.* 446 (1986); David D. Celentano et al., *Risk Factors for Shooting Gallery Use and Cessation Among Intravenous Drug Users*, 81 *AM. J. PUB. HEALTH* 1291 (1991).

41. Koester, *supra* note 31, at 289.

42. *Id.* at 291; Alice A. Gleghorn et al., *Acquisition and Use of Needles and Syringes by Injecting Drug Users in Baltimore, Maryland*, 10 *J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY* 97, 99 (1995).

43. R.T. D’Aquila & A.B. Williams, *Epidemic Human Immunodeficiency Virus (HIV) Infection by Injecting Drug Users*, *YALE J. BIOLOGY & MED.* 535, 545 (1987).

44. H.W. Haverkos & T.S. Jones, *HIV, Drug-Use Paraphernalia, and Bleach*, 7 *J. ACQUIRED IMMUNE DEFICIENCY SYNDROME* 741 (1994).

45. *Id.*

Unlike other drug paraphernalia, sterile syringes serve important clinical and public health functions (e.g., preventing the transmission of HIV infection and other blood-borne diseases among IDUs, their sex partners, and their children). A legitimate medical and public health purpose exists for increasing IDUs' access to sterile syringes. In summary, the medical and public health communities attribute a scientific and social meaning to syringes that contrasts sharply with the criminal justice view of syringes as instruments of illicit drug use and its attendant moral decay. Below, I examine three public health policies to reduce the adverse health effects of drug injection: repeal of laws and regulations restricting access to sterile injection equipment; establishment of syringe exchange programs; and counseling, education and treatment.

III. REPEAL OF LAWS AND REGULATIONS RESTRICTING ACCESS TO STERILE INJECTION EQUIPMENT

Broadly speaking, four categories of law and regulation directly restrict the supply of sterile drug injection equipment: syringe prescription laws, drug paraphernalia laws, the Federal Mail Order Drug Paraphernalia Control Act, and pharmacy regulations and practice guidelines. This section describes these laws and regulations and assesses their effects on the population's health.⁴⁶

A. *Syringe Prescription Laws*

Syringe prescription laws proscribe the dispensing or possession of a syringe without a valid medical prescription. Syringe prescription laws do not have a criminal intent requirement. Thus, in a state with a syringe prescription law, a pharmacist who dispenses a hypodermic syringe without a prescription need not know that the buyer intends to use the syringe to inject illegal drugs; the very act of selling or dispensing the syringe without a prescription constitutes a violation.

Eight states and one territory have syringe prescription statutes prohibiting the dispensing of hypodermic needles and syringes without a valid medical prescription.⁴⁷ Six additional states restrict the purchase of syringes without a prescription. These laws variously require prescriptions for sales to specific

46. The data presented in this section are taken from a national survey undertaken under the auspices of the Centers for Disease Control and Prevention and the Association of Schools of Public Health. The methodology and complete data are reported in Lawrence O. Gostin et al., *Prevention of HIV/AIDS Among Injection Drug Users: The Theory and Science of Public Health and Criminal Justice Approaches to Disease Prevention*, 46 EMORY L.J. (forthcoming 1997).

47. California, Delaware, Illinois, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and the Virgin Islands.

classes of purchasers (e.g., minors),⁴⁸ for certain types of purchases (e.g., bulk),⁴⁹ or for non-authorized purposes.⁵⁰

To limit physicians' and pharmacists' discretion in dispensing syringes, most syringe prescription laws require a "legitimate medical purpose." The "legitimate medical purposes" doctrine strengthens the regulatory effect of syringe prescription laws through dual mechanisms. First, the doctrine holds that a prescription is invalid unless it has been issued in good faith for a therapeutic purpose. Physicians have been convicted or have had their licenses revoked for improperly prescribing drugs or drug paraphernalia.⁵¹ Secondly, the laws in many states require pharmacists to document syringe and needle sales, together with the intended medical purpose. Under these laws, persons charged with illegal possession of a hypodermic syringe or needle bear the burden of proving that they have sufficient authority or license to possess such equipment.⁵²

B. Drug Paraphernalia Laws

Throughout the 1960s and 1970s, against the backdrop of concern about illegal drugs and the realization that traditional anti-drug laws were inadequate to curb drug use, states and municipalities enacted drug paraphernalia laws. Many legislatures drafted broadly worded statutes that would comprehensively cover various drug paraphernalia. The courts found these early drug paraphernalia laws to be unconstitutionally vague and overly broad.⁵³ To cure the constitutional flaws, in 1979 the Drug Enforcement Administration promulgated the Model Drug Paraphernalia Act (MDPA).⁵⁴ Moreover, the Supreme Court advanced the trend toward comprehensive drug paraphernalia laws by upholding the constitutionality of broadly worded local laws that were not based upon the MDPA.⁵⁵

48. Virginia requires a prescription for sale to individuals under age 16; Florida requires one for sale to individuals under age 18; Oregon requires the authorization of a physician, parent, guardian, or other acceptable means for sale to minors; and Maine specifies that anyone over the age of 18 may purchase from an authorized seller.

49. A 1992 amendment to Connecticut law requires a prescription only for sales of more than ten syringes.

50. In Nevada, hypodermic devices may be sold without a prescription for medical, veterinary, industrial, and hobby purposes, as long as the seller is satisfied that the device will be used lawfully.

51. *Minnesota ex rel. Whipple v. Martinson*, 256 U.S. 41 (1921).

52. *Commonwealth v. Jefferson*, 387 N.E.2d 579, 581 (Mass. 1979).

53. *See, e.g., Geiger v. City of Eagan*, 618 F.2d 26 (8th Cir. 1980) (declaring a local ordinance banning the possession, sale, or transfer of a "drug related device" as unconstitutionally vague).

54. *Drug Paraphernalia: Hearing Before the House Select Comm. on Narcotics Abuse & Control*, 96th Cong., 1st Sess. 6 (1979) (statement of Sue Rusche).

55. *Village of Hoffman Estates v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489 (1982).

Forty-seven states, the District of Columbia, and the Virgin Islands have enacted drug paraphernalia laws; only Alaska, Iowa,⁵⁶ South Carolina, and four territories⁵⁷ have no state or territory-wide drug paraphernalia statute. In forty-six states and territories, the drug paraphernalia laws are based at least partially on the MDPA. The statutes often enumerate the objects regarded as drug paraphernalia, and almost always include “[h]ypodermic syringes, needles, and other objects used, intended for use, and designed for use in parenterally injecting controlled substances into the human body.”⁵⁸

Drug paraphernalia statutes ban the manufacture, sale, distribution, possession, or advertising of a wide range of devices if knowledge exists that they may be used to introduce illicit substances into the body.⁵⁹ The statute is not violated if the drug injection equipment is sold without knowledge that it will be used to inject illegal drugs. Thus, a pharmacist who sells hypodermic syringes and needles over-the-counter, believing that the purchaser is an insulin-dependent diabetic, commits no offense under drug paraphernalia laws.

C. The Federal Mail Order Drug Paraphernalia Control Act

The Federal Mail Order Drug Paraphernalia Control Act (Mail Order Act), enacted as part of the Anti-Drug Abuse Act of 1986, was expanded in 1990.⁶⁰ The Mail Order Act was originally designed to prohibit the use of the United States Postal Service in transporting equipment intended for drug consumption. The statute was amended to proscribe any offer for sale and transportation in interstate or foreign commerce, or import or export of drug paraphernalia.⁶¹ In addition, the Act authorizes seizure and forfeiture of drug paraphernalia.⁶² Although challenged as unconstitutionally vague, and as lacking an intent requirement, the Mail Order Act has been upheld on both counts.⁶³

56. Alaska and Iowa have local drug paraphernalia provisions covering some counties and cities.

57. Guam, Northern Mariana Islands, Puerto Rico, and American Samoa.

58. *See, e.g.*, NEB. REV. STAT. § 28-439(3) (1996).

59. MODEL DRUG PARAPHERNALIA ACT art. II (1979), *reprinted in* Gregory R. Veal, Note, *The Model Drug Paraphernalia Act: Can We Outlaw Head Shops—And Should We?*, 16 GA. L. REV. 137 (1981).

60. 21 U.S.C. § 857 (1986) (repealed in 1990 and re-enacted as 21 U.S.C. § 863 (1996)).

61. 21 U.S.C. § 863(a)(1)-(3).

62. 21 U.S.C. § 863(c).

63. *See generally* Theresa A. Kleine-Kracht, Note, *Resolving Statutory Ambiguity with a Split Scienier Approach: The Second Circuit's Approach to the Federal Mail Order Drug Paraphernalia Act*, 81 KY. L.J. 779 (1992-1993).

The Mail Order Act is notable in that it conferred federal jurisdiction over an area traditionally reserved for the states.⁶⁴ Police and prosecutors, in deference to local public health authorities, may choose to relax enforcement of state laws that restrict access to drug injection equipment. Such a decision, however, does not preclude federal authorities from vigorously enforcing the Mail Order Act.

D. Pharmacy Regulations and Practice Guidelines

Pharmacy regulations are established pursuant to state law by Pharmacy Boards or other governmental agencies, such as the Department of Consumer Protection, the Department of Health, or the Department of Drug Control. Pharmacists are legally required to comply with the rules regulating the sale of syringes. In addition, state pharmacy boards typically establish practice guidelines. Although these guidelines lack the force of law, a pharmacist who fails to comply with them could be found civilly liable under state tort law or be subjected to professional sanction.

Thirty-two jurisdictions have pharmacy regulations or practice guidelines restricting access to syringes.⁶⁵ Twenty-three of these states do not have syringe prescription laws.⁶⁶ In at least thirteen of these twenty-three states, regulations or mandatory practice standards effectively bar IDUs and the general public from purchasing syringes.⁶⁷ The regulations require that sellers ask purchasers to proffer some form of identification, along with a prescription or other proof of medical need. These rules may also impose record-keeping requirements. Other states specify that purchasers must produce valid identification, such as a driver's license.⁶⁸ In many states, pharmacists are expressly authorized to refuse to sell syringes which they believe may be intended for illegal use.⁶⁹

64. Chris B. Pascal, U.S. Dep't of Health & Human Services, *Intravenous Drug Abuse and AIDS Transmission: Federal and State Laws Regulating Needle Availability*, in *NEEDLE SHARING AMONG INTRAVENOUS DRUG ABUSERS: NATIONAL AND INTERNATIONAL PERSPECTIVE* 119 (Robert J. Battjes & Roy W. Pickens eds., 1988). See also *supra* note 10.

65. Alabama, Arkansas, California, Delaware, District of Columbia, Georgia, Hawaii, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and the Virgin Islands.

66. Alabama, Arkansas, District of Columbia, Georgia, Hawaii, Indiana, Kentucky, Maryland, Minnesota, Missouri, Nevada, New Mexico, North Dakota, Ohio, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

67. Arkansas, District of Columbia, Georgia, Indiana, Kentucky, Maryland, Nevada, Ohio, Pennsylvania, Tennessee, Virginia, Washington, and West Virginia.

68. *E.g.*, South Carolina and Virginia.

69. *E.g.*, Georgia, Maryland, Mississippi, Pennsylvania, Tennessee, Texas, and Washington.

Eighteen jurisdictions track the sale of needles and syringes by requiring pharmacists to maintain detailed records.⁷⁰ The information requested often includes the purchaser's name and address, the date and quantity of the sale, and the intended use. Purchasers may also be required to sign a register. In addition, pharmacists must usually retain the records for a period of time prescribed in the regulations and, if requested, submit the documents for inspection by law enforcement or by other government agencies.

In summary, a pervasive network of laws, regulations, and practice guidelines exist that severely restrict the sale and possession of sterile drug injection equipment. Every state and the District of Columbia have enacted state or local laws restricting the sale, distribution, or possession of syringes.⁷¹ Forty-nine states, the District of Columbia, and the Virgin Islands have passed drug paraphernalia statutes or local ordinances. Only South Carolina and four territories⁷² do not have drug paraphernalia provisions. Ten states and one territory have statutes, regulations, or local ordinances that require a prescription for the purchase of syringes.⁷³ Fourteen additional states have regulations or local ordinances that otherwise limit the sale and purchase of syringes.⁷⁴

E. Public Health Effects of Syringe Deregulation

This section examines the public health effects of syringe deregulation. The principal issue is whether deregulating syringe sale and possession will likely reduce blood-borne infection without increasing drug use in the population.

1. Over-the-Counter Sale of Syringes: The Role of Pharmacists

Pharmacists face daunting legal and professional hurdles in selling injection equipment to IDUs. By requiring prescriptions or proof of medical need, identification, and record-keeping, states impede pharmacists and customers from instituting safer means for drug injection. Drug users, wary of legal consequences, may avoid pharmacies out of fear of intrusive questioning and/or government scrutiny of their purchase records. Pharmacists, wary of criminal

70. Arkansas, California, Connecticut, District of Columbia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Rhode Island, South Carolina, Virginia, West Virginia, and the Virgin Islands.

71. Only four territories—Guam, the Northern Mariana Islands, Puerto Rico, and American Samoa—did not report any restrictions.

72. Guam, Northern Mariana Islands, Puerto Rico, and American Samoa.

73. California, Delaware, Florida, Illinois, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and the Virgin Islands.

74. Arkansas, District of Columbia, Georgia, Indiana, Kentucky, Maryland, Michigan, Nevada, Ohio, South Carolina, Tennessee, Virginia, Washington, and West Virginia.

prohibitions and professional sanctions, may decline to sell syringes to suspected IDUs.

Nationwide, pharmacists retain considerable discretion in deciding whether to sell syringes, and to whom. Some pharmacists sell to all buyers; others refuse to sell to purchasers who demonstrate visible signs of injection drug use or who cannot offer a plausible medical justification; still others refuse sales for discriminatory or capricious reasons.⁷⁵ Pharmacist discretion yields wide variation in the willingness to sell to IDUs.⁷⁶ Biases toward, for example, racial minorities, young people, and homeless or mentally ill persons potentially limit opportunities for pharmacy customers to purchase hypodermic needles and syringes.⁷⁷

2. Drug User Compliance with Public Health Advice: The Law's Chilling Effect

The simple act of following public health advice to obtain and use a sterile syringe for each injection⁷⁸ can pose acute legal problems for IDUs, including prosecution for possession of drug injection equipment. An IDU is unlikely to present a valid medical reason for requiring a syringe and needle, and thus is likely to violate both syringe prescription and drug paraphernalia laws. Drug users may be arrested for carrying syringes and even bottles of bleach.⁷⁹

One might ask: why would the potential legal consequences of carrying sterile injection equipment dissuade a drug user, when she is already engaged in far more serious criminal behavior? From the drug user's perspective, laws that proscribe the possession of syringes are problematic for a number of reasons. First, drug users who are arrested on a drug paraphernalia charge are subject to fines and possible incarceration. Secondly, the violation itself marks the person as a drug user, and may subject her to more intense police surveillance. Third, once an individual is found to possess drug paraphernalia,

75. A. Glantz et al., *Role of Community Pharmacies in Prevention of AIDS Among Injecting Drug Misusers: Findings of a Survey in England and Wales*, 299 BRIT. MED. J. 1076 (1989); Gerry V. Stimson, *Syringe-Exchange Programmes for Injecting Drug Users*, 3 AIDS 253, 254 (1989).

76. R. Ettelson, *Sell Needles and Syringes to IV Drug Abusers?*, 57 PHARMACY TIMES 107 (1991).

77. William M. Compton III et al., *Legal Needle Buying in St. Louis*, 82 AM. J. PUB. HEALTH 595 (1992); William A. Zellmer, *Pharmacist Involvement in Needle Exchange Programs*, NS34 AM. PHARMACY 48 (1994) (surveying state pharmacy leaders' attitudes toward over-the-counter sales of syringes to IDUs and reporting the influence of a strong professional anti-drug bias).

78. GUIDE TO CLINICAL PREVENTIVE SERVICES: REPORT OF THE U.S. PREVENTIVE SERVICES TASK FORCE (2d ed. 1996) [hereinafter GUIDE TO CLINICAL PREVENTIVE SERVICES].

79. Jeff Stryker, *IV Drug Use and AIDS: Public Policy and Dirty Needles*, 14 J. HEALTH POL. POL'Y & L. 719, 728 (1989).

she is more likely to undergo a police search for illicit drugs. Discovery of a syringe or even bleach may provide probable cause under the Fourth Amendment to conduct a broader search of the drug user and her possessions, leading to confiscation of illicit drugs and prosecution for sale or use.

Ethnographic studies vividly illustrate that drug users, fearing detection of drug injection equipment under these laws, often fail to carry sterile syringes and needles.⁸⁰ Syringe laws and regulations, therefore, create a marked disincentive for drug users to possess sterile syringes when they purchase or inject drugs. Ironically, this is precisely the time when users most need sterile injection equipment. To arrest and prosecute the drug user for complying with the health department's safer injection practice recommendations effectively undermines public health.

3. Providing the Means for IDUs to Engage in Safer Drug Injection: Research Evaluations of Syringe Deregulation

Earlier thinking held that IDUs were engaged in such high risk and criminal activity that they harbored no concern for their health and well-being, and that they would refuse to alter their behavior.⁸¹ Some individuals asserted that cessation of drug use, not harm reduction, was the only way to avoid risk.⁸² Yet, numerous studies have shown significant reductions in the frequency of injection and needle sharing following public health intervention programs that provide education, counseling, and the means to change high-risk behavior.⁸³

Behavioral scientists have consistently observed that education, counseling, and outreach activities will not modify IDUs' behavior unless they are given the means to comply with public health advice.⁸⁴ One way to provide such means

80. Koester, *supra* note 31, at 290-91; Feldman & Biernacki, *supra* note 10, at 32.

81. Alan A. Wartenberg, 'Into Whatever Houses I Enter': *HIV and Injecting Drug Use*, 271 JAMA 151, 151 (1994).

82. See OFFICE OF NATIONAL DRUG CONTROL POLICY, NEEDLE EXCHANGE PROGRAMS: ARE THEY EFFECTIVE (ONDCP Bulletin No. 7, 1992).

83. See, e.g., Donald C. Des Jarlais & Samuel R. Friedman, *The Psychology of Preventing AIDS Among Intravenous Drug Users: A Social Learning Conceptualization*, 43 AM. PSYCHOL. 865 (1988); Richard C. Stephens et al., *Effects of an Intervention Program on AIDS-Related Drug and Needle Behavior Among Intravenous Drug Users*, 81 AM. J. PUB. HEALTH 568, 568-69 (1991).

84. Donald C. Des Jarlais & Samuel R. Friedman, *HIV and Intravenous Drug Use*, 2 AIDS S65, S70-71 (1988). When counseled through educational programs, IDUs will seek to use sterile syringes; restricting access to syringes creates an artificial scarcity which in turn inflates the street value. No amount of education is likely to prevent an addict in the throes of withdrawal from using dirty equipment if that is all that is available. D'Aquila & Williams, *supra* note 43, at 553. Furthermore, some dealers reportedly repackage used works and sell them as new, a danger most addicts are ill-equipped to detect. Don C. Des Jarlais & William Hopkins, "Free" Needles for Intravenous Drug Users At Risk for AIDS: *Current Developments in New York City*, 313 NEW ENG.

is to permit IDUs to purchase syringes over-the-counter in pharmacies. Some states have recently reformed their laws to permit over-the-counter syringe sales, providing an opportunity to scientifically investigate the health effects. The results suggest that repealing or modifying restrictive laws may reduce unsafe injection behavior among IDUs, including re-use of contaminated equipment and reliance upon questionable sources (e.g., drug dealers, street sellers, and shooting galleries) for "new" syringes.⁸⁵ In Connecticut, where restrictive laws regarding access to syringes were partially repealed in 1992, evaluation of the law's impact after one year demonstrated positive behavioral and health outcomes. In a survey of pharmacies, researchers found that in the year after non-prescription sales in pharmacies became legal, more than 80% of pharmacies in the state were making non-prescription sales.⁸⁶ Sales of syringes in areas with large IDU populations increased substantially, suggesting that new purchasers, including IDUs, were taking advantage of the recently enacted legislation.⁸⁷ Surveys of IDUs in Connecticut also revealed reductions in unsafe injection practices. Following the change in the law, IDUs reported a 39% drop in multi-person use of syringes. Injecting drug users also reported a shift in their primary source of syringes—from purchases on the street (of potentially non-sterile syringes) to purchases from pharmacies (of sterile syringes).⁸⁸

Legal penalties for possession of syringes have failed to solve the problem of drug abuse and have created an environment in which sterile syringes are scarce, and risky behavior among IDUs is prevalent. With a limited supply of syringes and continuing demand, used syringes are sometimes re-packaged and sold as new.⁸⁹ Even when addicts can obtain sterile syringes, the public policy criminalizing the possession of hypodermic syringes prevents many addicts from carrying their own injection equipment for fear of arrest. Compelling empirical data suggest that the prevailing policy promotes multi-person use of injection equipment, including the renting of syringes in shooting galleries, or the

J. OF MED. 1476, 1476 (1985) [hereinafter Des Jarlais & Hopkins, "Free" Needles].

85. Elaine O'Keefe, *Altering Public Policy on Needle Exchange: The Connecticut Experience*, 6 AIDS & PUB. POL'Y J. 159 (1991); Merrill Singer et al., *Needle Access as an AIDS Prevention Strategy for IV Drug Users: A Research Perspective*, 50 HUM. ORG. 142 (1991).

86. Linda A. Valleroy et al., *Impact of Increased Legal Access to Needles and Syringes on Community Pharmacies' Needle and Syringe Sales—Connecticut, 1992-1993*, 10 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 73 (1995).

87. *Id.*

88. Samuel L. Groseclose et al., *Impact of Increased Legal Access to Needles and Syringes on Practices of Injecting-Drug Users and Police Officers—Connecticut, 1992-1993*, 10 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 82 (1995).

89. See Des Jarlais & Hopkins, "Free" Needles, *supra* note 84.

purchase of syringes from street suppliers.⁹⁰ During a survey in California, an ethnographer asked a female heroin addict why she did not carry sterile syringes to use when she injected drugs: "‘Because,’ she answered, ‘I would rather get AIDS than go to jail.’"⁹¹

IV. PUBLIC HEALTH EFFECTS OF SYRINGE EXCHANGE PROGRAMS

Syringe exchange programs (SEPs) provide an organized method of channeling access to sterile injection equipment. Characteristically, SEPs offer new syringes and needles to IDUs in exchange for used equipment. Syringe exchange programs are typically operated or funded by public health departments, by community-based organizations, or by former IDUs. An April, 1995 survey of sixty SEPs in North America found them operating in forty-six cities in twenty-one states.⁹² During 1994, the SEPs exchanged approximately eight million sterile syringes for used syringes.⁹³ In addition, the programs offered a wide range of services, including instruction on hygienic drug injection, provision of latex condoms, HIV counseling and testing, tuberculin skin testing, directly observed tuberculosis therapy, and primary health care.⁹⁴

A. *The Lawfulness of Syringe Exchange Programs*

The lawfulness of SEPs in many jurisdictions is fraught with doubt. Syringe exchange programs in the April, 1995 survey reported: 55% were "legal" because they operated in a state with no syringe prescription law or under an exemption to the state prescription law allowing the SEP to operate; approximately 32% were "illegal-but-tolerated" because the program operated in a state with a prescription law but had received a formal vote of support or approval from a local elected body such as a city council; and 13% were "illegal/underground" because the program operated in a state with a prescription law and had no formal support from local elected officials.⁹⁵ A more recent study of fifty-two syringe exchange programs revealed: 25% operated under claims of lawfulness (none of which had been judicially reviewed) based upon a local interpretation of state drug or public health statutes; 52% had received formal authorization under state drug paraphernalia

90. Jean-Paul C. Grund et al., *In Eastern Connecticut, IDUs Purchase Syringes from Pharmacies but Don't Carry Syringes*, 10 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 104 (1995).

91. Feldman & Biernacki, *supra* note 10, at 35.

92. Centers for Disease Control & Prevention, U.S. Dep't of Health & Human Services, *Syringe Exchange Programs—United States, 1994-1995*, 44 MORBIDITY & MORTALITY WKLY. REP. 684, 684 (1995).

93. *Id.*

94. *Id.* at 685.

95. *Id.*

laws through legislative amendments or judicial construction, state administrative action, or operation in a state with no such laws; and 17% operated without a legal foundation, subject to prosecution under drug paraphernalia or prescription laws.⁹⁶

Self-reported data likely underestimate the number of SEPs that operate without legal sanction. Public health officials or community activists who operate SEPs patently know that the needles and syringes they distribute will be used to inject illicit drugs. Strictly speaking, these persons have formed the requisite "intent" under drug paraphernalia laws and, absent some overriding legal authority, appear to be operating illegally. Law enforcement may benignly choose to see no "intent" under drug paraphernalia laws, but in those states with syringe prescription laws, public health officials or community activists are plainly engaging in unlawful behavior by distributing syringes without a medical prescription. Thus, federal, state, or municipal police have jurisdiction to arrest persons who participate in SEPs and attorneys general are authorized to seek an injunction against the program. At the very least, the uncertain legal status of some SEPs may discourage IDUs from participating in the programs.

B. Restrictions on the Use of Federal Funds for Syringe Exchange

Federal funding of SEPs is restricted to some degree in almost all programs. Since 1988, Congress has enacted at least seven statutes that contain provisions prohibiting or restricting the use of federal funds for syringe exchange programs and activities.⁹⁷ The ban applies regardless of the lawfulness of the SEP. For some time, annual federal appropriations statutes have contained restrictions for funding SEPs. For example, Title V, Section 505 of the Fiscal 1996 Appropriations for the Departments of Labor, Health and Human Services (DHHS), and Education provides:

[N]o funds appropriated under this act shall be used to carry out any program of distributing sterile needles for the hypodermic injection of any illegal drug unless the Secretary of Health and Human Services determines that such programs are effective in preventing the spread of HIV and do not encourage the use of illegal drugs.⁹⁸

96. Scott Burris et al., *The Legal Strategies Used in Operating Syringe Exchange Programs in the United States*, 86 AM. J. PUB. HEALTH 1161, 1162 (1996).

97. U.S. GENERAL ACCOUNTING OFFICE, NEEDLE EXCHANGE PROGRAMS: RESEARCH SUGGESTS PROMISE AS AN AIDS PREVENTION STRATEGY 25-26 (Report No. GAO/HRD-93-60 1993) [hereinafter U.S. GAO].

98. Pub. L. No. 104-134, § 505, 110 Stat. 1321 (1996). In fiscal year 1996, this language was included in some, but not all, continuing resolutions of agencies operating under the purview of the Department of Health and Human Services (DHHS). For example, the language did not appear in the continuing resolutions for the Centers for Disease Control and Prevention and the National

The United States General Accounting Office concluded that the Department of Health and Human Services (DHSS) is authorized to conduct demonstration and research projects involving the provision of syringes, but is prohibited from using certain funds to support SEPs directly,⁹⁹ which may prevent DHSS from funding ancillary support services provided by SEPs.¹⁰⁰ Accordingly, SEPs must rely exclusively on state, local, or philanthropic funds for their operational activities, which is problematic given their uncertain legal status.

Under current law, before the federal government can fund SEPs, the Secretary of Health and Human Services must find that the programs effectively prevent the spread of HIV and do not encourage the use of illegal drugs.¹⁰¹ The Institute of Medicine recently recommended that the Surgeon General make the determination that the federal law has deemed necessary before the present prohibition against federal funds to support SEPs may be rescinded.¹⁰² Congress, however, insists that the research additionally show that SEPs reduce injecting drug use.¹⁰³ Although some studies suggest that this is the case,¹⁰⁴ the current Congress remains reluctant to fund syringe exchanges.

C. Evaluation of Syringe Exchange Programs

Research studies of SEPs, while complicated, have identified three health benefits among IDUs who participate in these programs: reduction in high-risk behavior; reduction in the incidence of HIV and other blood-borne infections; and greater access to drug treatment and other drug and HIV prevention services. Each of these indicators demonstrates the potentially powerful efficacy of SEPs.

1. Reduction in Risk-Behaviors

In studying SEPs, researchers have focused on reported changes in behavior capable of transmitting HIV among SEP clients. Comparisons of IDUs' reported behavior pre- and post-participation in the SEP have consistently revealed a marked decline in the frequency of unsafe drug injection practices. The data show that participants in SEPs are less likely to share injection

Institute of Health. Congress likely created an unintended loophole, however, and actually intended that all funds from DHHS be subject to the quoted restriction.

99. U.S. GAO, *supra* note 97, at 13.

100. *Id.*

101. Pub. L. No. 104-134, § 505, 110 Stat. 1321 (1996).

102. NATIONAL RESEARCH COUNCIL, *PREVENTING HIV*, *supra* note 1, at 253.

103. Paula Span, *Needle Exchanges Inject Controversy in AIDS Prevention*, WASH. POST, July 16, 1996, at A1.

104. See U.S. GAO, *supra* note 97, at 8-9 (discussing a number of studies showing a reduction in drug injection among long-term SEP participants).

equipment and more likely to use a new, sterile syringe for each injection as recommended by public health officials. These results have been reported among SEP participants in several cities, including New York,¹⁰⁵ Portland,¹⁰⁶ Hartford,¹⁰⁷ and Tacoma.¹⁰⁸

2. Reduction in Incidences of Blood-Borne Infections

Through a variety of direct and indirect means, scientific investigations have shown reduced incidences of HIV infection among SEP participants. Recent studies, described in the National Research Council's review of SEPs,¹⁰⁹ found direct evidence of substantially lower rates of new HIV infections among New York City IDUs who used SEPs.

Researchers have found indirect evidence of a reduced incidence of HIV infection among SEP participants in Tacoma, Washington and New Haven, Connecticut. The program in Tacoma, founded in 1988, is the longest-operating legally-authorized SEP in the United States.¹¹⁰ Studies assessing the impact of Tacoma's SEP are significant; syringe exchange was the area's primary HIV prevention effort, so the results of efficacy studies are less likely to be confounded by other measures. Scientific investigations of the program also afford comparison of reported effects across studies. Blinded seroprevalence surveys of persons in the Tacoma area who entered drug treatment programs from June, 1988 through December, 1992 revealed an HIV seroprevalence of 2% to 4% during each year of the five-year period studied.¹¹¹ For a community to maintain a low level of HIV infection among IDUs in the absence of effective HIV prevention efforts is unusual. During the same period, many geographic areas experienced a rapid rise in seroprevalence, particularly where

105. Denise Paone et al., National Research Council & Institute of Medicine, *New York City Syringe Exchange: An Overview*, in WORKSHOP ON NEEDLE EXCHANGE AND BLEACH DISTRIBUTION PROGRAMS 47 (1994).

106. Kathy Oliver et al., National Research Council & Institute of Medicine, *Behavioral and Community Impact of the Portland Syringe Exchange Program*, in WORKSHOP ON NEEDLE EXCHANGE AND BLEACH DISTRIBUTION PROGRAMS 35 (1994).

107. Merrill Singer et al., *Sale and Exchange of Syringes*, 10 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 104 (1995).

108. See Hollis C. Hagan et al., National Research Council & Institute of Medicine, *Risk for Human Immunodeficiency Virus and Hepatitis B Virus in Users of the Tacoma Syringe Exchange Program*, in WORKSHOP ON NEEDLE EXCHANGE AND BLEACH DISTRIBUTION PROGRAMS 24-34 (1994); Hollis C. Hagan et al., *An Interview Study of Participants in the Tacoma, Washington, Syringe Exchange*, 88 ADDICTION 1691 (1993).

109. See generally NATIONAL RESEARCH COUNCIL, PREVENTING HIV, *supra* note 1.

110. *Id.* at 234.

111. See HOLLIS C. HAGAN & C.B. HALE, HIV-1 SEROPREVALENCE SURVEYS IN PIERCE COUNTY (1993) (on file with author).

HIV prevention efforts were not targeted at IDUs.¹¹² Although a sustained low level of infection cannot be associated conclusively with syringe exchange efforts, the data provide indirect evidence that the SEP may have prevented some cases of HIV and that the program was not associated with an increase in new infections. In New Haven, researchers quantified the estimated reduction in HIV incidence based on a mathematical model of exchanged syringes contaminated with HIV. They concluded that the New Haven SEP was associated with a 33% reduction in HIV incidence.¹¹³

Due to the difficulty of measuring substantial changes in new HIV infections directly, investigators have examined changes in the incidence of other blood-borne diseases. A case-control study conducted from 1991 through 1993 in Pierce County, Washington found that cases of both hepatitis B virus (HBV) and hepatitis C virus (HCV) occurred significantly less frequently among SEP participants than among the control subjects.¹¹⁴ The National Research Council concluded that "case-control studies indicate a powerful retardant effect of needle exchange program attendance on infection with two blood-borne viral infections. . . ." ¹¹⁵ Observational studies in Pierce County reinforce this conclusion; new HBV and HCV cases attributable to injection drug use declined by more than 75% within two years after a SEP was established.¹¹⁶ During the same time period, new cases attributable to sexual transmission remained relatively stable.¹¹⁷ The National Academy of Sciences has observed that each of these scientific studies is methodologically flawed. Nevertheless, when examined as a body of scientific evidence, these data are compelling. "The situation resembles the exploration of the relationship between cigarette smoking and lung cancer; virtually every individual study was vulnerable to some particular objection, yet collectively those studies justified a compelling conclusion."¹¹⁸

112. For example, HIV seroprevalence among IDUs in New York City increased from less than 10% to more than 50% in five years; in Edinburgh, from 0% to more than 40% in one year; in Bangkok, from 2% to more than 40% in two years; and in Manipur, India, from 0% to 50% in one year. Don C. Des Jarlais et al., *Maintaining Low HIV Seroprevalence in Populations of Injecting Drug Users*, 274 JAMA 1226 (1995).

113. Edward H. Kaplan & Elaine O'Keefe, *Let the Needles Do the Talking! Evaluating the New Haven Needle Exchange*, 23 INTERFACES 7 (1993).

114. After adjusting for gender, race, age, and duration of injection, the odds ratio for the association between non-use of the exchange and hepatitis B was 5.5 (95% C.I. 1.5-20.4), while the odds ratio for hepatitis C was 7.3 (95% C.I. 1.6-32.8). See Holly Hagan et al., *Reduced Risk of Hepatitis B and Hepatitis C Among Injection Drug Users in the Tacoma Syringe Exchange Program*, 85 AM. J. PUB. HEALTH 1531 (1994).

115. NATIONAL RESEARCH COUNCIL, PREVENTING HIV, *supra* note 1, at 243.

116. See Miriam J. Alter et al., *Risk Factors for Acute Non-A, Non-B Hepatitis in the United States and Association with Hepatitis C Virus Infection*, 264 JAMA 2231 (1990); Miriam J. Alter et al., *The Changing Epidemiology of Hepatitis B in the United States*, 263 JAMA 1218 (1990).

117. HAGAN & HALE, *supra* note 111.

118. NATIONAL RESEARCH COUNCIL, PREVENTING HIV, *supra* note 1, at 3.

3. Access to Drug Treatment and Other Drug and HIV Prevention Services

Research has demonstrated that participants in SEPs have greater access to drug treatment and other HIV and drug prevention services.¹¹⁹ The majority of SEPs in the United States provide referrals to drug treatment; a much smaller number offer drug treatment on-site.¹²⁰ Since drug treatment can be effective in reducing use and dependence on illicit drugs,¹²¹ SEPs can serve to reduce harms from both drug use and blood-borne disease.

4. Absence of Evidence of Increased Drug Use

Law enforcement authorities and church and minority leaders often oppose SEPs due to continuing concerns about the potential recruitment of new drug users, apprehension of increased drug use among current IDUs, and worry about the adverse effects on communities, including a proliferation of discarded syringes.¹²² These fears pose substantial barriers to a local community's acceptance of SEPs. Studies of SEPs, however, have found no scientifically reliable evidence of these negative effects.

A recurrent objection to SEPs is that easy access to clean syringes will encourage persons to begin injecting.¹²³ Earlier studies found no evidence that new injectors were entering SEPs (on average, SEP participants were older and had been injecting longer than other IDUs in the community),¹²⁴ but the data were not strong enough to exclude the possibility that, over time, SEPs could increase rates of community drug use. Newer data are more conclusive. After reviewing recent studies from both the United States and Amsterdam, the National Research Council has found no evidence to suggest that new injectors

119. PETER LURIE ET AL., 1 THE PUBLIC HEALTH IMPACT OF NEEDLE EXCHANGE PROGRAMS IN THE UNITED STATES AND ABROAD 234-38 (1993).

120. *Id.* at 236-37.

121. 4 THE EFFECTIVENESS OF DRUG ABUSE TREATMENT: EVALUATION OF TREATMENT OUTCOMES FOR 1971-1972 DARP ADMISSION COHORT (S. Sells & D. Simpson eds., 1976); D. Dwayne Simpson, U.S. Dep't of Health & Human Services, *National Treatment System Evaluation Based on the Drug Abuse Reporting Program (DARP) Follow Up Research*, in DRUG ABUSE TREATMENT EVALUATION: STRATEGIES, PROGRESS AND PROSPECTS 29, 36 (1984).

122. Minority communities and church groups in poor inner city areas are particularly vehement in their opposition to clean-needle programs; the disparate impact that drug use has on their communities fuels fears that they will bear the risk of experimental needle exchange programs. Hanna Rosin, *Hiding from a Killer, Denial and Paranoia—"It's a Plot by the White Man"—May Be Fueling the Spread of AIDS in the Black Community*, ATLANTA J. & CONST., July 2, 1995, at B1. See also *Council Calls for End to Free-Needles Plan*, N.Y. TIMES, Dec. 7, 1988, at B10; Michael Marriott, *Needle Exchange Angers Many Minorities*, N.Y. TIMES, Nov. 7, 1988, at B1.

123. FRANKLIN E. ZIMRING & GORDON HOPKINS, THE SEARCH FOR RATIONAL DRUG CONTROL 171 (1992).

124. LURIE ET AL., *supra* note 119, at 275.

are being recruited through access to syringes from SEPs. Even in Amsterdam, where SEPs serve both injecting and non-injecting drug users, results reveal no changes in the proportion of the two groups of users.¹²⁵

Critics also argue that SEPs might increase drug use among existing IDUs. The evidence suggests that this danger is unlikely. Drug use is driven by physiological and psychological dependency, as well as by the availability of the drug itself rather than the means to administer it. An increase in sterile injection equipment will likely have little impact on the level of drug use; IDUs who procure drugs but lack access to new injection equipment simply re-use old needles and syringes. The most recent studies in New York, San Francisco, and Portland report either stable levels of injection,¹²⁶ or decreased rates of injection among SEP participants.¹²⁷

A final objection to SEPs is based on the environmental and health hazards of contaminated syringes. Where the problem has been systematically studied, no evidence has been found that SEPs cause an increase in the total number of discarded syringes; they may in fact result in fewer improperly discarded syringes.¹²⁸ Many programs employ a one-for-one exchange, which motivates IDUs to return used syringes and produces no net increase in the number of syringes in circulation.¹²⁹

In summary, a great deal of evidence exists that SEPs are effective interventions for prevention of HIV and other blood-borne diseases. They provide IDUs with the means to protect their own health, promote safer drug injection practices, and reduce or stabilize the rates of blood-borne infection. Moreover, SEPs provide these benefits with little economic cost and with no observable adverse effects on society's attempts to decrease drug dependency.

125. NATIONAL RESEARCH COUNCIL, PREVENTING AIDS, *supra* note 1, at 225-26.

126. John K. Watters et al., *Syringe and Needle-Exchange as HIV/AIDS Prevention for Injection Drug Users*, 271 JAMA 115 (1994).

127. *See generally* NATIONAL RESEARCH COUNCIL, PREVENTING AIDS, *supra* note 1. The only recent study to show an increase is unpublished.

128. LURIE ET AL., *supra* note 119.

129. Merrill Singer et al., *Sale and Exchange of Syringes*, 10 J. ACQUIRED IMMUNE DEFICIENCY SYNDROME & HUM. RETROVIROLOGY 104 (1995) (reporting about one-to-one syringe exchanges).

V. PROVIDING TREATMENT TO REDUCE THE INTERCONNECTED
EPIDEMICS OF DRUG USE AND BLOOD-BORNE DISEASE

The foregoing public health strategies are designed to make drug injection safer for individuals who cannot or will not stop using illicit drugs. The rationale for these interventions is not necessarily that drug use is legitimate from a moral, legal, or public health perspective. Rather, the social imperative of reducing the considerable morbidity and premature mortality associated with drug injection justifies these strategies. Society cannot ethically stand by and accept profound health consequences for drug users, their sexual partners, and children, when these consequences are largely preventable at a reasonable cost.

Public health strategies do not merely strive to make drug injection safer, but also to reduce drug use itself. Since drug use results in significant harms to the physical and mental health of the individual, and since it results in violence and family disintegration in the community, public health strategies must embrace interventions designed to help individuals to stop using illicit drugs. Reducing injecting drug use is the single most effective means of preventing the transmission of blood-borne diseases.

One of the most promising strategies for reducing drug use is to provide treatment. Yet, there exists a distinct ambivalence toward drug treatment in the United States. While drug use is considered an overarching social problem,¹³⁰ relatively few resources are devoted to treatment. The percentage of the federal drug budget devoted to treatment pales in comparison with funds allocated for law enforcement and interdiction.¹³¹ There are long waiting lists for drug treatment programs throughout the United States.¹³²

Delays in providing treatment for IDUs cost human lives and scarce health care resources. An IDU who is turned away from treatment will in all probability continue the dangerous cycle of drug use, sharing of injection equipment, crime, and imprisonment. Neither imprisonment nor hospitalization

130. See BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, A NATIONAL REPORT: DRUGS, CRIME, AND THE JUSTICE SYSTEM 93 (1992) (reporting that 60% of the population in 1989 perceived drugs as one of the factors most responsible for crime in the United States).

131. See, e.g., Roberto Suro, *Drug Control Strategy in Midst of a Makeover: Problem Is Recast as Public Health Issue*, WASH. POST, Mar. 2, 1997, at A11 (estimating federal funding for drug control enforcement at over \$7.75 billion in 1996, with comparable federal funding for treatment and prevention during the same year estimated at \$4.0 billion).

132. See, e.g., Lawrence O. Gostin, *The Interconnected Epidemics of Drug Dependency and AIDS*, 26 HARV. C.R.-C.L. L. REV. 113, 173-75 (1991) (citing NATIONAL ASS'N OF STATE ALCOHOL AND DRUG ABUSE DIRECTORS, TREATMENT WORKS: A REVIEW OF 15 YEARS OF RESEARCH FINDINGS ON ALCOHOL AND OTHER DRUG ABUSE TREATMENT OUTCOMES (1990) [hereinafter TREATMENT WORKS]).

for drug-associated illnesses addresses the problem; when the user is released from prison or the hospital, the cycle will likely repeat itself. The result is an ever increasing spiral of drug use, crime, and blood-borne infection. The lifestyles of drug dependent people often drive them to seek immediate relief from the physical and psychological effects of drugs. A user cannot be relied upon to reappear for a treatment slot that becomes available at some future time. Moreover, society may have lost any opportunity to get the user into treatment. For these reasons, the comprehensive goal of public health must be drug treatment on demand.

Treatment is often undervalued as a policy option because of the perception that drug use is primarily a problem for law enforcement, rather than for public health.¹³³ Part of the reason for this perception may be that drug use is thought to result from willful behavior, rather than from a classic disease process. More importantly, many believe that drug treatment simply does not work. Below, I present the extant empirical data showing the striking cost-efficacy of drug treatment. This is followed by proposals to expand access to drug treatment in the health care and criminal justice systems.

A. The Efficacy and Cost-Effectiveness of Treatment as a Public Health Strategy

A common view of drug dependency is that it is a chronic, relapsing illness that is resistant to treatment. Yet, a great deal of evaluative research demonstrates the efficacy of treatment in reducing drug use, multi-person use of syringes, and in increasing employment and social adjustment.¹³⁴ Further, the longer the treatment process, the more likely that it will be effective in ameliorating the profound physical, psychological, and social problems of drug dependency.¹³⁵

Treatment outcome data, to be sure, are compromised by the lack of controlled clinical trials.¹³⁶ Much of the early research also focused on heroin

133. See Suro, *supra* note 131, at A11. This perception may be changing at the urging of President Clinton and Barry R. McCaffrey, head of the White House drug policy office. "Clinton's [drug control] strategy represents a profound shift in rhetoric," said Kenneth Sharpe, a professor of political science at Swarthmore College and frequent critic of federal drug policies. *Id.* "It is the first significant step toward talking about illicit drug use as more of a public health issue than as a crime problem." *Id.*

134. See NATIONAL CRIMINAL JUSTICE ASS'N, U.S. DEP'T OF JUSTICE, TREATMENT OPTIONS FOR DRUG-DEPENDENT OFFENDERS: A REVIEW OF THE LITERATURE FOR STATE AND LOCAL DECISIONMAKERS 2-5 (1990).

135. See generally Lawrence O. Gostin, *Compulsory Treatment for Drug-Dependent Persons: Justifications for a Public Health Approach to Drug Dependency*, 69 MILBANK Q. 561 (1991).

136. CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT, THE EFFECTIVENESS OF DRUG ABUSE TREATMENT: IMPLICATIONS FOR CONTROLLING AIDS/HIV INFECTION 62-64 (1990).

rather than cocaine use. Despite the methodologic concerns, authoritative reviews of a large number of outcome studies conclude that treatment is effective.¹³⁷ Much of the collective knowledge of treatment effectiveness derives from two large-scale, federally funded, longitudinal studies: the Treatment Outcome Prospective Study (TOPS)¹³⁸ and the National Treatment System Based on the Drug Abuse Reporting Program (DARP).¹³⁹ TOPS and DARP, together with numerous smaller studies,¹⁴⁰ demonstrate that three primary treatment modalities were effective in causing significant and enduring declines in drug use and criminal behaviors—methadone maintenance (and other opioid substitution therapies, including the recent use of the FDA-approved, long-acting opioid, Levo-Alpha-Acetyl-Methadol [LAAM]),¹⁴¹ therapeutic communities, and outpatient drug-free programs.

Methadone maintenance allows a short-acting opiate administered with needles to be replaced with a legal, long-acting, safe, and orally administered substance.¹⁴² The Congressional Office of Technology observes that the “consistency of the scientific literature regarding the safety, efficacy, and effectiveness of methadone is overwhelming, yet some still consider methadone a controversial treatment modality.”¹⁴³ The Institute of Medicine has concluded that about 25% to 45% of opiate addicts who begin methadone maintenance treatment continue treatment for a year or longer.¹⁴⁴ Methadone maintenance has the highest rate of retention of all treatment modalities, and lowers HIV risk behavior by significantly reducing the number of injections and sharing of equipment.¹⁴⁵

A study in 1993 examined the rates of AIDS risk behaviors (particularly among IDUs) between comparable samples of opiate addicts in methadone maintenance treatment and those who were not receiving such treatment. The

137. *See id.*; NATIONAL CRIMINAL JUSTICE ASS'N, *supra* note 134; TREATMENT WORKS, *supra* note 132.

138. *See* CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 136, at 65-86; 1 INSTITUTE OF MEDICINE, TREATING DRUG PROBLEMS (1990).

139. *See* OPIOID ADDICTION AND TREATMENT: A 12 YEAR FOLLOW UP (D.D. Simpson & S.B. Sells eds., 1990).

140. *See* A. Thomas McLellan et al., *Is Treatment for Substance Abuse Effective?*, 247 JAMA 1423 (1982); NATIONAL INSTITUTE ON DRUG ABUSE, RESEARCH AND CLINICAL PRACTICE (1983).

141. JANICE FAY KAUFFMAN & GEORGE E. WOODY, U.S. DEP'T OF HEALTH AND HUMAN SERVICES, MATCHING TREATMENT TO PATIENT NEEDS IN OPIOID SUBSTITUTION THERAPY 6 (1995).

142. *Id.* at 62.

143. CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 136, at 76. *See also* KAUFFMAN & WOODY, *supra* note 141, at 7 (“Ambivalence about opioid substitution therapy continues in spite of the overwhelming scientific evidence of its effectiveness.”).

144. INSTITUTE OF MEDICINE, FEDERAL REGULATION OF METHADONE TREATMENT 22 (1995).

145. James R. Cooper, *Methadone Treatment and Acquired Immunodeficiency Syndrome*, 262 JAMA 1664 (1989).

results of this comprehensive study are remarkable. At baseline, 13% of the methadone-maintained group were HIV positive compared to 21% of those not on treatment. Over the course of three years, an additional 5% of the methadone-maintained group became infected with HIV (all of which had dropped out of their treatment program), while an additional 26% of those not on treatment at baseline became infected.¹⁴⁶ Although this study does not prove that methadone treatment was the causal agent between the different rates of infection, it suggests that participation in the treatment program was a factor in reducing AIDS risk behaviors.¹⁴⁷ Although several pharmacotherapies are currently being evaluated, the absence of any established efficacious agent is having dire consequences for cocaine-dependent persons and, if they are HIV infected, their sexual partners.

Therapeutic communities are “residential programs with expected stays of nine to twelve months, phasing into independent residence.”¹⁴⁸ Therapeutic community clients end virtually all illicit drug taking and other criminal behavior while in residence and perform better than those not in treatment (in terms of reduced drug use and criminal activity and increased social productivity) after discharge.¹⁴⁹

Outpatient drug-free programs display a great deal of heterogeneity, and range from one-time assessments and drop-in, or “rap” centers to virtual outpatient therapeutic communities with daily psychotherapy and counseling. The TOPS and DARP studies suggest similarly favorable outcomes for drug users attending outpatient drug-free programs.¹⁵⁰ Yet, evaluation is significantly hampered by the lack of uniformity in these programs and the small number of clients.

The evidence suggests that drug treatment is not only efficacious, it is cost effective. Comprehensive cost/benefit analyses conducted by the TOPS¹⁵¹ study and another report in California, the Tabbush¹⁵² study, conclude that state level funding of drug abuse programs is economically justified. The studies focus on societal savings and benefits realized from: reduced arrest, prosecution, and incarceration costs; reduced loss due to property theft; reduced social costs due to an improved labor market; and reduced medical treatment

146. INSTITUTE OF MEDICINE, *supra* note 144, at 23-24.

147. *Id.* at 24.

148. 1 INSTITUTE OF MEDICINE, *supra* note 138, at 14.

149. *Id.* at 188-89.

150. CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 136, at 84-86.

151. *Id.* at 65-86.

152. VICTOR TABBUSH, THE EFFECTIVENESS AND EFFICIENCY OF PUBLICLY FUNDED DRUG ABUSE TREATMENT AND PREVENTION PROGRAMS IN CALIFORNIA: A BENEFIT COST ANALYSIS (1986).

costs. The TOPS study concludes that there was an 11% to 30% decline in these indirect costs as a consequence of drug abuse treatment. The Tabbush study found a benefit-cost ratio of 1 to 11.54—for every dollar spent for effective drug treatment, \$11.54 of social costs is saved.¹⁵³

If policy makers concur that prevention and treatment—when properly designed, funded, and executed—are beneficial to the individual and are cost effective, the remaining question is how best to reach the drug user to reduce demand. A fundamental problem with existing treatment services is that they are often far removed from the silent world of the illicit drug user. Virtually all treatment services are delivered through traditional drug treatment facilities separated from the mainstream health care system. Drug treatment occurs, if at all, when a drug user seeks out services, has the persistence to wait his turn on the list, and voluntarily remains in treatment for the duration necessary to obtain results. This system is, at best, haphazard and idiosyncratic. At worst, it perpetuates the revolving door between drug use, needle sharing, and brief stays in detoxification or in prison.

The lesson for policy makers from the social science research is therefore relatively simple. The most effective strategy to reduce the dual epidemics of drug use and blood-borne disease is to identify as many unrecognized cases as possible and to give them the opportunity to enter and remain in treatment for durations that maximize the chance of a positive outcome. Two distinct loci for enhancing the capacity to identify and treat drug dependent persons are the health care and criminal justice systems. Large numbers of otherwise unrecognized and untreated drug users come into contact with both systems. It makes no sense to have a seriously drug-dependent person pass through an emergency room, hospital, courtroom, or prison and fail to identify her as a person who needs treatment.

B. Treatment of Drug-Dependent Persons in the Health Care System

Seriously drug-dependent people are likely to have multiple health problems, not only because of the physical and psychological effects of their dependency, but because they are likely to be poor, malnourished, even homeless. As a result of their multiple health problems, drug-dependent persons are likely to come into contact with the health care system in traditional venues such as hospitals, emergency rooms, community health and mental health centers, family physician offices, managed care organizations, and the like.

153. *Id.* at 94.

Patients with drug-related illness form a major proportion of hospital, particularly emergency department, admissions in the United States.¹⁵⁴ Hospitals participating in the Drug Abuse Warning Network (DAWN) in twenty-one American cities reported in 1990 that over one-half of their approximately 371,000 emergency room episodes involved illegal drug use.¹⁵⁵ Thousands of other unidentified drug users, many already HIV positive, pass through the health care system. Blinded studies of sentinel hospitals throughout the United States suggest that as many as 80,000 cases of HIV infection pass undetected through American hospitals each year.¹⁵⁶ A large proportion of these cases are likely to be unrecognized and untreated injecting drug users.

Even if seriously drug-dependent people were identified in traditional health care settings, they would be unlikely to receive the expert care needed to ameliorate their long-term dependencies. Traditional medicine is ill-prepared, at the most fundamental levels, to provide effective drug abuse treatment.¹⁵⁷ Research shows that medical school training in drug abuse treatment is quite poor. Medical education, from internship through residency, rarely exposes medical students to addicts and the problems of drug dependency. Even primary care physicians themselves feel they are incompetent to treat substance abuse, and research supports their beliefs that they are inaccurate in identifying and diagnosing substance abuse.¹⁵⁸

The inadequate medical education, and the poor attitudes toward drug users among physicians, are not the only problems in providing drug treatment services in the mainstream health care system. Physicians in most mainstream health care settings cannot legally prescribe methadone—the FDA approved chemical treatment for opiate abuse. Prescribing methadone has, from its inception, been highly regulated.¹⁵⁹ There are strict conditions for its use.¹⁶⁰ In particular, a provider cannot prescribe methadone unless she is specifically

154. THE WHITE HOUSE, NATIONAL DRUG CONTROL STRATEGY 3 (1989).

155. BUREAU OF JUSTICE STATISTICS, *supra* note 130, at 11. Cocaine topped the list at approximately 125,000 emergency room episodes in 1990. *Id.* Heroin/morphine use resulted in slightly less than 50,000 episodes in 1990, with reported instances of marijuana, PCP, and barbiturates use totaling less than 25,000 each in the same year. *Id.*

156. See Michael E. St. Louis et al., *Seroprevalence Rates of Human Immunodeficiency Virus Infection at Sentinel Hospitals in the United States*, 323 NEW ENG. J. MED. 213 (1990).

157. The Drug Policy Research Center aptly observes that drug treatment has been de-emphasized by the health care industry because the “mechanisms for funding drug treatment and the institutions that provide treatment have developed quite separately from the regular system of health care in America. . . .” JOHN G. HAAGA & ELIZABETH A. MCGLYNN, THE DRUG ABUSE TREATMENT SYSTEM, PROSPECTS FOR REFORM 1 (1993).

158. See *Chemical Dependency: A Treatable Disease*, 81 OHIO ST. MED. J. 77 (1985).

159. See INSTITUTE OF MEDICINE, FEDERAL REGULATION OF METHADONE TREATMENT 120-50 (1995).

160. See 21 C.F.R. §§ 291.501-.505 (1996).

approved for the purpose, and approval is not granted unless there is compliance with detailed regulations concerning staff-patient ratios, counseling, and paperwork.¹⁶¹ The regulations have had the effects of stifling growth of methadone treatment and discouraging ordinary health care providers from offering drug abuse treatment at all.

Consider the typical case of a seriously drug dependent person in an emergency department or hospital bed. The health care professional can treat all of the physical conditions associated with drug use, but is unable to prescribe treatment related to the primary diagnosis of drug dependency. The professional's only realistic option, assuming the drug problem is even diagnosed, is to place the patient on a waiting list for a drug treatment slot, with all of the known limitations of a waiting list placement.

Thus, although drug dependent people are in routine contact with the health care system, which has the unique capacity to identify and care for patients, systemic problems remain in utilizing the mainstream health care system for these purposes. Integration of drug treatment into primary care, hospitals, community health and mental health centers, managed care organizations, and other providers will require a sizable influx of resources for training, facilities, and staff. It may also require fundamental reform of federal regulations to allow physicians to prescribe methadone and future chemical treatments for drug dependency.

C. Treatment of Drug Dependent Persons in the Criminal Justice System

Drug abuse is placing an extraordinary burden on law enforcement, courts, and prisons.¹⁶² Considerable evidence exists showing the close relationship between drug use and crime. Voluntary urine tests taken of arrestees in twenty-three major cities in 1993 revealed that on average more than 50% of those tested had used drugs recently and 75% of inmates report using drugs during their lifetimes.¹⁶³ The Department of Justice reported in 1992 that more than half of violent offenders in state prisons committed their offenses under the influence of illicit drugs.¹⁶⁴ An inordinately high proportion of persons arrested for criminal offenses in the United States have recently used drugs, including injection drugs such as heroin. One study reported that one-third of state prison inmates who used drugs in the past utilized a needle and syringe to

161. *Id.* § 291.505(b)(2)-(4). See also INSTITUTE OF MEDICINE, *supra* note 159, at 120-50.

162. See BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, DRUGS AND CRIME FACTS—1994, at 10-15 (1995).

163. *Id.* at 6-7.

164. BUREAU OF JUSTICE STATISTICS, *supra* note 130, at 5.

inject drugs; 15% of these same inmates reported sharing a needle at least once.¹⁶⁵ Prisoners also sometimes continue drug use after incarceration, and may even share injection equipment with other prisoners.¹⁶⁶ Despite the large number of drug dependent persons coming into contact with the criminal justice system, there are few comprehensive treatment programs. Surveys suggest that very few prison inmates receive treatment, and many of the nation's prisons have no identifiable drug abuse treatment program.¹⁶⁷ For many in the criminal justice system, routine urine testing is the only "treatment" provided. The criminal justice system, particularly in corrections, often presents ideological, economic, and practical reasons for not providing treatment for more people. This resistance to establishing effective drug treatment programs reflects once again the tension between the preventive and punitive goals of criminal justice and rehabilitation. Even if this conflict could be solved, severe prison overcrowding and limited resources make the provision of treatment difficult.

The ideological aversion to rehabilitation is not a serious argument against sufficient and adequate treatment in the corrections system. Rather, it is a mere abstraction fueled by the government's policy of holding users accountable or punishing them. There are budgetary and practical restraints on treatment expansion in prisons. However, financial analyses continually show that treatment is highly cost effective.¹⁶⁸ Planners should carefully consider the future savings associated with effective treatment when attempting to work within present budgetary constraints.

Systematic treatment of persons in the criminal justice system is fully consistent with the research presented earlier. Criminal justice settings (including diversion, probation, prison and parole) provide optimal opportunities for treatment: large numbers of drug users come into contact with these programs; they are captive participants who otherwise often have unproductive time; they are already subject to state control because of their offenses; and they may remain under control for considerable periods, thereby providing the best opportunity for successful treatment outcomes. A demand reduction model, based on sound public health principles and practices, works better, is more humane, and costs less than the model of punishment and retribution that has dominated government thinking.

165. BUREAU OF JUSTICE STATISTICS, *supra* note 162, at 7.

166. See G.L. Vigdal & D.W. Stadler, *Controlling Inmate Drug Use Cut Consumption by Reducing Demand*, CORRECTIONS TODAY, June 1989, at 97 (before intervention, 26.9% of inmate urine samples tested positive for illicit drugs).

167. FRANK TIMS, DRUG ABUSE TREATMENT IN PRISON 13 (National Institute on Drug Abuse Research Report No. ADM 86-1149, 1981).

168. See *supra* notes 134-53 and accompanying text.

VI. CONCLUSION

The interconnected epidemics of injecting drug use and blood-borne disease cause illness and death among drug users, their sexual partners, and children. Permitting the profound adverse health effects would be conscionable if science and public health could not provide cost effective methods to reduce morbidity and premature mortality without significant tradeoffs. However, there exists a great deal of accumulated evidence that a public health approach could markedly improve the health of large populations by reducing blood-borne disease, including HIV/AIDS, and reducing the harms of drug use itself.

A comprehensive, well-financed public health strategy to impede the dual epidemics of drug use and HIV/AIDS includes: deregulation of syringe possession and distribution; expansion of syringe exchange programs, including an end to the ban on federal funding; increased access to high quality treatment for drug and alcohol dependency, particularly in the health care and criminal justice systems; education and counseling regarding drug abuse and blood-borne disease; and support and community activities for families and young people.¹⁶⁹

Far from "sending the wrong message" or encouraging initiation into drug use, a public health approach would reduce drug use while still averting harms to individuals who cannot or will not stop taking drugs. The evidence suggests that a public health approach should reduce morbidity and mortality associated with blood-borne disease, and can be implemented without harmful social or economic repercussions. A public health approach does not itself increase the availability of illicit drugs, and is not equivalent to condoning drug use. Ultimately, both law enforcement and public health should seek the same end—to promote the health and safety of the population through a comprehensive program designed to prevent drug dependency and blood-borne disease.

169. NATIONAL COMMISSION ON AIDS, *THE TWIN EPIDEMICS OF SUBSTANCE USE AND HIV* (1991).