

The Costs of Needle Exchange

Two Main Costs to Consider

Instituting needle exchanges (NEPs) in New Jersey would involve two primary costs: monetary and societal. While the cost to taxpayers is difficult to project, there is sufficient evidence that the cost to communities would be detrimental. Cost estimates by the media and those who support starting three pilot needle exchanges in our state are speculative at best and most likely represent expenses for the first year of operation only. As recently as May 15, 2006, the Office of Legislative Services, Human Services Section, stated that “No fiscal estimates are available on the proposed needle exchange bills.”¹

Throughout the country and the world, the cost of needle exchange programs varies greatly. One reason for this is that the number of NEP users typically increases over time, and so do the monetary costs. For example, Ontario's program started in 1999, and in 2006 the number of needles handed out grew almost 75 percent. Close to 6,000 needles were given out in the first quarter of 2006, compared to nearly 3,500 in the first three months of the previous year.²

In London, five million needles are provided to drug addicts each year, yet harm reduction advocates claim that this amount is 80 percent short of the total needed because their estimate of the number of injection drug users (IDUs) was inaccurate.³

These scenarios suggest that the number of users typically increases where NEPs are established. It follows that associated costs will increase, as more needles, more clean-up, more NEP workers, and more police to monitor the area are required. (See NJFPC publication *The Case for Opposing Needle Exchange*.)

Furthermore, once the decision is made to implement “harm reduction” drug strategies, costs could grow as a result of expanding programs to include drugs for users, rather than treatment or rehabilitation programs.

Toronto has had needle exchange programs for a number of years, but now, rather than spending needed money for rehabilitation programs, they've approved a new “harm reduction scheme” which allows the distribution of so-called “safer crack kits.” Councilwoman Sylvia Watson tried to get her colleagues to wait for a cost estimate before approving the measure, but they passed it anyway. The Board of Health had already spent \$300,000 to create the plan and supporters were asking for \$250,000 to hire four staff to implement it.⁴

Vancouver, one of the first cities to institute NEPs, became the first to start a program in 2005 that prescribes *free heroin* for those who “cannot stop” taking drugs, in an attempt to “stabilize their lives” and reduce deaths by overdose — not necessarily to end their addiction.⁵

Another vague cost discussed by NEP supporters is “cost per infection prevented,” which assumes that in a year's time, a certain number of people will be saved from contracting HIV, thanks to the services of an NEP. In a 1999 presentation to the New Jersey Governor's Council on HIV/AIDS, Don Dejarlis, Ph.D. (professor of epidemiology and population health, Beth Israel Medical Center, New York

City), reported on cost-per-infection-prevented figures, based on a non-verifiable estimate of about 3 percent of users supposedly prevented from contracting HIV.

Taking Dejarlis' projected cost of three NEP pilot programs — a total of \$750,000 — and dividing by 84.44 people (3 percent of the current number of users as of 2005 in the cities that will be served by the pilot programs: Atlantic City, Camden and probably Newark) amounts to \$8,021 as a “cost per infection prevented.”

In contrast, a 2005 study by the RAND Corporation posted on the National Institutes of Health (NIH) website, shows that the average cost per infection (supposedly) prevented by NEPs is more than 60 percent higher, about \$13,000 per person in high prevalence areas.⁶ When NEP supporters talk about how much a needle exchange program will cost, their numbers are highly speculative at best. (See NJFPC publication *Needle Exchange Programs: Multiple Problems, Unproven Results*, p. 5.)

True Seroconversion Statistics Prove Projections of NEP Cost & Effectiveness Are Flawed

Needle exchange supporters typically distort the cost of needle exchanges versus HIV treatment. A paper posted on the Drug Policy Alliance of New Jersey website attempts to make the case that, on average, about two IDUs per year would be saved from contracting HIV/AIDS as a direct result of an NEP,⁷ yet there are no valid statistical seroconversion studies⁸ to support this statement.

In fact, of the seven statistically valid seroconversion studies published from 1994 through mid-2003, *none* show a decrease in the spread of Hepatitis B (HBV) or Hepatitis C (HCV), and two of them show an increase.⁹

The parameters of a statistically valid seroconversion study are: Using a sample of injection drug users who agree to use a specified needle exchange, testing their blood to determine negative HIV status, then after set periods of time, testing their blood again at predetermined intervals to determine whether or not they have contracted HIV. This population must then be compared to the periodic serostatus of IDUs not using the needle exchange.

Some studies used by pro-needle supporters purportedly provide seroconversion data by comparing new cases of HIV/AIDS or drops in new cases from one community to another. This method of comparison, however, is not valid because there is no way to rule out other possible contributing factors.

For example, between 1988 and 1993 in the U.S., HIV/AIDS cases decreased in IDUs apart from specific interventions.¹⁰ Right now, amidst the outcry from NEP supporters as to the threat of HIV/AIDS in New Jersey, “the number of people living with HIV/AIDS who were exposed by injection drug use has generally shown a downward trend between 2001-2005,”¹¹ without any additional intervention, such as an NEP.

Unreliable Statistical Models Used to Support NEPs

Dr. Fred Payne, former medical epidemiologist with the Centers for Disease Control and Prevention (CDC) and

retired senior research epidemiologist of allergy and infectious diseases at NIH, is an expert on the statistical and epidemiological parameters of studies regarding HIV/AIDS.

In a personal interview, Payne was asked about some of the studies commonly touted by NEP supporters, including: (1) a 1997 worldwide study by Hurley, Jolly and Kaldor, which claims to show an average annual seroprevalence 11 percent lower in cities with NEPs, and (2) "seroconversion" studies presented by D. Paone in 1997 at the New York Statewide HIV Conference, which he claims show NEPs are effective.¹²

"The worldwide study combines published with unpublished sources in 81 different cities," Dr. Payne explained, "and therefore the results cannot show a direct association that rules out other factors." Concerning the studies presented by Paone as "seroconversion," Payne stated "These cannot be published, true 'seroconversion' studies testing NEP participants over a set period of time, and therefore proper statistical methods cannot be used to show a direct cause-and-effect connection between HIV data and the NEP program."¹³

Human and Societal Costs of NEPs

Lastly, NEP supporters seem to ignore two other major cost factors. First, by instituting NEPs and enabling questionably "safer" drug use, the government is doing nothing to stop the transmission of HIV/AIDS through sexual contact and the continued needle sharing that inevitably happens, especially when users may not be near the NEP. Those who continue to contract disease through these methods will continue to spread HIV/AIDS and the health costs will continue to mount.

Furthermore, peer-reviewed scientific and anecdotal evidence appear to support the fact that sustained, continued drug use, such as that facilitated by NEPs, likely weakens drug abusers' defenses against infection, sustains their long-term risk for disease and minimizes the benefits of available treatments for HIV disease,¹⁴ adding to health costs.

Second, NEPs are likely to increase the costs of drug abuse for society and law enforcement. Communities suffer the results of more open drug dealing and taxpayers shoulder the burden of funding more police to monitor and deal with the influx of crime to the area. When the government

removes a barrier to injection drug use by supplying clean needles in a protected area, predictably, drug trafficking in and around the vicinity of the NEP will increase, along with more crime, prostitution, guns, etc. (See NJFPC publication *The Case for Opposing Needle Exchange*.)

Are There Better Ways to Slow the Spread of HIV/AIDS?

Even NIH Director Elias A. Zerhouni, M.D., has qualified the usefulness of NEPs, saying "it [can be] an effective component of a *comprehensive community-based HIV prevention effort*,"¹⁵ meaning that when not accompanied by treatment and education programs, a needle exchange program's effect upon slowing the spread of HIV is questionable.

The bottom line is that there are more positive and relatively cost-effective ways to slow the spread of HIV/AIDS, without adding to societal degradation and condoning and enabling drug addicts and dealers.

According to the latest RAND study, there are more economical methods in the fight against HIV/AIDS. The summary chart "Cost-Effective Allocation of Government Funds for Preventing HIV" shows that the annual costs of two existing intervention programs, "Notifying Sexual Partners" and "Educational Videos at STD Clinics," would be about \$16 million, versus about \$30 million to implement a needle exchange in a high prevalence area. Additionally, these interventions would reach more than three times the number of people with lifesaving HIV prevention information.¹⁶

However, one of the three researchers on this RAND study, Deborah Cohen, MD, MDH, verified that the RAND data is gathered from a variety of self-report studies, not seroconversion studies,¹⁷ which compromises its accuracy. But if one is willing to argue the matter employing the compromised study parameters that pro-needle supporters are using, the RAND study shows there are arguably better funding options to slow the spread of HIV/AIDS.

Let's hope the public, the media and our legislators will once and for all learn how to clearly differentiate a valid study from an invalid one and challenge health experts on this basis. Then legislators can decide upon valid options that consider the well-being of all our citizens and will slow the spread of HIV/AIDS.

1 Office of Legislative Services, telephone inquiry by writer via the office of New Jersey Assemblyman Joseph Pennachio, May 15, 2006.

2 Fiona Isaacson, "Needle Exchanges Jump Among Local Drug Users," *Guelph Mercury* (Ontario, Canada), May 6, 2006, p. A-3.

3 "One in 50 Injects Drug, Research Finds," *UK Press Association*, May 12, 2004 (<http://society.guardian.co.uk/drugsandalcohol/story/0,8150,1281633,00.html>).

4 Sue-Ann Levy, "License to Kill? Even Some Addicts Say 'Safe Injection Sites are Harmful,'" *Toronto Sun*, Dec. 18, 2005, Comment section, p. 6.

5 Am Johal, "North America's First Heroin Prescription Program Introduced in Canada," *Worldpress.org*, March 26, 2005.

6 D.A. Cohen, S-Y Wu, and T.A. Farley, "Cost-Effective Allocation of Government Funds to Prevent HIV Infection," *Health Affairs*, Vol. 24, No. 4, July/August 2005, pp. 915-926.

7 P. Lurie, E. Drucker, "An opportunity lost: HIV infections associated with lack of a national needle-exchange programme in the USA," *Lancet*, 1997; 349:604-608, as cited in Drug Policy Alliance of New Jersey, "Syringe Availability" (<http://www.drugpolicy.org/library/research/syringe.cfm>).

8 Seroconversion studies are designed to determine the number of NEP participants whose blood converted from HIV negative to HIV positive within a set time period.

9 Fred Payne, MD, MPH, FACPM, "An Evidence-Based Review of Needle Exchange Programs," Children's AIDS Fund website, Feb. 28, 2005, modified May 10, 2006, p.1 (<http://www.childrensaidsfund.org/showarticle.asp?id=246>).

10 P.S. Rosenberg, R.J. Biggar, *JAMA*, 1998; 279:1894-1899.

11 New Jersey HIV/AIDS Reporting System, Report as of 12/31/2005, Figure 3, "Estimated Persons Living with HIV/AIDS in NJ by Modified Exposure Category 2001-2005."

12 Drug Policy Alliance of New Jersey, "Syringe Availability" (<http://www.drugpolicy.org/library/research/syringe.cfm>).

13 Fred Payne, MD, MPH, FACPM, telephone conversation with writer, May 10, 2006.

14 Congressional Subcommittee Questions the Scientific Validity of Harm Reduction, letter from Hon. Mark Souder, Chairman, Subcommittee on Criminal Justice, Drug Policy and Human Resources, April 27, 2004.

15 Elias A. Zerhouni, M.D., Director of NIH, Bethesda, Maryland, letter to the Hon. Mark Souder, Sept. 2, 2004.

16 D.A. Cohen, S-Y Wu, and T.A. Farley, "Cost-Effective Allocation of Government Funds to Prevent HIV Infection."

17 Deborah Cohen, MD, MDH, RAND Corporation, telephone conversation with writer, March 16, 2006.

