Syringe Exchange Prevented Thousands of New HIV Cases in Two Cities

A new study confirms that providing clean drug injection equipment slows the spread of HIV.

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Syringe exchange programs in Philadelphia and Baltimore prevented more than 12,000 new cases of HIV over a 10-year period, according to a recent study. These findings add to the evidence that such programs are both highly effective and a good public health investment.

“Small investments in syringe exchange programs yield large savings in treatment costs,” study author Monica Ruiz, PhD, MPH, of the George Washington University Milken Institute School of Public Health, said in a press release. “Syringe exchange programs represent a powerful way to stop the spread of HIV, especially in communities struggling to fight the opioid epidemic.”

HIV, hepatitis B and hepatitis C are readily transmitted through shared syringes and other equipment used to inject drugs. Harm reduction and AIDS activists in the United States began to distribute clean needles on an underground basis in the late 1980s, and several cities went on to implement authorized programs, especially as the opioid crisis worsened over the past decade. However, more than half of the states still have not legalized syringe exchange.

Ruiz and her colleagues conducted a mathematical modeling study to evaluate how policy changes that allowed legal syringe exchange programs in the two cities affected the number of new HIV cases over a decade. Based on surveillance data about new HIV diagnoses among people who inject drugs, they modeled what likely would have happened under different policy scenarios. They used Philadelphia data from 1984 through 2015 and Baltimore data from 1985 through 2013.

The HIV epidemics in both Philadelphia and Baltimore were initially largely driven by injection drug use rather than sex between men. Philadelphia was among the first U.S. cities to implement needle exchange. Members of ACT UP and other AIDS activists started Prevention Point in 1991, and the city authorized the program the following year—though syringe exchange remains illegal in Pennsylvania. In Baltimore, the city health department started a needle exchange program in 1994, and Maryland legalized syringe services in 2016.

As described in the Journal of Acquired Immune Deficiency Syndromes, the authors estimated that

without needle exchange, there would have been 15,248 new HIV diagnoses among people who inject drugs in Philadelphia between 1993 and 2002 rather than the observed 4,656 cases, suggesting the program averted 10,592 diagnoses.

In Baltimore, the model estimated that there would have been 7,263 new diagnoses between 1995 and 2004 rather than the observed 5,372 cases, or 1,891 cases prevented.

Considering the cost of care and treatment for the additional people who otherwise would have acquired HIV, the study authors estimated that needle exchanges saved more than $243 million annually in Philadelphia and over $62 million in Baltimore. Taking into account the cost of the programs, the estimated one-year return on investment was nearly $183 million in Philadelphia and about $47 million in Baltimore.

“Giving injection drug users access to clean syringes can not only help them avoid HIV but often helps them obtain other health services, including access to drug treatment programs,” Ruiz said. “Such programs offer communities huge public health and societal benefits, including a reduction in new HIV cases and cost savings to publicly funded HIV care.”

Click here to read the study abstract.

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