# Addressing the Rise of Infectious Disease Related to Injection Drug Use

LESSONS LEARNED FROM KENTUCKY

# **EXECUTIVE SUMMARY**

With opioid-involved overdoses claiming the lives of 130 people every day across the United States, governors are looking to replicate best practices to address the epidemic and related challenges, including increased transmission of costly and devastating infectious diseases.<sup>1</sup> This case study explores Kentucky's effort to establish syringe services programs, referred to as Harm Reduction and Syringe Exchange Programs (HRSEPs), in areas hardest hit by the opioid epidemic. The first southern state to authorize syringe services programs, Kentucky has established more than 50 HRSEPs to curb infectious disease transmission, provide basic health care services and establish new pathways to substance use disorder treatment and recovery for people who inject drugs.

Injection drug use increases the risk of transmitting blood-borne infections such as human immunodeficiency virus (HIV), hepatitis C virus (HCV) and endocarditis when people who inject drugs share needles, syringes and other injection equipment that may contain infected blood. New cases of HIV have been diagnosed, and new cases of HCV have increased 350% since 2010, with the most significant increases occurring among young people in nonurban areas.<sup>2</sup> In 2015, recognition of an outbreak of HIV and HCV among people in a small Indiana county who inject drugs brought national attention to the significant risk of infectious disease transmission in this population and spurred other jurisdictions, including neighboring Kentucky, to act to prevent future outbreaks.

In 2016, the Centers for Disease Control and Prevention (CDC) identified 220 counties across 26 states at high risk for rapid spread of HIV and HCV related to injection drug use based on indicators such as deaths from drug overdose, opioid prescribing and availability of opioid use disorder treatment. Certain areas are more vulnerable to infectious disease outbreaks, but the widespread increase in injection drug use across the country puts nearly every state at risk, with serious fiscal and public health consequences.

Kentucky's experience offers important lessons for other states grappling with these challenges. Drawing on extensive interviews with state and local leaders in Kentucky, this case study provides insights into best practices and lessons learned, with a focus on the cross-sector partnerships central to state and local efforts to expand comprehensive harm reduction services.

### Considerations for Governors in Expanding Comprehensive Harm Reduction

- Gubernatorial leadership and strong, cross-agency partnerships at the state level can help build and maintain support for syringe services programs as part of a comprehensive response to the opioid crisis.
- Funding, data and technical assistance are critical for local communities seeking to establish comprehensive harm reduction and syringe services programs.
- Engaging local public health, law enforcement, business leaders, the faith community and other local stakeholders is key to building and sustaining support.



### INTRODUCTION

### Increasing Rates of Infectious Disease Resulting From Injection Drug Use

Today, more than 2 million people in the United States have opioid use disorder, and 130 people die every day from an opioid-related overdose.<sup>3</sup> As the opioid epidemic has evolved, opioid-involved overdose deaths have increasingly involved illicit opioids — counterfeit opioid pills, heroin and heroin mixed with fentanyl — as prices have fallen, availability has increased and access to prescription opioids has become more tightly controlled.<sup>4,5,6</sup> Methamphetamine injection use has also increased in the United States, both independently and mixed with heroin or illicit fentanyl.<sup>7,8,9</sup>

Sharing needles, syringes or other injection equipment increases the likelihood of exposure to infectious disease by providing a direct route of transmission for blood-borne infections such as HIV, hepatitis B virus (HBV), HCV and endocarditis, a deadly heart infection.<sup>10</sup> With more people injecting drugs, communities across the country have seen an increase in these and other blood-borne infections.<sup>11,12</sup> According to CDC, rates of HCV infection increased 350% between 2010 and 2016, with 69% of cases reporting injection drug use.<sup>13</sup> The longstanding decline in HIV diagnoses among people who inject drugs has slowed, and one out of 10 new HIV infections is among people who inject drugs.<sup>14,15</sup>

> The rate of **infants born to HCV-infected mothers increased by 68%** nationally from 2011–2014, primarily due to the opioid crisis.<sup>16</sup>

In 2016, CDC identified 220 counties most at risk of rapid transmission of HIV and HCV based on indicators associated with injection drug use, such as deaths from drug overdose, prescription opioid sales, per capita income, unemployment and availability of medication-assisted treatment (Figure 1).<sup>17,18</sup> The counties were identified across 26 states, with 54 in Kentucky alone.

Certain counties and jurisdictions are more vulnerable to infectious disease outbreaks, but increased rates of injection drug use across the country put nearly every state at risk. At least 30 states have seen increases in rates of HCV infection, with some of the most significant increases in nonurban localities east of the Mississippi River and nearby Appalachia counties.<sup>19</sup> Kentucky, Tennessee, Virginia and West Virginia together experienced a 364% increase in acute HCV cases between 2006 and 2012 among white, nonurban people under 30 years of age. Similar rates were found in Massachusetts, Wisconsin and Upstate New York.<sup>20</sup> In 2018, CDC identified 34 states and territories experiencing or at risk of significant increases in hepatitis infection or an HIV outbreak (Figure 1).<sup>21</sup>

### The Costs of Treating Injection Drug Use-Related Infections

In addition to the devastating public health effects, infections caused by injection drug use take a costly economic toll. The opioid epidemic and injection drug use-related infections put increased pressure on public programs such as Medicaid, which covers nearly 40% of people with opioid use disorder.<sup>23</sup> Medicaid also covers a significant portion of the population living with HIV and HCV.<sup>24,25</sup>

Although Medicaid is one of the largest payers of treatment for opioid use disorder and infectious disease, an estimated one in five people with opioid use disorder in the United States is uninsured, putting strain on health care providers and state uncompensated care programs.<sup>26</sup> Hospitalizations for substance use-related infections cost more than \$700 million annually.<sup>27,28</sup> In one year alone, unreimbursed emergency department treatment for drug dependence-associated endocarditis cost a hospital in North Carolina more than \$5.2 million.<sup>29</sup>

### The Role of Comprehensive Harm Reduction and Syringe Services Programs

As of May 2019, 28 states and the District of Columbia have passed legislation authorizing syringe services programs, an evidence-based, costeffective approach to reducing the transmission of blood-borne infections among people who inject



FIGURE 1: Vulnerable Counties and Jurisdictions Experiencing or At Risk of HIV or HCV Outbreaks<sup>22</sup>

drugs.<sup>30,31,32</sup> The use of sterile needles, syringes and other injection equipment for each injection can significantly reduce the risk of transmitting or acquiring infection. An element of comprehensive harm reduction, syringe services programs are also an important avenue for connecting people who inject drugs to the services they need, including substance use disorder treatment. Many programs provide an array of services, such as HIV and HCV testing, distribution of harm reduction materials (condoms, injection supplies, naloxone), education on safer injection practices, wound care and connections to social services and treatment for infectious disease and substance use disorder.<sup>33</sup>

### WHAT IS COMPREHENSIVE HARM REDUCTION?

"Comprehensive harm reduction" refers to a set of public health strategies intended to reduce the negative impact of drug use, including HIV, HCV, overdose and death among people who are unable or not ready to stop using drugs. In addition to providing sterile needles and syringes and facilitating disposal of used drug-preparation equipment, these programs offer testing, referral to drug treatment and an array of other health and social services.<sup>34</sup>

Research has shown that syringe services programs are effective in both improving health outcomes and reducing costs. Since implementing syringe services programs, New York City and Washington, D.C. have seen a 70% decrease in the number of newly diagnosed HIV cases.<sup>35</sup> Additionally, studies have found no evidence that such programs lead to higher drug use. In fact, people who use syringe services programs are 2.5 times more likely to stop injecting drugs.<sup>36</sup>

COST OF A NEW, STERILE SYRINGE \$1.00 VS. COST OF TREATING ONE PERSON WITH HIV \$400,000<sup>37</sup>

# KENTUCKY HARM REDUCTION AND SYRINGE EXCHANGE PROGRAMS

In 2014, an outbreak of HIV in Scott County, Indiana — a rural area just 40 miles from Louisville, Kentucky — caught the attention of Kentucky lawmakers. Fewer than five cases of HIV had ever been reported annually in Scott County, which has a population of just 23,000.<sup>38</sup> By early 2015, 135 people were diagnosed with HIV infections linked to the injection of a prescription opioid.<sup>39</sup> Of the 225 people ultimately diagnosed with HIV, more than 90% were co-infected with HCV.<sup>40</sup>

The Scott County experience provided new momentum for syringe services legislation in Kentucky, where overdose death rates are among the highest in the nation.<sup>41</sup> The state was experiencing an increase in injection drug use fueled by the opioid epidemic and a corresponding rise in rates of HCV, with reported cases increasing by 240% between 2009 and 2013.<sup>42</sup> The spike in HCV cases, often a harbinger of HIV transmission, raised concerns among state and local health officials. In northern Kentucky alone, officials estimated that an HIV outbreak like the one in Scott County would result in 2,300 new infections and more than \$1 billion in health care costs.<sup>43</sup> The need for action was clear, but the path to authorizing HRSEPs in Kentucky was not easy. As one state official noted, "The political blowback [to the bill's introduction] was severe and swift." Many legislators and citizens feared that providing sterile syringes would enable drug use. Proponents shared research to dispel this notion and provided information about the nature of substance use disorder.<sup>44,45</sup> Supporters also emphasized the potential for HRSEPs to reduce Medicaid spending associated with treating infectious diseases, prevent needle stick injuries among law enforcement and others and connect individuals to treatment and recovery for substance use disorder.

Lawmakers debated whether local approval should be required to establish a HRSEP. A local vote can help garner community support by providing a forum for public health officials and other stakeholders to highlight the benefits of comprehensive harm reduction. In other instances, it can delay or prevent implementation of programs in at-risk areas. A requirement for local approval was ultimately added to the bill as part of a compromise, requiring consent from three local governing bodies — the local board of health, the county legislative body and the city legislative body — to establish a HRSEP.<sup>46</sup>

In March 2015, HRSEPs were authorized as part of broader legislation to address the opioid crisis in Kentucky.<sup>47</sup> As of April 2019, HRSEPs have been approved in 60 of Kentucky's 120 counties, with some counties having more than one location. Because of the local nature of HRSEPs, the programs differ in terms of their delivery and staffing models as well as in their hours of operation and the types of services they offer. As Van Ingram, the longtime director of Kentucky's Office of Drug Control Policy (ODCP) said, "If you've seen one HRSEP, you've seen one HRSEP." HRSEPs offer testing for HIV and HCV; some also provide the overdose-reversal drug, naloxone, and onsite access to a peer recovery coach. HRSEPs may provide health care services on-site or link individuals to community providers for needed care, including substance use disorder treatment.\*

\*According to preliminary data, HRSEPs have provided 189 referrals for substance use disorder treatment, 1,710 HCV tests, 91 referrals for HCV testing, 2,348 HIV test, 99 referrals for HIV testing, 11 referrals for HIV services other than testing and 153 referrals for clinical services such as sexually transmitted disease testing and treatment.

# LESSONS LEARNED FROM KENTUCKY

Kentucky's experience offers important lessons for other states grappling with the infectious disease impacts of the opioid crisis. Drawing on extensive interviews with state and local leaders, this section highlights key insights from Kentucky, with a focus on the cross-sector partnerships that have been central to state and local efforts to expand comprehensive harm reduction services.

### Gubernatorial leadership and strong cross-agency partnerships at the state level can help build and maintain support for syringe services as part of a comprehensive response to the opioid crisis.

Since taking office in 2015, Kentucky Gov. Matt Bevin has led a coordinated and comprehensive public health response to the opioid epidemic, regularly speaking on the topic and promoting Kentucky's evidence-based approach to prevention, treatment and recovery. As part of these efforts, Gov. Bevin established the Kentucky Opioid Response Effort (KORE) Cross-Systems Advisory Council — a multiagency group that meets regularly to communicate plans, discuss programming and identify opportunities for cross-agency collaboration. "It starts with the governor setting the tone," explained John Tilley, secretary of the Kentucky Justice and Public Safety Cabinet. "We have limited resources and we have to work collaboratively."<sup>48</sup>

Made up of state leaders from public health, behavioral health, Medicaid, public safety and corrections, the KORE Cross-Systems Advisory Council has been integral to coordinating the state's opioid response and related efforts to prevent the spread of infectious disease. Through KORE, state officials share information and make resource allocations to support HRSEPs as part of a continuum of care for individuals with opioid use disorder. It was through this forum, for example, that state behavioral health and public health officials identified an opportunity to allocate remaining federal State Targeted Response to the Opioid Crisis Grant (Opioid-STR) program funding to HRSEPs and coalition-building efforts in at-risk communities.

### Funding, data and technical assistance are critical for local communities seeking to establish comprehensive harm reduction and syringe services programs.

Kentucky provides funding, data and technical assistance to support HRSEPs and inform local decision making. One important resource is the state's guidelines for local health departments, which address issues such as assessing the community's need for a HRSEP, engaging potential clients, developing operating principles and conducting monitoring activities.<sup>49</sup> For local health departments interested in establishing a HRSEP, the state also provides valuable data that local officials and community members can use to make the case for comprehensive harm reduction, including a county-by-county risk index (Figure 2). The Kentucky Opioid Overdose Index Score was developed for each county based on factors associated with injection drug use, including the rate of fatal opioid overdose, opioid-related ED visits and hospitalizations and opioid prescriptions greater than or equal to 100 morphine milligram equivalents.

As in other states, state agency leadership in Kentucky determines how to direct federal resources to local communities for a range of activities, including comprehensive harm reduction. HRSEPs in Kentucky receive federal funding awarded to the state by CDC and the Substance Abuse and Mental Health Services Administration, including Opioid-STR and State Opioid Response grants. Under federal rules, funds can be used to support all aspects of syringe services programs, apart from the purchase of needles and syringes. However, states must consult with CDC and demonstrate that they are experiencing or are at risk of an outbreak of HIV or significant increases in viral hepatitis.<sup>50</sup> Kentucky and 35 other states and territories, the District of Columbia, a tribal nation and several local jurisdictions have completed this process to date.<sup>51</sup>

HRSEPs are also supported by state funding through the Kentucky Department for Public Health and ODCP, which provides annual grants to 78 antidrug coalitions in 120 counties across the state. Most coalitions allocate funding to HRSEPs to help cover the cost of naloxone, pay salaries or purchase supplies.



In addition to funding, Kentucky partners with local HRSEPs to collect data to identify trends, assess outcomes and ensure that services reflect local needs. Ongoing data collection can also build a case for continued funding and support for HRSEPs among elected officials and the public. Data showing the number of referrals to substance use disorder treatment from HRSEPs in Kentucky, for example, have been particularly compelling in persuading policymakers of the value of harm reduction in not only mitigating the effects of drug use but addressing the underlying addiction.

Sponsored by the Kentucky Department for Public Health and ODCP, Kentucky hosted a convening for HRSEPs to share best practices, discuss lessons learned and build relationships with their peers across the state. The first HRSEP Summit, held in March 2018, brought together local jurisdictions to showcase best practices for gaining community support, obtaining local approval, start-up methods, developing an integrated approach to service delivery and other aspects of HRSEP implementation. In April 2019, Kentucky broadened the scope of the statewide meeting to focus on the full continuum of harm reduction. The Harm Reduction Summit brought together 400 individuals from across the state — many outside public health — and underscored the role of HRSEPs as one part of the continuum of care for individuals with substance use disorder.

### Engaging local public health, law enforcement, business leaders, the faith community and other local stakeholders is key to building and sustaining support for comprehensive harm reduction.

State and local leaders in Kentucky emphasize the role that communities play in starting and sustaining HRSEPs. Local public health officials lead efforts to engage stakeholders and educate the public on the effectiveness of these programs. The support of local business owners, law enforcement, health care providers, faith leaders, antidrug coalitions, individuals in recovery and families affected by the opioid crisis is key to gaining approval from local governing bodies. "You have to do the education and lay the groundwork county by county, community by community," says ODCP Director Ingram. "Local leaders need to hear from their friends and neighbors that this is what their communities need."52 This process is integral to building and sustaining local support. "Once this work is done, the community 'owns' the program," says Dr. Connie White, senior deputy commissioner for the Kentucky Department for Public Health. "It is not some theory forced upon the community but a thoughtful, local choice."53

Data and research are an important part of any conversation about comprehensive harm reduction. Public health officials in Kentucky have used both state and local data to inform the public about the complexity of the opioid epidemic and the role HRSEPs play not only in preventing blood-borne disease but as a touchpoint to substance use disorder treatment and other services. Reflecting on the debate in one community, Dr. Ardis Hoven of the Kentucky Department for Public Health recalled that "it was someone in the local ranks, educated by public health authorities, who was able to turn the tide and convince the rest of the bank board that this was a good idea."<sup>54</sup>

In addition to building political support, local communities in Kentucky provide critical financial and in-kind support for HRSEPs. Programs receive funding from local governments and health departments. Many also receive grants from private foundations, such as the R.C. Durr Foundation in northern Kentucky. In one part of the state, the Kentucky Fire Commission provides a mobile command center and the use of a driver free of charge to the local public health department. The unit has two rooms, one of which is available for HIV testing, and offers services at two locations every week. The partnership is a creative way to provide needed services to an at-risk community with limited resources.

### **LOOKING AHEAD**

HRSEPs have become a central element in Kentucky's effort to address the opioid epidemic, improve health outcomes and prevent the spread of devastating and costly infectious diseases transmitted through injection drug use. Kentucky officials are also aware of the role HRSEPs can play in identifying and actively responding to evolving trends, such as recent increases in methamphetamine use, and the changing needs of the communities they serve.

Kentucky is now considering ways to expand the harm reduction services it provides, including in areas of the state that have not yet fully embraced or have limited access to HRSEPs. With funding from CDC, the state recently purchased five vans to serve as mobile HRSEPs in rural communities. Kentucky is also exploring methods and alternative locations beyond HRSEPs to offer wound care, education on safer injection practices, naloxone distribution and referral to treatment. Outside local health departments, hospitals and primary care settings have been identified as potential avenues for providing harm reduction services and ongoing education in community-based settings with low-threshold access. Challenges remain, but Kentucky leaders are hopeful that local support will continue to grow as communities become more familiar with harm reduction services and their role in setting individuals on a path to treatment, recovery and better health. Establishing HRSEPs as nonjudgmental, safe places where everyone will be treated with respect will continue to be key to effectively serving the needs of this population. As leaders in Kentucky have noted, HRSEPs are about much more than syringe exchange. They are places where trusting relationships can be built and where people can obtain services to develop healthier futures.

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