

Addressing HIV and Drug Use in Indiana: A Systems Approach

CASE STUDY

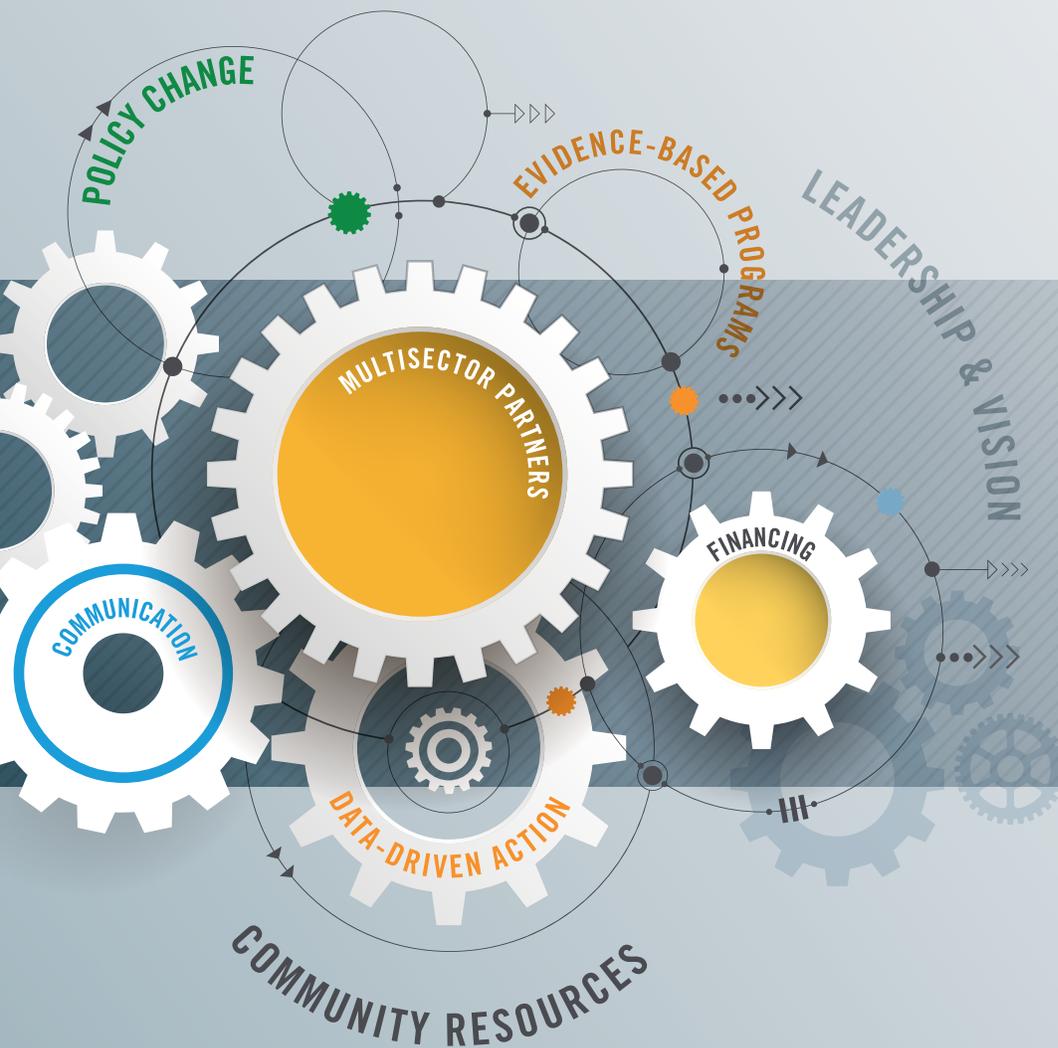


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INTRODUCTION

A local disease intervention specialist (DIS) working in Indiana's southeastern region first recognized the state's HIV outbreak in January 2015, after identifying and interviewing three people newly diagnosed with HIV. Through these interviews, DIS learned that two of the three individuals had recently injected drugs and had a common needle-sharing partner. By Jan. 23, 2015, contact tracing identified eight additional HIV infections linked to Austin, Indiana, a rural town located in Scott County, where only five total HIV cases had been reported between 2004 and 2013.

Routine contact tracing revealed a geographically-isolated cluster of individuals newly diagnosed with HIV. Concerned about an emerging HIV outbreak related to injection drug use, the Clark County Health Department shared its observations with the HIV/STD division at the Indiana State Department of Health (ISDH). As additional confirmatory HIV tests became available, the HIV/STD division notified the state epidemiologist and chief medical officer in early February 2015, and ISDH assigned additional DIS to assist with the expanding and complex outbreak investigation to identify additional cases and potentially exposed contacts. By the end of the month, ISDH had activated an incident command system (ICS) and contacted the CDC to request urgent epidemiologic assistance. On March 26, 2015, Gov. Mike Pence issued an executive order declaring a public health emergency in Scott County. As of January 2017, case follow-up and contact tracing has identified 215 individuals with HIV infections related to this outbreak.

The factors driving this HIV outbreak are not unique to rural Indiana. Small towns across America are experiencing a depleted public health infrastructure and limited programs supporting economic mobility and growth. For example, according to RWJF's County Health Rankings, Scott County consistently ranks among the lowest in the state for health outcomes and life expectancy, with significant unemployment (8.9%), high poverty (19%), low educational attainment (21.3% of residents did not complete high school), and a high proportion of individuals without health insurance and access to medical care.

The HIV outbreak brought to light Scott County's heavy burden of drug use and addiction and exposed conflicting beliefs surrounding the accessibility, availability, and acceptability of substance abuse and mental health services. Services for people with substance use disorders in the United States are often met with public opposition due to the persistent stigma facing people who inject drugs and individuals living with HIV. This opposition affects the types of prevention and treatment interventions that policymakers are willing to authorize and fund. This outbreak symbolizes the confluence of repeated systematic failures to address rural Americans' serious economic and social challenges and to ensure that people living in rural areas have what they need to live, thrive, and succeed.

When people talk about Austin, they sometimes talk about two towns: the town dealing with a lagging economy and unemployment, and the town subjugated by opioid addiction. Over the years, as federal and state budgets continued to shrink, the Austin community watched as many local organizations were forced to scale back and, eventually, discontinue services, including those for early childhood and adult education programs, domestic violence resource centers, and facilities equipped to provide HIV testing.

LOCAL CHARACTERISTICS OF THE OUTBREAK

Since the mid-1990s, HIV incidence in the United States has remained relatively stable at approximately 50,000 new infections per year. Injection drug use accounts for approximately 8 percent of new HIV infections, although in recent years, it has contributed to a 150 percent increase in acute cases of hepatitis C virus (HCV) infection. The Indiana outbreak involves a rural community in which HIV infection spread exceedingly fast among a large network of people who injected prescription opioids. In February 2016, the estimated prevalence of HIV in Scott County was 4.6 percent. To put this figure into perspective, in cities that have the highest prevalence of HIV infection in the United States (i.e., Miami, New York, and San Francisco), the current prevalence is between 0.8 and 1 percent.

Most people diagnosed in this outbreak have been young (median age 34 years), almost all are non-Hispanic whites, and just over half are men (58%). More than 90 percent are also co-infected with HCV. Almost all of the newly diagnosed people reported injection drug use. Cases were linked to syringe-sharing partners injecting OPANA® ER (oxymorphone), a powerful semi-synthetic prescription opioid analgesic. FDA approved OPANA® ER for oral use in 2006 for the management of severe pain. However, like other opioid analgesics, the drug has been misused by people seeking its euphoria-inducing effects. The majority of people infected with HIV were abusing the name-brand extended release formulation by dissolving and injecting it, although some people reported injecting other drugs, including heroin or methamphetamine.

The manufacturer of OPANA® ER marketed a new formulation in February 2012 with properties that make it difficult or undesirable for individuals to tamper with it. This abuse-deterrent version of OPANA® ER turns into a gel if the tablets are crushed. However, even with the new formulation, individuals can readily prepare it for injection by heating it to burn off the coating and then crushing the tablet in liquid, adding more liquid to thin out the solution as needed.

Addiction shares many features with other chronic diseases, including a tendency to run in families. For some, injection drug use in Austin is an entrenched, multi-generational phenomenon occurring with as many as three generations of a family injecting together. Individuals often share syringes and drug preparation equipment to cook and dissolve tablets, and then draw the liquid up into an insulin syringe for injection. In a single day, on average, one person might inject between four and 15 times, with as many as six syringe-sharing partners per injection event.

There are several reasons for the high number of daily injections. OPANA® ER is extremely costly to obtain, selling on the street in Austin for as much as \$200 per tablet. Individuals often purchase a quarter of a pill and share it with others. Because dissolving the pill results in a thick solution, the volume of water required to thin it out produces more solution than an insulin syringe can accommodate in one draw. The leftover solution is drawn up and injected at that time, or saved for later. In addition, when the pill is dissolved and injected, it loses its extended release properties, and the effects of the drug wear off in a matter of hours. People will inject small doses many times throughout the day in order to avert the symptoms of drug withdrawal. Before the outbreak and the opening of the syringe exchange program, it was not uncommon for a single syringe to be used upwards of 300 times, until the calibration markings on the syringe were entirely worn off from heavy use and re-use.

DATA-DRIVEN ACTION

Taking steps to determine the number, size, and timing of the infection clusters helps guide effective interventions in a geographically concentrated area.

EPIDEMIOLOGY

Contact tracing is the process of confidentially locating individuals who may have potentially been exposed to HIV and identifying their syringe-sharing and sexual partners and any social contacts who might also be at risk for HIV infection. These contacts are then assessed for risk, offered testing for HIV, HCV, and other STDs, and if necessary, interviewed to identify their syringe-sharing and sexual partners. This cycle continues until no new contacts are identified. Disease intervention specialists (DIS) detected and confirmed the cluster of 11 new HIV cases in Austin between November 2014 and January 2015.

Contact tracing by disease intervention specialists played a critical role in identifying potentially exposed residents in Indiana.

Shortly after ISDH activated the ICS, it established a massive public health response to the outbreak. In an effort to determine the source of the outbreak and trace patterns of transmission in Scott County, DIS ran a “blitz” from February–June 2015. During this time, approximately 49 DIS from at least 14 different states—a mix of CDC field staff and state or local DIS staff—came to assist with the Indiana HIV outbreak, and some remained in the county going door-to-door for more than a month to aid the response.

At the onset, investigators used point-of-care, oral fluid rapid HIV tests (a swab in the mouth to collect saliva), which take approximately 20 minutes to process. If the rapid test was positive, showing that the disease was likely present, investigators sent a blood sample to the ISDH laboratories for confirmatory testing. Blood samples were also sent for individuals with negative rapid tests and pooled for more sensitive nucleic acid amplification testing. This allowed public health responders to identify individuals in the earliest stages HIV infection before other conventional tests were positive. All individuals were also tested for HCV and syphilis.

ISDH Contact Tracing and HIV Testing Results (as of December 2016)	
Named Contacts	532
• Tested	472 (89%)
• Refused testing	15 (2.8%)
• Unable to locate	29 (5.5%)
• Other	16 (3.0%)
Other Tested	39
Total Tested	511
HIV Positive	213 (42%)

LABORATORY INVESTIGATION

Public health officials needed to determine the number, size, and age of infection clusters in order to decide on the type and scope of interventions needed for infection control. To learn more about how this HIV infection was spreading, CDC virologists ran a phylogenetic sequence analysis, which has been used extensively in HIV epidemiology. Phylogenetics can be used to infer epidemiologic trends, and a clustering of sequences, such as those seen in Scott County, can reveal transmission networks (for example, among people who inject drugs).

After DIS drew the blood samples, they were sent to ISDH laboratories to confirm HIV infection, and then forwarded to CDC, where *pol* sequencing was conducted to help ISDH understand how the cases identified were genetically linked to the Indiana outbreak. Investigators ran phylogenetic analysis on 157 isolates. These results were compared to reference samples collected from residents of Scott County and surrounding areas

between October 2014 and April 2015 and to samples from the National Institutes of Health's GenBank database.

Specialists at the CDC lab also performed avidity testing to distinguish recent infections (less than 6 months) from longstanding, prevalent infections. The results showed that more than 85 percent of the HIV infections were recent, occurring within the previous six or seven months.

Based on this information, it's likely that the HIV infection that spread through Scott County entered the community in mid-2014 and then proliferated extremely quickly—a pattern consistent with the new introduction of HIV into a community with a high prevalence of pre-existing HCV infections, particularly among people who inject drugs. In 2014, Scott County had the highest rates of HCV infection in Indiana.

Typically, this type of testing is conducted retrospectively after the entire HIV transmission network has been described. However, in this case, the ongoing availability of phylogenetic information helped CDC and ISDH determine that there was a single large cluster of related cases of HIV-1 subtype B strains, all epidemiologically linked to Scott County and with limited geographic spread.

COMMUNICATION

The Scott County outbreak's rapid transmission rate translated into an increased demand for information. ISDH needed a coordination strategy to engage the community and local response partners and streamline HIV reporting protocols.

"We are building a model for prevention and response should this type of outbreak happen in other communities in the nation." – Indiana State Health Commissioner, Jerome Adams, MD, MPH

INCIDENT COMMAND SYSTEM

When in the middle of a complex and difficult response, having a centralized coordination process is invaluable. ISDH determined that its response capacity would be best organized and monitored using an incident command system (ICS). On Feb. 20, 2015, ISDH activated a state-level ICS and later established a corresponding local incident command center on the ground in Austin.

Incident command typically comes to mind in the context of responding to catastrophic incidents involving mass transportation, terrorist attacks, or natural disasters. In this case, Indiana's strong preparedness infrastructure was instrumental in allowing the state to quickly draw on different authorities and integrate major stakeholders to establish this system. Generally speaking, since 9/11, increased federal funding for preparedness and required regional preparedness drills have shaped a culture of collaboration at the command level. For example, prior to the Indiana outbreak, leadership at ISDH had developed both institutional and personal relationships with groups and organizations central to this response, like the Indiana University School of Medicine, a partner whose name carried credibility and which had the resources to maneuver quickly in the Scott County response.

ISDH established a Unified Command (UC) structure because there were multiple jurisdictions involved in the outbreak and the state needed a system to coordinate an effective response while allowing each agency to

carry out its own operational, administrative, and regulatory responsibilities. At the state level, the members of ISDH's UC who were charged with coordinating the response included the state epidemiologist and the director of the HIV/STD division, who were designated as the incident commander and deputy incident commander, respectively.

ISDH appointed a second incident commander to coordinate the county-level response, including communicating with local partners, doctors, the sheriff, and the county commissioners. The department named ISDH's director of the local public health preparedness program as the local incident commander. Once the local response was established, the HIV/STD division director was deployed to Austin to assist with that effort.

Other key positions within the ICS included the public information officer, director of planning and response operations, safety officer (from the Austin Police Department), and liaison officer (the state registrar/ISDH director of vital records). The operations branch was responsible for coordinating activities around four major functions: vital records, immunizations, and insurance; HIV prevention; public health; and addiction and treatment. The state also activated a joint information center to manage the immense media presence in Austin. The center provided information to the media and established credibility by ensuring timely updates about the response operations throughout the county.

Having a trusted, local incident commander stationed in Scott County for several months of the response was unique and important in helping identify and build relationships with local partners that otherwise couldn't have been formed from 100 miles away in the state capital.

COMMUNITY ENGAGEMENT

Maintaining regular and open communication with the public, through both traditional and social media, was a high priority for ISDH officials to disseminate reliable information about both the response and about the services available to the community. Effective communication was doubly important to limit the flow of misinformation, minimize confusion, and clarify expectations. Beginning on the first day of the on-the-ground response, ISDH hosted local policy coordination meetings. For several weeks, ISDH held these meetings daily, and included representatives and appointees from the governor's office, the local health department, the mayor's office, the Austin Police Department, county commissioners, the county council, Scott Memorial Hospital, local care providers, the Scott County sheriff, the county prosecutor, and LifeSpring Mental Health Services, the state-designated community mental health center for Scott County.

Because of the unprecedented nature of the outbreak and the need to quickly suppress and sustain suppression of the viral load in this community, the response demanded an intense and structured approach from ISDH. The incident command paradigm translated into somewhat of a hierarchical response model, particularly at the beginning, because it was an efficient way of plugging people into specific areas where there were clear and immediate needs.

Although the county's community-based services and organizations had declined over the years, those that remained were responsive to the diversity of needs in the local community. There was a tremendous influx of volunteers and phone calls from people all over the county who offered to help, but the challenge lay in figuring out where these assets could be most effectively put into action. The fluidity of the situation resulted in some of these assets being underutilized, triggering frustration for some individuals.

By the beginning of April 2015, the outbreak response in Scott County was in full swing, testing the social fabric of the community. The 4,200 residents of Austin saw their quiet town become a hub for national attention, its “drug problem” punctuated by media coverage that ranged from compassionate to reproachful. One resident, voicing the anguish of other members in her community, says it was hurtful to hear Austin characterized as a “forgotten, destitute place [where] nobody’s doing anything.”

When many people and organizations come together to work on a common challenge, they usually have differing perspectives. Therefore, it’s important to build trust among residents, organizational and community leaders, and government officials and to develop cooperative plans before a crisis, particularly when resources are scant. These relationships help responders understand what services various partners and organizations can provide. Incomplete situational awareness can lead to duplicate efforts, and it can also leave communities feeling disempowered when they perceive their role in a response as merely symbolic.

Having a concrete plan to identify and involve local response partners ahead of any public health emergency helps ensure ownership and builds experiential knowledge necessary for the local workforce, which bears the responsibility afterwards of sustaining efforts and supporting the community.

Local knowledge is key and must be given credence in the response’s decisionmaking process. Consider including elected officials, members of local substance abuse coalitions, businesses, mental health professionals, faith-based groups, local media, pharmacies, transportation officials, and others in response discussions. Developing a coordination strategy with community partners so that they have a legitimate, defined, and visible role in the response is also important in restoring the public narrative to one of resilience and strength.

Coordinating an Effective Public Health Response: Key Questions for Health Officials

- *What is your level of communication with rural communities?*
- *What is your level of understanding of rural communities’ needs?*
- *What does your local/area/regional data tell you about the health of the community? Does it make sense?*
- *Who is the local public health leadership? What are the local leadership agencies?*
- *Do you know who conducts prevention programs and outreach? Treatment services?*
- *Do your local health departments, treatment providers, and public health workers have the capacity to meet the community’s needs?*
- *Is there a local coalition or established collaboration that regularly brings key people together to strategize about resident needs and possible interventions?*

HIV REPORTING IN INDIANA

ISDH provided increasingly robust communication to its response partners as it better understood the outbreak and deployed additional DIS. The outbreak’s rapid pattern of transmission translated into an increased demand

for information in the state and scrutiny concerning how critical information reaches the community, including the local health department.

Mechanisms for mandatory HIV reporting vary across states, and decentralized states, like Indiana, can face particular challenges in bringing this data together for public health purposes across disparate and uncoordinated systems. ISDH observed early on that there were significant gaps in HIV reporting that disrupted the information flow. There are often initial delays in completion of case reports of HIV positive screens submitted by providers, and then further delays because they are sent by mail to ISDH. If the diagnosis was made in another state, discrepancies in how states communicate and share data can delay the transmission of information for weeks. Some of the Scott County residents who had positive screening tests for HIV were diagnosed at clinical facilities in Louisville, Kentucky.

ISDH wants to ensure that case reporting is no longer dependent on outdated methods (i.e., “a sheet of paper in an envelope with a stamp on it”) and establish a more user-friendly process for individual practitioners to make sure that vital information is relayed in a timely manner. ISDH’s eventual steps toward implementing more streamlined reporting protocols will require careful attention to confidentiality. Disclosing one’s HIV status is considered a highly sensitive issue, and people who acquire HIV by injecting drugs are especially stigmatized. ISDH must therefore balance privacy and security needs with appropriate—and timely—patient information sharing.

ISDH hopes to modernize its case reporting process to streamline communication around reporting so that local health departments know about emerging problems sooner.

LEADERSHIP AND VISION

Gov. Pence’s executive order enabled ISDH to coordinate a multisector response to the HIV outbreak and build the “One Stop Shop,” an innovative entity that bridged organizationally siloed agencies and connected affected residents to an array of comprehensive health care and social services.

EXECUTIVE ORDER 15-05

“And so, we needed, from time zero, medical services, insurance services, and addiction and mental health services. We needed prevention strategies that were going to work rapidly. We needed transportation, we needed job training, and then we needed to think about the other social determinants that got us all here in the first place.” – Indiana Deputy State Health Commissioner, Jen Walthall, MD, MPH

The state used Executive Order 15-05, declared on March 26, 2015, to coordinate the multiagency HIV response and gain additional funding to address the outbreak. The state approved \$2.1 million to support the response. One advantage of an executive order is that it can be used to quickly assemble the resources needed to concentrate on a public health problem that demands immediate attention, like pandemic influenza or, in this case, an HIV outbreak.

The state charged ISDH with partnering with the Indiana State Police, the Indiana Department of Correction, the Indiana Family and Social Services Administration, and local partners in the following activities:

- **Effort Coordination:** Coordinate HIV testing, treatment, coverage, outreach, and enforcement with state, federal, and local agencies.
- **Health Coverage Enrollment Assistance:** Provide health coverage enrollment assistance for individuals and local agencies, including for Medicaid and Healthy Indiana Plan 2.0, Indiana's Medicaid expansion waiver program.
- **Testing Support:** Encourage and support testing and screening by local health care providers in Scott County and surrounding counties.
- **Harm Prevention:** Provide education and technical support for harm prevention, disease containment, and medical pharmaceutical treatment.
- **Medical Personnel Recruitment:** Develop efforts to recruit and train physicians and other medical personnel to help control and stop the epidemic.

COMMUNITY OUTREACH CENTER (“ONE STOP SHOP”)

Establishing a facility that includes most of the services and resources essential to connecting someone with HIV to care would seem like a common sense response to an HIV outbreak. In fact, after a devastating tornado hit neighboring Henryville in 2012, Indiana state officials set up a similar facility in a centralized location with representatives from many state government agencies who could help connect people with recovery resources all under one roof.

In reality, Austin’s Community Outreach Center (COC), referred to interchangeably as the “One Stop Shop,” is one of the few places in the country where people have access to such a wide range of comprehensive services, including insurance coverage enrollment, birth certificates and identification services, HIV and HCV testing, immunizations, referrals for medical care and substance abuse treatment, transportation, and vocational training.

Scott County’s “one stop” model was effective in bridging organizationally siloed agencies to make it easier for residents who needed access to identification cards and vital records to obtain HIV-related and other services.

Four days after Gov. Pence declared his executive order, partnering state agencies set up a mobile unit functioning as a provisional COC in Austin. ISDH located a vacant warehouse and, within 48 hours, the COC was fully operational at this fixed location, with the goal of expanding access to an array of comprehensive services.

The state identified health insurance coverage as one of the most pressing needs facing affected residents. Many residents in Scott County were uninsured and also without identifying documents like birth certificates, delaying efforts to reach individuals most at risk and readily link them to other services, including education and training programs, healthcare, and food or cash assistance.

Below is a list of the key agencies involved and a description of the services they provided at the COC:

- **ISDH:** Provided immunizations, vital records and birth certificates, and HIV and hepatitis testing and services.
- **Bureau of Motor Vehicles:** Provided state-issued IDs for Scott County residents to allow them to enroll in health insurance.
- **Family and Social Services Administration:** Provided Healthy Indiana Plan 2.0 enrollment and enabled presumptive eligibility allowing local healthcare providers to respond quickly to testing and treatment needs.
- **Department of Workforce Development:** Provided local job referrals and vocational training.

Community Outreach Center Service Summary (Total reported as of June 2015)	
Total Services	1761
Visitors	1085
Insurance Enrollments	397
Drivers License/State ID	137
Vital Records	247
Immunizations	378
Mental Health	106
Care Coordination	116
HIV Testing	331
Department of Workforce Development	49

Local newspapers and television and radio stations publicized the COC's opening, and fliers were mailed to every Scott County resident. The Coalition to Eliminate the Abuse of Substances (CEASe) and other volunteers embedded in the community led substantial outreach efforts to educate community members about the available services. A volunteer from a local church also drove a door-to-door shuttle bus to transport people to and from the COC.

EVIDENCE-BASED PROGRAMS

Scientific evidence shows that, in addition to HIV treatment, syringe exchange programs and medication-assisted treatment (MAT) are effective in preventing the spread of HIV among persons who inject drugs, and the most important factors in the success of these interventions are political and community support.

SYRINGE EXCHANGE PROGRAM

Executive Order 15-05 authorized Scott County to operate a limited (30-day) syringe exchange program. Prior to this, although it was legal to purchase a small quantity of syringes in Indiana without a prescription, using them for nonmedical purposes was considered a felony punishable by up to three years in prison. The executive order temporarily suspended the state's drug paraphernalia laws to allow people to exchange used syringes for sterile ones in order to reduce the risk of sharing contaminated syringes.

After a panel of CDC experts presented scientific evidence to the governor's office on the effectiveness of syringe exchange programs for preventing HIV infections among injection drug users, the state was able to authorize an exchange program in Scott County.

Harm reduction strategies are intended to reduce the negative consequences associated with drug use. However, political and ideological disagreement surrounding harm reduction has contributed to legislative barriers, such as paraphernalia laws, that restrict states from implementing syringe exchange programs, particularly in rural and suburban areas.

Legal syringe exchange programs exist in many states, often as one component of more comprehensive measures to decrease HIV and HCV infections and get more people into substance abuse treatment. These programs typically integrate other services with syringe exchange, including education on safer injection practices and syringe disposal, and referrals to primary care and mental health services.

Still, operating a syringe exchange in Scott County was initially met with strong resistance. Community members were concerned that the program would attract more drug users, “addicts,” and “criminals” to Austin. Residents also worried that the syringe exchange sent the wrong message, not only condoning, but facilitating illegal drug use and distribution.

Like many other public health interventions where community acceptance is integral to success, it was important to establish trust among key stakeholders, including community leaders, elected officials, local law enforcement, faith-based leaders and groups, and businesses. However, the circumstances in Indiana offered only a very brief window of opportunity to understand the concerns of the community before the syringe exchange became operational.

It is important for public health officials to keep in mind that opening a syringe exchange requires building trust, protecting confidentiality, restoring self-worth, and treating people who use drugs with dignity and respect.

In late March 2015, ISDH contacted experts in syringe exchange programs to visit Scott County to help determine what supplies were needed to set up an effective syringe exchange program. The experts met with people who inject drugs (PWID) in the community and came up with recommendations for types of syringes, needles and other equipment used by those in the community for the county health department to use in the syringe exchange program.

With the very recent change in the legal status of syringe exchanges, it became clear that the community was undergoing a dramatic paradigm shift and needed the time, space, and flexibility to determine what a syringe exchange in Scott County would look like and how it would operate to serve the needs of the people living in a small, rural town. Over the next several days, as Scott County was developing a proposal for its syringe exchange and harm reduction efforts, ISDH provided technical expertise and examples of other successful syringe exchange models so that the community could decide which elements would be most representative of the public’s values and expectations.

On April 4, 2015, the Scott County Health Department received approval from local officials and Indiana State Health Commissioner, Dr. Jerome Adams, to establish the first syringe exchange program in Indiana. The program would be co-located within the COC alongside the other services, and also offer services through a mobile outreach van. On April 20, 2015, the governor extended the executive order by 30 days, allowing Scott County to continue operating the needle exchange.

Scott County’s program operates a “one-for-one plus” model, where participants are provided one syringe for every syringe brought in for proper disposal, and an additional number of new, sterile syringes to meet the injection needs of the client as determined by the syringe exchange program. During the enrollment and intake process, although the state does not collect or maintain any personally identifiable information, individuals are required to provide demographic data for program planning and monitoring purposes. A unique identifier and ID card is then assigned to each person to be presented in order to exchange and receive new syringes each time.

Scott County's "one-for-one plus" model aimed to encourage PWID to access the syringe exchange program more often, increasing opportunities for them to properly dispose of used syringes and get connected to other services, including HIV and HCV testing and addiction treatment referrals. In addition to sterile syringes, participants are given a wound kit, harm reduction education, and referrals to health and substance abuse services. Scott County's public health nurse also operates the program's mobile unit, canvassing the streets, distributing syringes, and building trust with local residents and PWID. This increased contact, together with the mobile unit's outreach efforts, is helping to dispel prejudicial and inaccurate beliefs surrounding drug use, HIV, and addiction treatment.

Naturally, there were some growing pains in the months following the executive order's new legal protections for syringe access. For example, it was easier to change the law than it was to change the mindset of law enforcement officers, who had been trained to protect the community and treat syringe possession as a crime or evidence of criminal activity.

The law did not automatically change law enforcement officers' behaviors and attitudes toward PWID and the individuals accessing the syringe exchange. There were numerous reports of officers using their de facto authority to confiscate syringes or arrest people on other charges, such as possession of drug paraphernalia or finding illicit drug residue in the syringes they were carrying. Some officers were simply unaware of the law change and, as a result, did not adapt their conduct in the streets accordingly. However, one of the key messages that helped allay law enforcement officers' concerns was that syringe exchange programs serve as a bridge to substance abuse and HIV treatment.

By targeting the misconceptions about drug use and harm reduction, law enforcement and public health officials were able to reach a middle ground concerning the syringe exchange in achieving a shared goal: ensuring and protecting the community's health and safety.

To assess the initial impact of the syringe exchange program in Scott County, investigators from CDC, the Scott County Health Department, and ISDH studied changes in injection-related risk behaviors between April and June 2015. In a sample of 100 people enrolled during the first two months of the program, many self-reported injection-related risk behaviors, including sharing and reusing syringes, declined significantly.

In May 2015, Indiana passed a syringe exchange law (SEA 461) to allow local health departments to establish county-by-county syringe exchange programs as part of a comprehensive public health response to HIV and HCV. The law permits local health departments to establish a syringe exchange program through the following process:

1. The local health officer declares to the county or municipality an **epidemic** of HIV or HCV linked to injection drug use that cannot be addressed effectively in other ways. The local health officer must also indicate that the syringe exchange is medically appropriate as part of the comprehensive **public health response**.
2. The county executive body (commission) holds a **public hearing** and approves a program.
3. The county submits a **comprehensive plan** for a syringe exchange program, including documentation of local approval, to the state health commissioner.
4. **ISDH reviews** the application to make sure it complies with Indiana law, and then responds with approval or request for additional information within 10 days.

ISDH distributed county profiles to each local health department to help them determine if unsafe injection drug use (IDU) is occurring by monitoring key data that can point to emerging needs. For example, rates of HCV are one of the most robust surrogate indicators of a community's IDU and HIV risk and vulnerability.

The profiles present county-specific HIV, STD, HCV, and opioid overdose data that local officials can use to understand disease trends over time and help counties and municipalities determine if they should consider establishing a syringe exchange program. The ISDH Epidemiology Resource Center also developed five-year data trend spreadsheets to further help those counties interested in developing a syringe exchange program. In addition, ISDH prepared a syringe exchange guidance document for local health departments with information about state and national resources (e.g., a checklist and menu of syringe access options).

Legislating a pathway to syringe exchange for Indiana's at-risk counties was a major triumph, but far from a perfect solution to the HIV outbreak. State leaders recognize that they need to employ primary prevention strategies that concentrate on the root causes of HIV infection and drug misuse, such as childhood trauma, generational poverty, unemployment, inadequate housing (including transitional housing and shelters), discrimination, and mental illness. Moving forward, ISDH and its partners will continue to focus on prevention efforts and sustainability, including plans to improve the public health infrastructure, reduce socioeconomic and health disparities, and put age-appropriate HIV and substance abuse prevention education into practice across the state. They also recognize that routine and widespread testing for HIV and HCV needs to be available in communities affected by substance abuse, including testing in the field, and in emergency departments, jails, and addiction treatment programs.

HIV PREVENTION, CASE MANAGEMENT, AND ADDICTION TREATMENT

It's important to reframe the conversation around addiction and HIV in order to reach individuals who have historically faced harassment, stigmatization, violence, and social exclusion. To begin this process, in May 2015, Scott County turned its attention to HIV clinical care and case management, and expanded access to addiction and mental health services. County officials held a series of meetings to determine how to provide education to the larger community and sustain the array of services needed, including linkage to HIV care and antiretroviral therapy, offering pre-exposure prophylaxis (PrEP) for people at ongoing risk of HIV infection, helping people access HCV treatment, and providing addiction treatment services, including MAT.

ISDH provided HIV testing training to local health departments, hospitals, schools, and local organizations in an effort to expand the reach of routine, universal testing and re-testing that continues to be necessary to prevent a possible future HIV resurgence. Individuals who are not infected but remain at high risk of infection are being offered PrEP, a once-daily antiretroviral pill that reduces the risks of acquiring HIV through sexual contact by more than 90 percent and through injection drug use by more than 70 percent. Once someone tests positive for HIV, a DIS contacts the person, performs a risk assessment and contact tracing, and draws blood for a confirmatory lab test. If the confirmatory test is positive, a care coordinator links the individual to HIV care and medical services. The Clark County Health Department hired a local HIV care coordinator and ISDH funded two additional care coordinators through the Clark County Health Department who are assigned to Scott County and the southern Indiana region.

The coordinators are co-located within the COC and Foundations Family Medicine, which provides HIV clinical care with support from the AIDS Healthcare Foundation, the Midwest AIDS Training and Education Center, and an HIV/HCV Project ECHO (Extension for Community Healthcare Outcomes) project based in Connecticut. After someone tests positive for HIV, he or she is referred to the local family physician or another healthcare provider and to a care coordinator who can connect the individual with access to medication, insurance, financial assistance, and referrals to other social services.

Care coordinators play an important role in retaining patients in medical care and helping those living with HIV navigate a wide variety of health and social services.

Each of Indiana's HIP 2.0 managed care entities provide additional care coordination services. When the Family and Social Services Administration, which oversees the Medicaid program, placed staff on the ground in Scott County to facilitate presumptive eligibility at the beginning of the outbreak response, it also coordinated meetings between ISDH and the managed care entities to make sure that individuals diagnosed with HIV would receive ongoing case management and treatment. Their goal is to get people into care coordination within 48 hours so that, once engaged in medical care, a healthcare provider can prescribe appropriate medication in order to reduce a patient's viral load. The results of all viral load tests conducted in Indiana are then reported to ISDH, allowing the state health agency to monitor disease progression and treatment efficacy.

It has been challenging getting HCV-infected patients into treatment due to the fact that Indiana's many rural areas are not served by an infectious disease specialist or gastroenterologist, the only medical professionals authorized under Indiana Medicaid to prescribe medications to treat HCV. ISDH worked with Indiana Medicaid to authorize family physicians who participate in an HCV Project ECHO project to prescribe appropriate HCV treatment for eligible patients. The physician has since reported multiple individuals treated for HCV who have been cured. ISDH is now engaging the Indiana University School of Medicine to replicate New Mexico's Project ECHO model in Indiana, which will increase the availability of primary care physicians who are authorized to provide treatment under this model. More than 90 percent of the people diagnosed with HIV in Scott County were co-infected with HCV.

In June 2015, Scott County officials moved the COC and the syringe exchange program to a new location in the north end of Austin, the area hit hardest by the outbreak. Two months later, with state funding, LifeSpring Health Systems opened a satellite office in the same building to provide outpatient mental health and substance abuse treatment services. LifeSpring is the county's designated community mental health center, providing services in six southern Indiana counties. Although its primary location in Scottsburg is just six miles outside of Austin, it was inaccessible for many affected individuals. The satellite office's proximity to the syringe exchange helps encourage some people to take that first step toward treatment.

As is the case in many rural communities across the United States, few doctors in rural Indiana have a waiver certifying them to prescribe buprenorphine, a form of MAT. Coupled with behavioral therapy and other support services, medications such as methadone, buprenorphine and naltrexone have proven effective in treating opioid use disorder. Despite MAT's effectiveness, many people in Scott County who need treatment for opioid misuse are not able to get it, in large part because they can't find providers or the upfront costs simply make it out of reach. Further, some providers within the medical community view MAT as simply "substituting one drug for another" and draw a hard line on the role of medications in addiction treatment and recovery.

Conflicting views and concerns about the practice of MAT had historically been so strong that the Indiana General Assembly declared a moratorium on new opioid treatment programs (OTPs), restricting the state's MAT network to just 13 facilities, only three of which operate as nonprofits. In 2015, the state passed legislation allowing the creation of five new OTPs established by either hospitals or community mental health centers before 2018. Even so, like many states, Indiana struggles to treat its increasing population of people addicted to opioids.

To address the stigma surrounding addiction treatment, it is beneficial to engage community members, such as faith-based leaders and local public figures, as advocates and spokespeople for treatment and prevention initiatives.

But Indiana is finding that the most effective system of care for people with substance use disorder is a system that integrates harm reduction, treatment, and recovery support. State health officials in Indiana are calling for a full system of care, one that connects MAT and addiction treatment services with primary care, substance use, community mental health, and recovery-oriented services. Austin now has recovery support programs that are organized by community volunteers. Trained lay recovery coaches from the Project Empowerment Effect Recovery Services program, supported by the Indiana chapter of Mental Health America, drive from Indianapolis every week to run a recovery group at a local church.

CONCLUSION

The public health infrastructure in Scott County was a significant obstacle for HIV outbreak responders because the systems in place weren't adequate to bring an outbreak of this size and complexity under control. In order to prepare for the possibility of future HIV or HCV outbreaks, health departments, health systems, and local providers need to be actively involved in community-wide strategies to identify and prevent substance abuse (see **Appendix A**). In addition, public health leaders found that stigma concerning MAT is institutionalized in Indiana in ways that profoundly affect health and wellness. State health officials are well-positioned to broker the gaps between communities and the healthcare system by creating a policy environment that supports high-quality, comprehensive services for people with substance use disorders.

Preventing and responding to disease outbreaks requires effective coordination across multiple levels of health departments and across various points of the healthcare system. Disjointed pathways result in missed opportunities to tackle the broader determinants of health, whether they relate to alcohol or drug use, adverse childhood experiences, or environmental threats. State health departments can urge other levels of government to consider greater investments in early childhood development, housing, mental health, and treatment services, recognizing the fundamental role that these systems play in addressing the root causes of drug use and addiction. **Appendix B** depicts the interrelatedness of several policy decisions, state and local strategies, and community practices and how specific actions and services at each level of the public health enterprise contributed to a comprehensive effort to prevent and stop the spread of HIV and HCV in Scott County.

Although major events like the Scott County HIV outbreak require a rapid response, working with communities to establish and strengthen the local public health infrastructure takes time, resources, and a long-term strategy. Media, political, and public interest in the Scott County HIV outbreak was forceful, so it is important to prioritize communication early in the response. One of the main lessons that the state health department learned was how important it is to fully engage other agencies and organizations, including those in the public



health community but also the media, county law enforcement and the sheriff's office, and academic health centers and universities. These partners played an active role in supporting the organizational, logistical, financial, and communications efforts required to investigate and manage Indiana's HIV outbreak.

The shared experience of this outbreak has motivated response partners to help others understand that people who use drugs or who are living with HIV are members of the communities where we work and live. Understanding local data, developing trust, and building relationships between public health, law enforcement, treatment providers, and community members opens doors for a more comprehensive approach to preventing HIV and HCV outbreaks.

APPENDIX A

►► POLICY CHANGE

- SEA 461: authorized syringe exchange programs
- HEA 1269: expanded Medicaid enrollment for incarcerated persons
- HEA 1448: required Medicaid coverage of inpatient substance abuse detoxification services
- SB 406: allowed “third party” prescribing of naloxone

►► LEADERSHIP AND VISION

- Attorney General's Prescription Drug Abuse Prevention Task Force
- Community Outreach Center — “One Stop Shop”
- State Department of Health
- Bureau of Motor Vehicles
- Family and Social Services Administration (Medicaid)
- Department of Workforce Development

►► MULTISECTOR PARTNERS

- Office of the Attorney General
- Federal partners: CDC, HRSA, and SAMHSA
- Indiana University and School of Medicine
- University of Louisville's Division of Infectious Diseases
- Indiana Division of Mental Health and Addiction
- AIDS Healthcare Foundation
- Division of STD, Viral Hepatitis, HIV/AIDS Prevention
- American Academy of Addiction Medicine
- Mental Health America Indiana

►► EVIDENCE-BASED PROGRAMS

- HIV/HCV testing
- Comprehensive harm reduction measures
- Pre-exposure prophylaxis and HIV treatment
- Medication assisted treatment

►► DATA-DRIVEN ACTION

- Contact tracing and phylogenetic sequencing
- Surveillance for acute HCV infections
- Data on drug overdose deaths, EMS, hospital discharges, poison control centers, PDMP, treatment admissions

►► COMMUNICATION

- Incident Command System (state and local)

►► FINANCING

- Executive Order 15-05

►► COMMUNITY RESOURCES

- CEASe (Coalition to Eliminate the Abuse of Substances)
- Foundations Family Medicine
- Scott Memorial Hospital
- Grace Covenant Church
- Sheriff's Office
- LifeSpring
- Scott and Clark County Health Departments
- Stand Up (student organization)
- Get Healthy Scott County Recovery Coalition
- Midwest AIDS Training and Education Center

APPENDIX B

Statewide Strategy/Policy

SEA 461: authorized syringe exchange programs	Executive Order 15-05	Attorney General's Prescription Drug Abuse Prevention Task Force
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Enacted Statewide Strategy

Syringe exchange guidance and county profiles	Incident Command System	<i>You Are Not Alone</i> public awareness campaign
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Implemented Local Policy

Town hall and policy coordination meetings	Community Outreach Center ("One Stop Shop")	HIV/HCV testing in multiple settings
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Supported Community Practices

Syringe exchange programs and mobile unit; HIV/HCV testing	Engaging people in care continuum, including mental health, substance abuse treatment, and recovery	Education and community outreach; sustainability planning with local options
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Comprehensive efforts to prevent and stop the spread of HIV and HCV in Scott County.