COMMUNITY RESPONSE PLANNING FOR OUTBREAKS OF HEPATITIS AND HIV AMONG PEOPLE WHO INJECT DRUGS

A CASE STUDY FROM LENOWISCO HEALTH DISTRICT, A RURAL COMMUNITY IN VIRGINIA

NACCHO
National Association of County & City Health Officials

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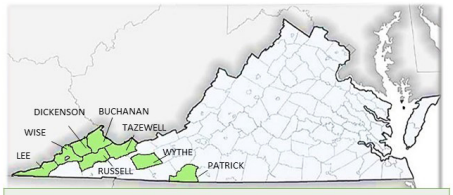
Background

Beginning in late 2014, an outbreak of HIV infections spread rapidly among a network of persons who inject drugs (PWID) in the small rural community of Austin in Scott County, Indiana. In January 2015, there were 11 newly diagnosed cases of HIV in Scott County. By the end of February, more than 40 new cases were identified, and on March 26, 2015, a public health emergency was declared. By the end of 2017, 223 people had been diagnosed with HIV, and more than 90% of these individuals are co-infected with hepatitis C virus (HCV).

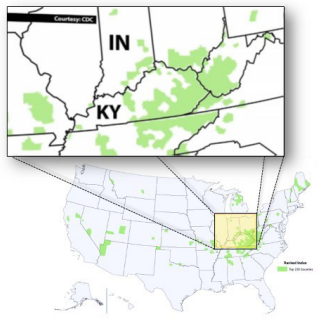
While this HIV outbreak was unprecedented, the conditions that led to the outbreak are not unique. It occurred in the context of the United States' national opioid epidemic, which is fueling increasing injection drug use, rising rates of HCV and hepatitis B virus (HBV), and pockets of new HIV infections. Responding to the outbreak in Scott County was an enormous effort that included local, state, and federal agencies. The response continues today to ensure care and treatment for those who were infected and comprehensive prevention services for those that remain at risk for HIV and HCV.

In response to the HIV outbreak in Scott County, the Centers for Disease Control and Prevention (CDC) conducted an assessment to identify counties that might be particularly vulnerable to the rapid spread of HIV and HCV among PWID.[1] The analysis identified 220 counties in 26 states, including eight counties in the Appalachian region of Virginia, as being most vulnerable to new HIV or viral hepatitis infections due to unsafe injection drug use.

CDC County-level Vulnerability to Rapid Dissemination of HIV/HCV Infection Among Persons who Inject Drugs

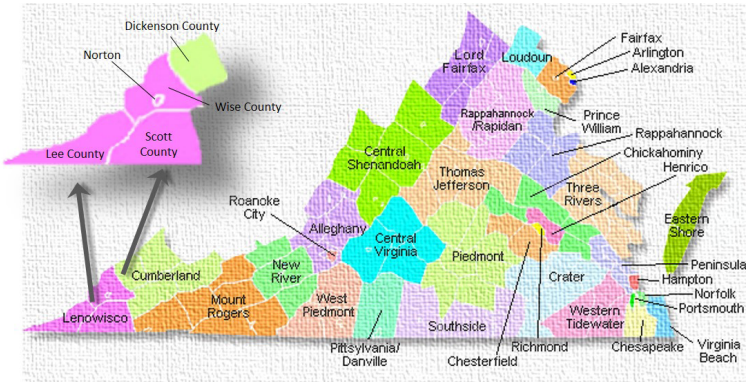


Vulnerable Counties and National Ranks (from 1-220)					
Buchanan	28	Lee	73	Patrick	166
Dickenson	29	Wise	78	Wythe	210
Russell	61	Tazewell	96		



Notes: Map and Analysis provided by the Geospatial Research, Analysis, and Services Program (GRASP), DIV of Toxicology and Human Health Sciences, ATSDR (2015). Data Sources: American Community Survey, 2012-2013; DEA ARCOS 2013; NCHS/NVSS 2012-2013; SAMHSA DATA 2000 Program Info 2014.

Even before the CDC released the results of this analysis, health officials in the LENOWISCO Health District, made up of four localities in rural southwest Virginia - Lee, Norton, Wise, and Scott - recognized similarities between their communities and Scott County, Indiana. LENOWISCO has also been heavily impacted by the opioid epidemic and experiencing increases in injection drug use and rising rates of hepatitis. In fact, the District experienced an injection drug use-associated outbreak of HBV in 2012.



In the wake of the HIV outbreak in Scott County and recognizing its ongoing vulnerability, the LENOWISCO Health District initiated efforts to develop a comprehensive community response plan for outbreaks of HIV and hepatitis among PWID. This document outlines the process for developing the community response plan, lessons learned, and key components of the plan. This document is intended to help health departments prepare for outbreaks of hepatitis and HIV among PWID by providing guidance on how to develop a local community response plan by integrating key elements of communicable disease control and prevention with emergency management concepts and community resource mobilization. See **Appendix I** for the Community Response Plan.

Process for Developing the Community Response Plan

In April 2016, four health districts in southwest Virginia, including LENOWISCO, and the Virginia Department of Health (VDH) organized a regional tabletop exercise to discuss and review plans in the case of an HIV outbreak. This exercise laid the groundwork for the development of the comprehensive community response plan.

In March 2017, the LENOWISCO Health District held a second tabletop exercise, Appalachian H.E.A.R.T. (Hepatitis/HIV Emergency Action Response Tabletop), which:

- Built on the results of the first exercise;
- Expanded the scope to include HBV and HCV, as well as plans for an ongoing, sustained response;
- Engaged additional community partners and key stakeholders; and
- Focused specifically on the LENOWISCO Health District and neighboring Dickenson County in the Cumberland Plateau Health District (i.e., DiLENOWISCO).

The results of the tabletop exercise were used to draft the Community Response Plan. After drafting the plan, the health district held four town hall-style meetings to educate the community about the infectious disease consequences of the opioid epidemic, review the draft community response plan, and gather input on the draft plan. Community feedback was incorporated into the Community Response Plan, which was authorized by the health official in August 2017. The sections that follow detail key steps in the process to develop the Community Response Plan.

Plan tabletop exercise

A task force of subject matter experts was established to oversee the planning process for the tabletop exercise. The task force included members of the health district's epidemiology response and disease investigation teams, health educators, and a representative from the local community hospital. The task force oversaw exercise logistics and developed the invitation list for participation. The goal for participation was to have existing and new stakeholders from multiple sectors represented at the exercise. The invitation list included representatives from the state health department, the regional Epidemiology Task Force, medical providers, correctional facilities, homeless shelters, food banks, faith-based communities, law enforcement, department of social services, home health agencies, community service boards, and the treatment and recovery community.

Since the task force members would also be key participants in the tabletop exercise, another team was established to design the exercise. The exercise design team was led by the Local Health Emergency Coordinator. The team followed the Homeland Security Exercise Evaluation Program framework to develop the exercise and situation manual.[2] See **Appendix II** for the Appalachian H.E.A.R.T Situation Manual.

Conduct tabletop exercise

The tabletop exercise was attended by 69 people and occurred over the course of four hours and 15 minutes. The facilitated exercise was organized into three modules:

- Module 1: Exercise background and initial outbreak response in affected counties
- Module 2: Community impact and public information/education
- Module 3: Looking forward

The modules were designed to achieve the following objectives:

- Discuss epidemiological and community methods of outbreak prevention and mitigation;
- Discuss essential viral hepatitis and HIV outbreak response needs;
- Examine information sharing processes with community partners; and
- Discuss laws, regulations, and procedures for viral hepatitis and HIV outbreak response and recovery.

Each module began with a summary of the key events occurring within a designated time period of the exercise scenario. The scenario began as follows:

> *August 28, 2016, Wise, Virginia: On a very windy and rainy night at approximately 2:35 a.m., law enforcement responded to a 911 call about an overdose. The patient was transported and naloxone was administered by EMS responders. The patient did not recover. Counterfeit prescription opioid pills (OxyContin®) laced with fentanyl were the presumed cause. Since the patient died as a result of the overdose, investigators were unable to get information about possible contacts. A blood specimen from the deceased initially provides test results that are positive for HIV antibodies, hepatitis C antibodies, and hepatitis B surface antigen (a marker of infectiousness). During the investigation, the Disease Intervention Specialist finds that the deceased individual was reported during the HBV outbreak in 2012, had a wide social network, and at that time, tested negative for HIV and HCV. Further epi investigation found that the deceased had been a patient at the July 2016 Remote Area Medical (RAM) Health Expedition in Wise County. The deceased had attended a party after Day 2 of RAM and engaged in extensive drug use, including needle sharing, as well as unprotected sex with multiple partners during and after the party.*

After each module summary was reviewed, participants, who were organized into groups by county, reviewed the situation and worked through a series of discussion questions to determine what the response should be. Key considerations included roles and responsibilities of the various stakeholders and resource needs. The small group discussions were reported out to the large group. During both the small group discussions and large group report-outs, exercise evaluators and observers took notes and documented their reflections. There were four exercise evaluators and two observers. These individuals were tasked with providing an objective assessment of the proceedings.

Develop after action report/improvement plan

The exercise design team used a capabilities-based approach to plan the exercise, which focused on developing exercise objectives and understanding exercise outcomes through a framework of specific action items. The After-Action Report/Improvement Plan (AAR/IP) documents these action items and includes information about major strengths and areas for improvement, analysis of core capabilities associated with responding to hepatitis and HIV outbreaks, lessons learned through the exercise process, results of the exercise evaluation, and accompanying appendices with related materials. Templates from the Homeland Security Exercise Evaluation Program were used for the AAR/IP. The AAR/IP served as a precursor to drafting the Community Response Plan.

Draft community response plan

The Local Health Emergency Coordinator drafted the Community Response Plan, with input and support from the project task force. DiLENOWISCO's District Epidemiological Response Plan was used as the foundation for the plan. The existing plan provided a strong base upon which to incorporate outcomes from the tabletop exercise and the specific and unique considerations related to outbreaks of hepatitis and HIV among PWID.

Additional resources were used as reference materials to ensure the plan included appropriate information and processes for prevention, mitigation, and sustained response and recovery. The resources included:

- Information from the 2012 HBV outbreak in LENOWISCO;
- Presentations by the Indiana Department of Health about the HIV outbreak in Scott County;
- The Harm Reduction Coalition website;
- U.S. Department of Health and Human Services Consultation Report, *Hepatitis C Virus Infection in Young Persons Who Inject Drugs*;[3]
- U.S. National Viral Hepatitis Action Plan for 2017-2020;[4]
- VaAware, a Virginia-based group focused on prescription drug and heroin abuse; and
- Various federal agency websites, including CDC, SAMHSA, and HIV.gov.

LENOWISCO Health District staff also spoke with staff at the Indiana Department of Health to gain additional insight into their response and recovery efforts for the 2015 HIV outbreak in Scott County.

Gather community feedback

Considering the substantial impact of the opioid epidemic and its related health consequences on individuals, families, healthcare providers, local systems, and communities – as well as the resources needed to prevent, prepare for, and respond to outbreaks of hepatitis and HIV – the task force understood that community engagement and input was essential to the development of a strong, workable, comprehensive response plan. The LENOWISCO Health District conducted four town hall-style meetings in June 2017. Hour-and-a-half long meetings were held in each of the four localities in LENOWISCO. The meetings were promoted via email, flyers, a press release to local media outlets, and social media. See **Appendix III** for the town hall meeting flyer and **Appendix IV** for the press releases.

The primary focus for the meetings was reviewing key components of the immediate response plan and discussing ongoing efforts to address substance use disorder, viral hepatitis, and HIV. Background information was also provided to increase community awareness and knowledge of the infectious disease consequences of the opioid epidemic and harm reduction strategies to prevent complications associated with drug use. In addition to staff from the LENOWISCO Health District, guests from VDH's Office of Epidemiology and CDC's Division of Viral Hepatitis were among the speakers for the town hall meetings. Presentations were followed by facilitated discussions to gather feedback and respond to questions from attendees.

In total, 93 individuals attended the town hall meetings. Participant feedback addressed the feasibility of the plan's components, provided general impressions of the response and recovery efforts, pointed to potential gaps in the plan, and highlighted potential concerns. Additionally, participants suggested several key locations in each county that could serve as an outreach center in the event that a localized response was needed. Following each meeting, the health department offered "REVIVE! Opioid Overdose and Naloxone Education" training. To help further spread awareness about the project, local media organizations were invited to participate in the town hall meetings. A local television network attended one of the meetings, resulting in an online news story as well as a feature spot on the evening news.

Finalize community response plan

Feedback and recommendations shared during the town hall meetings were reviewed and factored into the final version of the Community Response Plan. The plan was authorized by the health director on August 8, 2017.

Overview of the Community Response Plan

The Community Response Plan integrates key elements of communicable disease control and prevention with emergency management concepts and community resource mobilization. As such, the document applies to all phases of an emergency situation – preparedness, response, and recovery – resulting from an increase in HBV, HCV, or HIV due to injection drug use. The plan serves as a guide for HBV, HCV, and HIV surveillance and investigation activities and is an annex to DiLENOWISCO's Emergency Operations Plans (EOP). The Community Response Plan is designed to be used in concert with the EOP, which delineates supporting and coordinating functions that would be led by the VDH Office of Emergency Preparedness. The Community Response Plan outlines general strategies; however, it is recognized that during an emergency event, the judgment of public health leadership and incident command staff may require alterations to the strategies.

Given the wide variety of tasks to be executed as part of the community response, as well as the large number of individuals and skillsets that may be involved, organization of the response is critical. The Community Response Plan describes the organization of resources and tasks according to Incident Command System (ICS) principles. Additional documents, such as the EOP, provide more detail about the various roles and functions of an ICS structure that need to be addressed in public health response.

The Community Response Plan is organized to address three tiers of public health preparedness and response:

1. Community Prevention (pre-outbreak)
2. Community Response (immediate and intermediate response)
3. Community Recovery (sustained response)

Specific objectives of the Community Response Plan are to:

- Define an organizational structure which may be applied to ensure that all the necessary elements of the Community Response Plan are addressed in emergency response, including the following epidemiologic tasks:
    - Existing HBV, HCV, and HIV disease surveillance system;
    - The process involved in investigating occurrences or outbreaks of disease;
    - Steps for ensuring the timely, accurate, and consistent flow of disease- and outbreak-related information to the necessary stakeholders; and
    - Roles and responsibilities of epidemiology staff during HBV, HCV, and HIV events.
- Detail community resources and partnerships necessary during HBV, HCV, and HIV events, including:
    - Access to medical specialty care;
    - Insurance navigation;
    - Transportation;
    - Substance use disorder treatment; and
    - Ryan White HIV/AIDS Program.

The Community Response Plan is a working document. The Local Health Emergency Coordinator will update the plan annually, at a minimum, with input and review provided by health department staff and community partners. Additionally, based on lessons learned during an actual activation of the plan or exercise of the plan, it will be reviewed and supplemented as needed.

See **Appendix I** for the complete Community Response Plan.

Lessons Learned through Development of the Community Response Plan

While emergency response planning is a common activity for health departments, the areas of focus for this plan present unique characteristics and are not commonly recognized threats or hazards for response planning. However, in the wake of the HIV outbreak in Scott County, Indiana – and our ongoing national opioid crisis – jurisdictions are increasingly assessing their preparedness to respond to rapid increases in HIV and hepatitis among PWID. The experience of the LENOWISCO Health District provides important lessons learned and examples for other jurisdictions across the country facing similar vulnerabilities.

Successes:

- A diverse group of subject matter experts was assembled for the exercise task force. They were instrumental in developing an exercise scenario that took into consideration the context of the local community and addressed a broad array of issues related to the threat of a viral hepatitis or HIV outbreak among PWID.
- Since LENOWISCO is a rural area and participants from across the region were invited, conducting the tabletop exercise in a central and well-known location was important for increasing attendance.
- The health department leveraged existing relationships with community partners to engage new partners in the exercise.
- During the exercise, participants were grouped by county and efforts were made to break down silos by splitting up individuals representing specific agencies, organizations, and sectors. This helped to diversify perspectives at each table, which was important for increasing understanding of the roles and responsibilities of the different stakeholders during an outbreak response and strategizing approaches to how they would coordinate during the response. The seating arrangements also helped increase participant engagement.
- Holding the town hall-style meetings after the exercise was extremely beneficial to the process. It allowed for increased community engagement on the issues, provided an important opportunity to increase awareness among community partners of the infectious disease consequences of the opioid epidemic and harm reduction strategies, and garnered buy-in for the response plan, as well as the overall need for ongoing and expanded efforts to prevent hepatitis and HIV outbreaks from occurring.
- Since the town hall meetings were open to the public, it was important to have a diverse panel of speakers who were able to answer questions and address concerns of those less familiar with public health approaches and the health department's processes and policies.

Challenges:

- It was challenging to engage law enforcement. Only one representative from law enforcement attended the tabletop exercise and just a few law enforcement representatives attended the town hall meetings. Concerns related to harm reduction strategies and substance use disorder affected their participation and input.
- Some of the participants in the tabletop exercise expressed that they were unsure of their role in responding to and working to prevent this type of outbreak from occurring.

- Since the tabletop exercise engaged non-traditional partners for emergency preparedness efforts, some of the participants found the process difficult to understand. Similarly, during the town hall meetings, attendees had general questions about emergency response policies and procedures, which took time away from discussing the specifics of the Community Response Plan.

Issues and concerns raised during the tabletop exercise:

- Participants less familiar with contact tracing and partner services had questions and concerns about Health Insurance Portability and Accountability Act (HIPAA) compliance and privacy, including HIPAA's impact on communications among response leadership, community partners, and the public.
- Lack of funding and resources in rural communities, and the impact of this on responding to the opioid crisis and the spread of infectious diseases. For example, there are no infectious disease doctors in the LENOWISCO Health District and surrounding region, and limited availability of substance use disorder providers.
- High rates of homelessness in the region and a lack of shelters and transitional housing.

Steps for refining the process in the future:

- Increase outreach and engagement efforts to recruit more representatives from law enforcement, social services, and treatment and recovery to attend the tabletop exercise. One strategy for doing so would be to assign exercise planning task force members to serve as liaisons to each community sector.
- Dedicate more time at the beginning of the tabletop exercise or through pre-exercise assignments to explaining the Homeland Security Exercise Evaluation Program and the format of the exercise, ICS, and other key concepts associated with emergency response and preparedness. As this exercise engaged stakeholders less familiar with this work, there were some basic questions about the process that could have been addressed upfront.
- Similarly, since many of the participants in the tabletop exercise were not regularly engaged in work related to hepatitis and HIV, a pre-exercise webinar could be conducted to provide general information about viral hepatitis and HIV.
- Provide follow-up information and resources for participants to take back to their agencies and organizations to support further discussions of the issues. The information could also be accompanied with a recommendation that inner-agency plans be developed to supplement the Community Response Plan.
- Hold at least one town hall meeting outside of regular business hours to increase participation from the public.

Putting the Community Response Plan into Action

The Community Response Plan is a valuable guide for addressing the health district's vulnerability to an outbreak of hepatitis and HIV among PWID. In addition to providing detailed information about what would trigger activation of the plan, the specifics of the response in the case that the plan is activated, and the community and resources required for the response, the first tier of the plan, Community Prevention (Pre-Outbreak), addresses a number of actions the health department and its community partners should take to prevent an outbreak from occurring and increase preparedness and capacity to respond in the case an outbreak is detected.

These actions include:

- Educate community members on available evidence-based resources to reduce initiation of substance misuse and abuse;
- Educate populations at-risk for blood-borne pathogens (e.g., PWID, partners of PWID, household contacts);
- Educate healthcare providers;
- Educate and advocate for screening inmates for blood-borne pathogens at local and regional jails;
- Share surveillance data and other pertinent information with key stakeholders;
- Reach out to areas that are geographically dispersed;
- Partner with the faith-based community;
- Provide training to the regional Medical Reserve Corps;
- Educate law enforcement officers on substance use disorder and evidence-based prevention strategies for blood-borne pathogens;
- Partner with pharmacies and pharmacy organizations;
- Engage waste management partners in preparation for syringe disposal through syringe services programs (SSPs); and
- Recruit "recovery volunteers."

Additionally, the LENOWSICO Health District will work with its local, regional, and state partners to increase the availability of comprehensive harm reduction strategies for PWID. Of critical importance will be establishing SSPs, which are essential not only to pre-outbreak efforts, but are also a vital strategy during the immediate and sustained response periods. In February 2017, Virginia passed legislation to legalize syringe access programs. The legislation (House Bill 2317) took effect in July 2017 and authorizes the Commissioner of Health to establish and operate SSPs during a declared public health emergency. The legislation outlines that SSPs will be operated by local health departments or organizations with which VDH contracts and in accordance with the Virginia Standards and Protocols for Comprehensive Harm Reduction Programs.[5] Following the development of the Community Response Plan, the LENOWISCO Health District began the process of preparing an application to operate a comprehensive harm reduction program.

We encourage local and state health departments across the country to review the Community Response Plan, assess your local vulnerability to outbreaks of hepatitis and HIV among PWID, and consider undertaking a similar process to prepare for and respond to the possibility of an outbreak among networks of PWID.

References

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