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## Communicating During an HIV Outbreak Among People Who Inject Drugs—West Virginia 2019

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### Abstract

In 2019, the West Virginia Bureau for Public Health (WV BPH), Cabell-Huntington Health Department (CHHD), and CDC collaborated to respond to an HIV outbreak among people who inject drugs (PWID). CDC, WV BPH, and CHHD formed a cross-agency communications team to establish situational awareness, identify knowledge gaps, and establish key audiences for messages, including the general population, PWID, and clinical and social service providers. The team disseminated up-to-date information about the outbreak, and prioritized messages addressing stigma related to drug use, syringe services programs, and HIV. Messages were continually updated to address the evolving situation and to resonate with local values. Messages were disseminated via advertisements, local news media, and directly to PWID, people experiencing homelessness, and providers. The response supplemented CHHD's assets, including strong relationships and community knowledge, with staff capacity and expertise from state and federal agencies. This collaborative approach is a useful model to address communication needs.

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## Introduction

In January 2019, the West Virginia Bureau for Public Health (WV BPH) detected an increase in HIV diagnoses among people who inject drugs (PWID) in Cabell County, which includes the city of Huntington [1, 2]. Before the outbreak, two PWID received a diagnosis of HIV each year on average in Cabell County; in 2018, 14 PWID received HIV diagnoses. WV BPH requested CDC assistance, and WV BPH, the Cabell-Huntington Health Department (CHHD) and CDC collaborated to respond to the outbreak, which grew to include 82 people by October 2019. More details about this response are provided elsewhere [1, 2].

This outbreak among PWID involved many persons who were experiencing unstable housing or homelessness as well as complex and multiple layers of stigma. West Virginia experiences high rates of community drug use and overdose, with fatal overdoses in the state increasing from 212 in 2001 to more than 1000 in 2017. Kanawha County (where Charleston, the state capital, is located) and Cabell County consistently reported the most overdoses [3]. A 2018 study estimated that 2.4% of adult Cabell county residents had injected drugs in the past 6 months, most commonly heroin and methamphetamine, and nearly half of those surveyed reported reusing or sharing syringes or other equipment [4]. High poverty and unemployment and a limited supply of affordable housing, with available housing often in poor or uninhabitable condition, resulted in increased housing instability and homelessness in the area [5].

Cabell County's local syringe services program (SSP) provides harm reduction services including sterile syringes and other healthcare and support services to PWID. Community concerns about drug use and about the SSP complicated efforts to provide HIV prevention services for PWID and led to restrictions at the SSP prior to the outbreak. This outbreak was also preceded by other, similar outbreaks among PWID in several other areas across the United States including northeastern Massachusetts and Scott County, Indiana [6].

Clear, consistent communication with partners and the public during a public health investigation or outbreak is an essential part of public health response [7]. This combined state, local, and federal outbreak response prioritized communication to PWID, providers, and the community. This case study describes communication efforts during this response, including the important role of addressing complex, multi-level stigma related to drug use, SSPs, and HIV; stigma reduction is central to CDC's mission to promote health and prevent HIV transmission [8].

## Methods

### Determining Roles and Responsibilities

After detection of the HIV increase, WV BPH requested and received CDC assistance, as described in further detail elsewhere [1, 2, 9]. CDC, WV BPH, and CHHD established parallel Incident Command (WV and CHHD) and Incident Management (CDC) Systems to coordinate the HIV outbreak response. Recognizing the importance of a cohesive communications strategy across the response, communications staff from each of the three agencies formed a cross-agency communications team. The communications team was comprised of one full-time CDC staff member in the field and additional CDC, state, and local staff who covered these responsibilities as part of the response, often in addition to other job duties. Each communications team staff member serving on the response reported to the lead of their respective agency's Incident Command or Incident Management structure.

### Understanding the Community Context

Prior to the outbreak, community and clinical groups in Cabell County had established partnerships and programs to address substance use disorder (SUD) and overdose. CHHD established an SSP which began providing access to sterile syringes and other services in September 2015, initially with broad community support. Marshall University, CHHD, and other partners spearheaded efforts to offer medication for opioid use disorder, peer-based recovery, and other services for people who use drugs or who are experiencing SUD [10]. The Substance Abuse and Mental Health Services Administration (SAMHSA) funded programs and community coalitions to increase community partnerships, address SUD, and reduce overdose in West Virginia [11].

Despite strong initial community support, this ongoing public health challenge eventually resulted in burnout and compassion fatigue, described as stress or inability to cope resulting from repeated exposure to or caring for others undergoing traumatic experiences, among first responders and clinical providers [12]. Community support for programs such as the SSP declined over time, with some linking crime and syringe litter to the SSP [12]. In response to community concerns, beginning in July 2018 the CHHD SSP restricted the number of syringes distributed, and limited the program to persons who could demonstrate county residence. The restrictions posed challenges for clients experiencing homelessness and decreased access to this important prevention program, reducing the number of syringes distributed by two-thirds (from 62,000 per month to 18,600) [13]. Beyond substance use-related stigma and compassion fatigue, members of the response team identified low levels of knowledge about HIV as a challenge to outbreak response. Some community members described not realizing that people were still at risk for HIV, not understanding how it was transmitted, and not knowing that there were rapid tests or effective clinical options for treatment and prevention.

### Identifying Community Partners

Throughout the response, the communications team debriefed with other response staff after those staff met with local partners to implement and expand a range of interventions,

including partner services and testing, linkage to HIV and other care, pre-exposure prophylaxis (PrEP), and SSP; interviews with sex workers to understand and address their HIV prevention needs; and, implementation of a social network testing strategy to increase testing among PWID in the community [1, 2, 9]. The communications team also engaged directly with the CHHD SSP and other local service providers, including those serving people experiencing homelessness. These discussions and debriefings helped identify knowledge gaps and communication needs and informed the development of communications materials.

## Outcomes

### Communicating to the General Population

The communications response aimed to address complex layers of stigma related to perceptions of substance use, SSPs, and HIV among the general population. The communications team developed messages for use in media interviews and public discussions, and CDC staff with background in media as well as crisis and emergency risk communications provided training to CHHD staff to support engagement with local and national media outlets. Initial messaging focused on statistics about the efficacy of specific interventions (for example, data showing SSPs could help prevent HIV). Further conversations among team members highlighted the fact that this approach may not resonate with community members. Subsequently, the team identified and focused on the values of local residents, and how prevention efforts could support those values, including strong moral principles, taking pride in self-sufficiency and independence, and desire to do the right thing and take care of their community. The team then reframed messages to reflect how public health intervention efforts supported these values, and to emphasize that prevention and treatment provided PWID opportunities to improve personal and community health.

Recognizing the importance of addressing stigma across the state, team members initiated discussions that ultimately resulted in a collaboration between WV BPH and the WV Bureau for Behavioral Health to disseminate a statewide opioid use disorder anti-stigma campaign [14, 15]. A portion of the budget for this campaign was allocated to conduct message testing via focus groups, to support a component focused on HIV stigma. WV BPH also developed and deployed a new public-facing website (<http://www.hivawarewv.org>) to provide resources and information about HIV prevention, treatment, and to convey relevant and up-to-date information on the status of the HIV outbreak. Throughout the response, CDC staff monitored social and traditional media and other public discussions about HIV and injection drug use in the community to understand local perceptions, concerns, and knowledge about HIV and injection drug use, to identify topic areas where more communication was needed, and to continually refine messages.

### Communicating to PWID

The team aimed to increase accessibility of accurate information about HIV, including how to prevent it and the availability of treatment options, among PWID in Cabell County. As a result of the initial needs assessment, the team coordinated with other response staff to distribute existing PrEP and other HIV prevention communication materials from CDC's

Let's Stop HIV Together (<https://www.cdc.gov/stophivtogether>) campaign to providers who serve PWID, and provided HIV prevention posters and flyers for distribution at the CHHD SSP and local community-based organizations [9].

CDC staff provided two in-person trainings covering basic HIV information and risk reduction to local front-line staff engaging directly with people experiencing homelessness. The communications team also provided CDC-developed HIV communication materials (posters and flyers) from the Let's Stop HIV Together campaign to local organizations serving people experiencing homelessness that had trusted relationships with their clients. The team worked with these organizations to identify materials likely to resonate with their clients. Despite the communications team's early engagement with staff at local community-based organizations serving people experiencing homelessness, the initial materials provided were perceived by clients not to be adequately diverse regarding race, ethnicity, or gender identity, and did not reflect the clients' self-perceptions. The organization shared this feedback with the communications team. A second round of materials was more acceptable to clients, underscoring the importance of engaging directly with and getting feedback from the intended audience.

CHHD identified a need for information to be distributed to SSP clients in a discrete, portable format. Personal possessions such as bags and backpacks were frequently lost or stolen among clients experiencing unstable housing. Clients also reported concerns that carrying visible flyers or injection equipment could lead to unwanted attention from the community and from law enforcement, sometimes resulting in arrest or confiscated equipment. To respond to SSP clients' needs, the communications team worked with CDC to develop a series of pocket guides intended for distribution among PWID and people who were unstably housed. CDC reformatted existing fact sheets describing how to clean injection equipment in a format that could be folded to be easily carried in pockets or shoes. These cards included basic information on how to safely clean syringes and information about PrEP, could be printed either professionally or using a regular printer, and included folding instructions. CDC also provided printed versions of the cards using a special plastic-paper blend that resists tearing and repels moisture.

CHHD disseminated community-wide HIV messages throughout Cabell County encouraging people to get tested for HIV at the health department. Advertisements were placed in prominent locations, including billboards and gas stations. To reduce stigma by communicating that HIV could affect anyone, these messages avoided using images stereotypically associated with drug use and were placed in locations where they were likely to be seen by PWID as well as the general population. Advertisements promoting HIV testing also ran on various local dating and messaging apps. A commercial raising awareness of HIV status and local testing availability aired on a local TV segment. These efforts were part of an ongoing local campaign that was updated to address the HIV outbreak and based on evidence from CDC message testing. CDC also supported Facebook and Google HIV testing and anti-stigma online ads from their Let's Stop HIV Together portfolio, to viewers in the Southwestern part of WV, where Cabell county is located.

WV BPH, in partnership with CHHD, requested capacity-building assistance to increase key partners' support for SSPs, to decrease stigma surrounding drug use, and to provide education on comprehensive services for people who use drugs. WV BPH received capacity-building technical assistance from the National Alliance of State and Territorial AIDS Directors (NASTAD), with consultation on a peer-to-peer training program on HIV risk reduction, SSP implementation, and working with people who use drugs. NASTAD also provided ongoing consultation with the communications team on building and maintaining support for SSPs and reducing stigma for people who use drugs.

### **Response Communication to Providers**

Clinical and other service providers were also engaged throughout the response, for example during a meeting in April with Huntington providers to describe the epidemiology of the outbreak and discuss barriers and opportunities to support expanded HIV testing, PrEP, and HIV care. To increase knowledge among clinical providers about HIV screening, treatment, and prevention guidelines, especially for PWID, WV BPH issued a Dear Colleague Letter and two health advisories for clinical providers in the state, developed with input from CDC [16, 17]. The team worked across the response to disseminate HIV screening and PrEP educational materials to service providers in the community [9]. BPH also partnered with the Mid-Atlantic AIDS Education & Training Center, which provides continuing education to clinicians in the state, to develop in-person and virtual educational sessions related to drug use, stigma reduction, and best practices for serving PWID.

To further engage local providers, the WV Office of Epidemiology and Prevention Services and West Virginia Local Health Inc. developed and sponsored a statewide summit with support from NASTAD, the Claude Worthington Benedum, and the Comer Foundation. This summit convened local health officers from counties across the state, who are integral to creating and supporting local SSPs and other programs for people who use drugs or have substance use disorder. The summit included presenters from CDC, WV BPH, CHHD, NASTAD and other subject matter and medical experts. Local service providers were also engaged via a grand rounds and smaller meetings, to increase knowledge and awareness of potential injection drug use among their patients, to encourage increased testing for HIV, and to establish a person-first, non-stigmatizing approach to HIV, PrEP, and harm reduction.

### **Increasing Messaging Consistency**

The team also worked to increase messaging consistency by developing comprehensive communications packages for each of the three agencies (WV BPH, CHHD and CDC), based on needs identified during the response. These documents were continuously updated as the response evolved and included message maps and anticipated questions and answers. The communications team also met frequently (weekly, for several months, moving to less frequent meetings as needs decreased) to ensure consistent messaging across the agencies and to monitor and prepare responses for media communications or other requests. NASTAD participated in these calls to strategize on effective messaging related to SSPs and harm reduction programs.

## Lessons Learned

Several key elements supported successful communication during this outbreak response. The cross-agency communications team developed a comprehensive, audience-based communications plan incorporating stigma reduction and including input from all agencies, from community members, and from various teams across the response. This process enabled agencies to identify common messages as well as differences in communication tactics that needed to be addressed, ultimately allowing them to speak with one voice. The communications team also engaged in ongoing open communication with other teams across the response, continually probing to identify further communication needs that response staff or partners might encounter. Finally, the communications team worked across the response to maintain a focus on counteracting stigma, and to continually underscore the importance of communication, community engagement, and community trust as a core part of the response.

This work was not without challenges. Aligning messages between agencies required frequent reconsideration and discussion of messaging tactics as the situation evolved. Each agency contributed different expertise and knowledge to the effort. Synthesizing these into a product that met the needs of WV BPH, CHHD, and CDC while maintaining consistent messaging required adjustment and compromise on the part of all three agencies. Community engagement and input into message development also proved challenging. In this response, most of the input into messaging was received by the communications team through response staff or local partners, with little direct engagement with persons directly affected. Therefore, identifying acceptable messages and materials required some negotiation and iteration, for example when identifying materials that would resonate with clients of the local service provider or when developing messages that would be acceptable to address stigma in the local community. Ideally, messaging during any HIV response would adapt tested messages and would incorporate community input and feedback to maximize the likelihood that messages disseminated to the public resonate with their intended audiences.

In conclusion, communication is a core component of HIV outbreak response and public health more broadly [7]. Understanding specific community contexts and the needs of different audiences and key partners, and addressing the roles that stigma and marginalization may play, are essential to an effective HIV prevention communication strategy. Collaboration between local, state, and federal public health agencies for communications purposes was a strength of this public health response. The combined response team leveraged CHHD's assets, including strong relationships and firsthand knowledge about the community, with additional staff capacity and HIV and communications expertise from state and federal agencies. This collaborative approach was essential to this response and is a useful model for addressing the public health information needs of communities more generally.

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## Data Availability

Not available.

## References

- Atkins AD, McClung RP, Kilkenny M, et al. Notes from the field: outbreak of human immunodeficiency virus infection among persons who inject drugs—Cabell County, West Virginia, 2018–2019. *MMWR Morb Mortal Wkly Rep.* 2020;69(16):499–500. [PubMed: 32324723]
- McClung RP, Atkins AD, Kilkenny M, et al. Response to a large HIV outbreak, Cabell County, WV, 2018–2019. *Am J Prev Med.* 2021;61:S143–50. [PubMed: 34686283]
- West Virginia Department of Health & Human Resources Office of Drug Control Policy. Data Dashboard: Fatal Overdoses in West Virginia. 2021; <https://dhhr.wv.gov/office-of-drug-control-policy/datadashboard/Pages/default.aspx>. Accessed January 22, 2021.
- Allen ST, O'Rourke A, White RH, Schneider KE, Kilkenny M, Sherman SG. Estimating the number of people who inject drugs in a rural county in appalachia. *Am J Public Health.* 2019;109(3):445–50. [PubMed: 30676803]
- Urban Design Ventures. City of huntington analysis of impediments to fair housing choice FY2020–2024. Huntington, WV: City of Huntington 2020.
- Lyss SB, Buchacz K, McClung RP, Asher A, Oster AM. Responding to outbreaks of human immunodeficiency virus among persons who inject drugs-United States, 2016–2019: Perspectives on recent experience and lessons learned. *J Infect Dis.* 2020;222(Suppl 5):S239–49. 10.1093/infdis/jiaa112 [PubMed: 32877545]
- Tumpey AJ, Daigle D, Nowak G. Communicating During an Outbreak or Public Health Investigation. In: Rasmussen SA, ed. *The CDC Field Epidemiology Manual Atlanta, GA Centers for Disease Control and Prevention*; 2018. Available at <https://www.cdc.gov/eis/field-epi-manual/chapters/Communicating-Investigation.html>. Accessed November 10, 2021.
- Beer L, McCree DH, Jeffries WL, Lemons A, Sionean C. Recent US centers for disease control and prevention activities to reduce HIV stigma. *J Int Assoc Provid AIDS Care.* 2019;18:2325958218823541. [PubMed: 30798667]
- Furukawa NW, Weimer M, Willenburg KS, et al. Expansion of preexposure prophylaxis capacity in response to an HIV outbreak among people who inject drugs-cabell county. *West Virginia Public Health Rep.* 2021. 10.1177/0033354921994202.
- Marshall Health. *The Road to Recovery.* 2021; Available at <https://www.marshallhealth.org/services/addiction-medicine/the-road-to-recovery/>. Accessed November 10, 2021.
- Substance Abuse and Mental Health Services Administration. SAMHSA grant discretionary awards by state for West Virginia. 2018; <https://www.samhsa.gov/grants-awards-by-state/wv/discretionary/all/details?page=12>. Accessed January 13, 2021.
- Ondocsin J, Mars SG, Howe M, Ciccarone D. Hostility, compassion and role reversal in West Virginia's long opioid overdose emergency. *Harm Reduct J.* 2020;17(1):74. [PubMed: 33046092]
- Swenson K Unraveling an HIV cluster. *The Washington Post: National.* 2019 Nov 3. [https://www.washingtonpost.com/national/unraveling-an-hiv-cluster/2019/11/03/66cf4526-f5af-11e9-8cf0-4cc99f74d127\\_story.html](https://www.washingtonpost.com/national/unraveling-an-hiv-cluster/2019/11/03/66cf4526-f5af-11e9-8cf0-4cc99f74d127_story.html). Accessed August 16, 2021.
- Gupta R Opioid Response Plan for the State of West Virginia. Charleston, WV: Office of the Commissioner, State of West Virginia Department of Health and Human Resources Bureau for Public Health. 2018; <https://dhhr.wv.gov/bph/Documents/ODCP%20Response%20Plan%20Recs/Opioid%20Response%20Plan%20for%20the%20State%20of%20West%20Virginia%20January%202018.pdf>. Accessed November 10, 2021.



15. Casillas L West Virginia launches campaign to end opioid addiction stigma. 2020; <https://www.wvlp.com/health-2/state-launches-campaign-to-end-opioid-addiction-stigma/>. Accessed November 10, 2021.
16. West Virginia Bureau for Public Health. Health Advisory #158: Recommendations for Routine HIV Testing and Available Resources for Healthcare Providers. 2019; [https://oeps.wv.gov/healthalerts/documents/wv/WVHAN\\_158.pdf](https://oeps.wv.gov/healthalerts/documents/wv/WVHAN_158.pdf). Accessed March 11, 2021.
17. West Virginia Bureau for Public Health. Health Advisory #162: Human Immunodeficiency Virus (HIV) infections among people who inject drugs--additional area seeing increase, others vulnerable. 2019; [https://oeps.wv.gov/healthalerts/documents/wv/WVHAN\\_162.pdf](https://oeps.wv.gov/healthalerts/documents/wv/WVHAN_162.pdf). Accessed March 11, 2021.