

Additional Implementation Guidance for PS18-1802 Strategy 3: Cluster Detection and Response

November 2018

HIV cluster detection and response

HIV cluster detection and response is a critical component of CDC's overall strategy for bringing the nation closer to the goal of no new HIV infections. Cluster detection and response uses data routinely reported to health departments to identify communities where HIV may be spreading quickly. Health departments can then identify gaps in prevention and care services and ensure that services reach the populations that need them the most. Data used for cluster detection can include information on the number of diagnoses in an area or subpopulation and HIV genetic sequence data. HIV genetic sequence data are already routinely reported in many jurisdictions and have been used previously to understand the prevalence of drug resistance. All jurisdictions should be working to incorporate HIV sequence data into existing laboratory reporting processes and address barriers to this reporting. Using these data in near-real time to inform prevention efforts requires close coordination between surveillance and prevention programs and between state and local programs.

Foundational activities

Successful implementation of this work requires a series of activities that can be phased in over time to build a strong foundation for the ethical and effective implementation of this promising work. All PS18-1802-funded jurisdictions, regardless of where they are in the process of responding to clusters and outbreaks, should ensure that they have conducted or have plans to conduct the foundational activities listed below.

The following three foundational activities relate to **ensuring ethical implementation** of this work. These activities have been an important part of HIV surveillance and prevention efforts for many years, but have heightened importance when implementing a new activity such as cluster detection and response. These activities include:

- **Engaging community, including people with HIV, providers, and community-based organizations.** This engagement process is critical to increase awareness of health department activities and encourage dialogue from a wide range of stakeholders. Health departments can acknowledge and respond to concerns and work to adapt programs to address those concerns when possible. Engagement also allows health departments to identify additional roles for community partners in cluster and outbreak response situations, as they may have community connections and insight that could increase the impact of these response efforts. Initial community engagement regarding cluster detection and response should be completed no later than December 2019, and community engagement should be conducted in an ongoing manner after that time.
- **Assessing data protections and enhancing related policies and procedures when necessary.** Jurisdictions must comply with [CDC Data Security and Confidentiality Guidelines](#). Further assessment of data sharing and release policies and procedures should include identifying what protections are in place to prevent release of public health HIV data for non-public health purposes (including for use in criminal cases) and whether protections need to be strengthened. The assessment of data protections and development of an action plan to address gaps in data protections should be completed no later than December 2019. In 2020, jurisdictions will be expected to implement action plans, where needed, to address remaining gaps in data protection.
- **Assessing implications of criminal exposure laws.** Concerns about criminal exposure laws and the potential use of cluster data as part of criminal proceedings have been raised in some communities. Health departments can assess whether local HIV criminalization statutes are

present, their potential impact on HIV prevention efforts, and if there are opportunities to remove or modernize them. Many HIV-specific state laws were passed before studies showed that antiretroviral therapy (ART) reduces HIV transmission risk and most do not account for HIV prevention measures that reduce transmission risk, such as condom use, ART, or pre-exposure prophylaxis (PrEP). States with HIV-specific criminal laws can re-examine state laws, assess the laws' alignment with current evidence regarding HIV transmission risk, and consider whether the laws are the best vehicle by which to achieve their intended purposes. For more information, see [CDC's HIV-Specific Criminal Laws website](#). The assessment of implications of criminal exposure laws should be completed no later than December 2019.

The foundational activities listed below include key steps that are necessary for **effectively detecting and responding to transmission clusters**. These steps include:

- **Developing internal and external health department collaborations.** Successful cluster detection and response planning requires close collaboration between HIV surveillance, prevention, partner services, care, and other staff in the health department. Health departments should also consider collaborating with staff from local health departments and other state health departments, when appropriate, and should proactively establish mechanisms to allow appropriate data sharing to support cluster response. Collaboration should be established as soon as possible, but no later than June 2019, and should be ongoing after that time.
- **Developing capacity for cluster detection.** Health departments should build the foundation for both time-space and molecular cluster detection. All jurisdictions should use or adapt time-space SAS programs or develop other methods to identify situations of concern. Health departments should also develop capacity to analyze molecular data using Secure HIV-TRACE, a tool that allows health departments to analyze data to identify clusters. Developing analytic capacity may require training or hiring staff to ensure adequate skills. CDC is providing SAS programs and technical assistance to support development of capacity for cluster detection. Health departments should begin time-space cluster detection no later than June 2019 and molecular cluster detection no later than December 2019.
- **Assessment of prevention portfolio and fiscal mechanisms needed for response.** Clusters and outbreaks can occur in geographic areas or populations not directly served by existing HIV prevention programs, and responding to clusters requires flexibility in adapting prevention efforts. Health departments should identify organizations with experience in particular prevention activities (e.g., testing, partner services, PrEP, navigation, and syringe services), with specific subpopulations, and in different geographic areas within your jurisdiction and determine how they can support cluster response. Health departments should also assess whether existing mechanisms for conducting public health activities (e.g., in-house staff, contracts, cooperative agreements, or grants) are sufficiently flexible to allow health departments to respond to clusters. Building flexibility into funding mechanisms and agreements and proactively addressing issues such as secure data sharing can help a jurisdiction to effectively and efficiently respond to clusters and outbreaks. Health departments should complete an assessment of the prevention portfolio no later than December 2019 and continue re-assessing it in an ongoing manner after that time.

Cluster and outbreak detection and response plans

All jurisdictions are required to submit a cluster and outbreak detection and response plan as an attachment to the APR in August 2019. This plan should focus, at a minimum, on the above foundational activities. More detail on plans for cluster response will be expected in the plan submitted in 2020, as health departments develop full capacity.

Cluster response activities

Clusters (time-space, molecular, or provider-reported) may be detected at any time while a jurisdiction is implementing foundational activities and working toward developing full capacity. If a cluster of concern is detected, CDC recommends that cluster response should focus on 1) reviewing existing data (e.g., partner services, laboratory, and medical record data) to identify gaps in services and 2) re-focusing prevention efforts on communities involved in the cluster (e.g., improving services such as testing, PrEP, navigation, syringe services programs, education, or other efforts so that they better reach and are more acceptable to affected communities, or identifying ways to reduce community barriers to receiving needed services).

Additionally, certain individual-level prevention activities (such as partner services and linkage to care) are routinely conducted for all persons with diagnosed HIV infection, and it is important to continue conducting these activities for persons in clusters. However, some individual-level outreach activities considered for cluster response go beyond routinely conducted activities; these enhanced activities may include:

1. Re-interviewing people who have previously had a partner services interview and are later found to be part of a cluster, or
2. Contacting people who have previously tested negative and are later found to be associated with a cluster for re-testing or PrEP.

These enhanced individual-level outreach activities may be deferred as a standard part of cluster response at this time to allow time to conduct foundational activities and develop protocols to ensure appropriate implementation. Subsequent guidance will be issued that addresses the implementation of these activities. These enhanced activities may still be warranted, however, for particularly concerning clusters or outbreaks. When needed, this outreach must be conducted in an ethical, culturally sensitive, and non-coercive way.