

HIV Molecular Detection & Response Q&A

What is the purpose of the Los Angeles County's HIV Surveillance Unit?

Like other conditions such as foodborne illnesses, pertussis and sexually transmitted infections, HIV is reportable to the Los Angeles County Department of Public Health. The Division of HIV and STD Program's (DHSP) HIV Surveillance Unit receives all STD and HIV reports. The HIV Surveillance Unit is responsible for *the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice*. The information collected is used to compile statistics on the number of people newly diagnosed with HIV and the number of people living with HIV. It also helps determine how well the healthcare system is serving people with HIV and where to direct resources to improve HIV prevention, care, and treatment across Los Angeles County.

What is molecular sequence data?

Molecular sequence reporting is the collection and analysis of HIV genetic data generated through HIV drug resistance testing. HIV genetic data is information about the makeup of the virus itself, *unrelated to an individual's personal genetic makeup*. Molecular sequence data has been used for many years to track other conditions such as foodborne infections and tuberculosis. Molecular sequence data helps identify a group of related infections that would not otherwise be recognized as related and focuses public health efforts where they are needed most.

Molecular sequence analysis *examines the genetics of the virus, not the person*.

When is it collected?

HIV genetic data is collected through HIV drug resistance testing. This testing is routinely done when someone starts care for HIV and providers need to determine which medications will be most or least effective. Testing can also occur later in the course of treatment if resistance to a prescribed drug is suspected and a provider is considering switching a patient's medication regimen. Again, providers use this information to choose the best HIV regimen for their patient. The HIV genetic data, like all reportable lab data, is reported to DHSP by laboratories who process the sequence test. HIV genetic data is not reported to DHSP by the ordering provider.

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How is this information being used to end the HIV epidemic?

The federal government introduced a pledge to end HIV transmissions by 2030. The plan includes detecting and rapidly responding to growing HIV clusters to prevent new infections. On January 1, 2018, the Centers for Disease Control and Prevention (CDC) required CDC-funded HIV programs to develop plans to use molecular sequence data to detect and respond to HIV clusters and outbreaks.

Who receives this information?

California law requires that HIV-related lab data (e.g. antigen/antibody, viral load, and CD4 counts) be reported to the local health authority of those communicable diseases as mandated by Title 17, California Code of Regulations, § 2500. Molecular sequence has been reported to DHSP's Surveillance Unit since 2005 but DHSP only began reviewing this data to detect and respond to HIV clusters and outbreaks starting in 2016.

California's guide to HIV Rules and Statutes can be found at:

<https://www.cdph.ca.gov/Programs/CID/DOA/Pages/HIVLaws.aspx>

Can I opt out of having my HIV's genetic code collected and reported?

It is possible for patients to decline resistance testing, which would prevent the collection of this data; however, that should be a conversation between a patient and their doctor as the decision could impact treatment.

What is an HIV molecular cluster?

A molecular cluster is a group of people living with HIV whose viruses share similar genetic data. A cluster may include people who acquired HIV very recently or sometime in the past.

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What do HIV molecular clusters tell us?

When it is determined that persons in a molecular cluster have very recently acquired HIV, it may indicate the presence of current and ongoing HIV transmission. Because HIV is constantly evolving, people whose viruses are genetically similar may be closely linked (either directly or indirectly) by HIV transmission. Prompt detection of rapidly growing clusters makes it possible to quickly offer prevention and care resources that can improve the health of persons with HIV and reduce new infections.

What are the limitations of molecular sequence data?

These data do not provide a complete picture. First, clusters may only represent a small part of a larger transmission network because not everyone in a cluster has been diagnosed and not everyone with an HIV diagnosis has an HIV genetic sequence available. Second, it is not possible to determine who infected whom. Third, clusters may include people who acquired HIV recently or people who were infected sometime in the past, so the relationships of people in time are not clear.

If a cluster is detected, what will Public Health do with this information?

Currently, this information is primarily being used by DHSP to identify individuals who are out of HIV care, or whose HIV disease is uncontrolled. A team reviews these cases to determine the best approach to assist those clients, including how best to link them to care. In addition, if a person identified as part of a cluster is newly diagnosed with HIV but never previously contacted by DHSP, Public Health staff will reach out and offer to notify their sexual or injection drug using contacts about their potential HIV exposure and offer to get them tested and linked to medical care, among other services. If a cluster is identified, an immediate response by DHSP is initiated to quickly serve individuals who may be at risk. Persons are offered barrier-free testing, biomedical HIV prevention services (PrEP and PEP) and syringe exchange services.

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Has this information already been used in Los Angeles County?

Yes, DHSP's HIV Surveillance Unit monitors and analyzes this data closely. Given recent reports of HIV clusters and outbreaks across the US among people who inject drugs, DHSP is aware of the possibility of injection-related outbreaks locally and remains vigilant in using all available tools to monitor for potential outbreaks.

How is this information secured?

DHSP's HIV Surveillance Unit complies with comprehensive security and confidentiality protocols that adhere to all State and federal law and CDC requirements. Only a small number of authorized DHSP employees have access to this information, and only for HIV related data and analysis purposes.

What information is reported to the CDC and for what purpose?

CDC-funded grantees are required to report de-identified data to the CDC. This data is exported via a secure system. Names and other identifying information are never included in reports to the CDC.

More information about CDC HIV data collection and analysis can be found at:
<https://www.cdc.gov/hiv/statistics/surveillance/index.html>

Questions?

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