Drug-Resistance Testing
Medical Providers' Role in Ending HIV

TEXAS Health and Human Services
Texas Department of State Health Services

Cluster Detection

DSHS systematically collects and analyzes HIV genetic sequence data captured through drug-resistance testing. This data can be analyzed to identify and monitor transmission networks, sometimes called "clusters."

A **transmission network** is a group of individuals with highly similar HIV genetic strains. Identifying many similar strains within a short time period can indicate that HIV transmission is occurring rapidly. DSHS uses cluster detection to monitor the HIV epidemic, which improves access to and engagement in, HIV-related services.

What transmission networks tell us

- People within a network have a highly similar HIV strain.
- People may have recent sex or needle-sharing contacts in common, but we are unable to identify direction of transmission. We DO NOT know who transmitted HIV to whom.
- Medical providers are able to order routine HIV testing, which enhances efforts to identify people living with HIV associated with transmission networks who may be undiagnosed.

How is data collected for DSHS

1. Medical providers order a genotype HIV drug resistance test and the blood sample is sent to laboratories for drug resistance testing. The clinical purpose of the test is to monitor drug resistance and atypical/variant strains of the virus.
2. Drug resistance testing generates an HIV genetic sequence.
3. HIV genetic sequences are reported by laboratories to local and/or the state health department per Texas Administrative Code (Rule §97.133).
4. De-identified HIV genetic sequence data are reported to CDC.

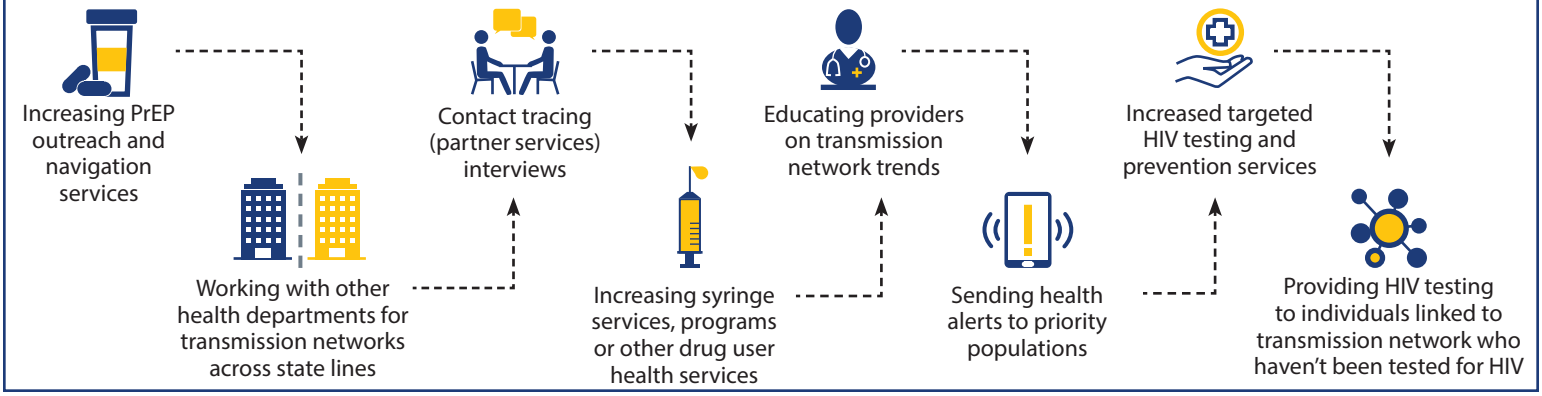
Implications for people in transmission networks

Personal identifying information is NOT shared outside of the health department.

Health department staff who contact sexual or needle-sharing partners do not disclose the identity of the persons who named them.

DSHS uses contact tracing to identify people who may need services, such as help with HIV testing, linkage to PrEP (for those who test negative) and linkage to HIV care (for those who test positive).

How does Public Health Respond?



Provider Roles: Patient Care

GENERAL MEDICAL PROVIDERS
are encouraged to:

- Perform routine HIV testing as part of a health screening.
- Inform people about Pre-Exposure Prophylaxis (PrEP) – people who do not have HIV can take a daily pill to prevent HIV acquisition.

HIV MEDICAL PROVIDERS
are encouraged to:

- Order genotype HIV drug resistance testing for people who are newly diagnosed or who are not virally suppressed.
- Encourage medical adherence and educate patients on Treatment as Prevention (TasP)[1] – people living with HIV who have an undetectable viral load have NO RISK of sexually transmitting HIV to others.

Provider Roles: Connecting to the Health Department

Tell patients that:

1. HIV test results and associated labs (CD4, viral load, and drug-resistance tests) are reported to the health department
2. Health department may contact patient

The Health Department will:

1. Assist with notifying partners
2. Provide services and medication assistance programs

Drug-Resistance Testing

HHS Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV continue to recommend standard genotype HIV drug-resistance testing to detect mutations in relevant viral genes at entry into care for persons with HIV.

Although there have been improvements in HIV treatments that may lower the chance of drug resistance, drug resistance testing is still recommended for the public health benefit it provides to detect and address transmission networks.

Provider Roles: Reporting and Services

Timely and Complete HIV reporting

- Demographics
- Residence at diagnosis
- Facility at diagnosis
- Personal history
- Lab tests
- Clinical status
- Medical treatment
- Testing and treatment history

Services

- HIV/STD testing, risk reduction counseling
- Engagement in care and medication adherence
- TasP
- Sexual history and assessment
- PrEP, nPEP

Learn more: cdc.gov/hiv/programresources/guidance/cluster-outbreak/

[1] cdc.gov/hiv/risk/art/

Original design by Houston Health Department.

DSHS HIV/STD Program
737-255-4300 | dshs.texas.gov/hivstd/