

Status of HIV Surveillance-related Laboratory Reporting in the United States and U.S. Dependent Areas

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OBJECTIVE

To provide an update on the status of HIV-related laboratory reporting laws and the use of electronic laboratory reporting (ELR) methods by health departments conducting HIV surveillance.

BACKGROUND

Laboratory data, including CD4+ T-lymphocyte (CD4) and viral load (VL) test results, are an essential component of the national HIV surveillance system.

- CD4 and VL data can be used to identify cases, stage disease at diagnosis, and monitor disease progression. These data can also be used to evaluate HIV testing and prevention efforts, determine linkage and retention in care, measure viral suppression, and assess unmet healthcare needs.
- Analyses at the national level can only occur with the adoption and implementation of the reporting of all HIV-related CD4 and VL test results by all jurisdictions.

Electronic laboratory reporting is used by laboratory providers to help them meet state reportable disease laws mandating that providers report cases of specified diseases to the health department.

- ELR supports overall public health surveillance by helping improve the timeliness and accuracy of case reporting and confirmation to state and local health departments.

METHODS

Data were obtained from two sources:

- 59 HIV surveillance programs provided updates to national HIV surveillance on the status of state laws, regulations, and practices for the reporting of HIV-related CD4 and VL results.
- 57 state/local health departments responded to a survey conducted by the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) program at CDC.

The CDC ELC program supports ELR infrastructure, implementation, and use. In 2012, the ELC program began monitoring the progress of ELR.

- One phase of the project assessed surveillance information systems and infrastructure to determine how ELR are received, managed and used.
- Health departments reported on the specific laboratories submitting reports, the volume of reports received and the percentage of ELR.

FIGURE 1. STATUS OF CD4 AND VIRAL LOAD REPORTING REGULATIONS

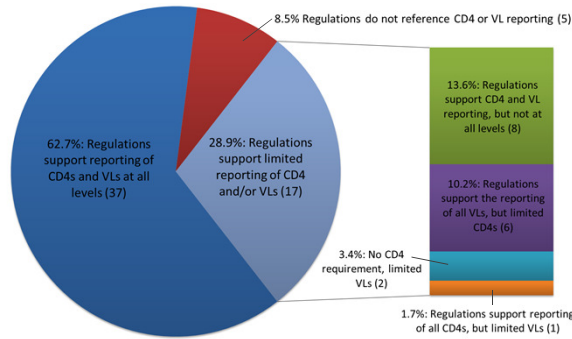
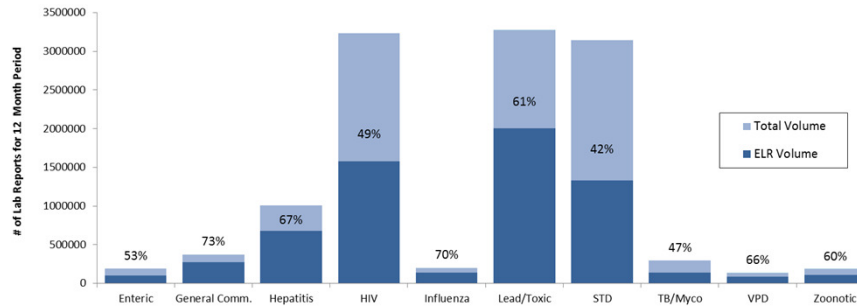
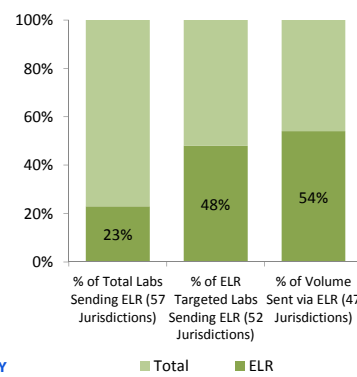


FIGURE 3. VOLUME OF LAB REPORTS AND % REPORTED VIA ELR, BY DISEASE CATEGORY



Note: 47 Jurisdictions Reported Data. General Comm: General Communicable Diseases, VDP: Vaccine Preventable Diseases

FIGURE 2. ESTIMATED NATIONAL STATUS OF ELR



RESULTS

While the majority of jurisdictions (63%, n=37) require all CD4 and VL results to be reported, 17 jurisdictions require limited CD4 and/or VL reporting, and 5 jurisdictions do not have regulations in support of CD4/VL reporting to HIV surveillance. Of the 17 jurisdictions:

- 8 (14%) require CD4 and VL reporting but not at all reportable levels (e.g., CD4 <200 or only detectable VLs),
- 6 (10%) require all VL results but limited CD4 results (e.g., <200 or <14%),
- 2 (3%) require no CD4 reporting and limited VL results (e.g. detectable VLs)
- 1 (2%) requires all CD4 results but limited VL results (e.g., detectable VLs)

ELC Survey:

- An estimated 23% (range: 0-75%) of laboratories send ELR feeds (HIV and non-HIV related) to health departments.
- 51 areas (45 states and 6 cities) are receiving ELR, while 6 areas (5 states and 1 territory) have not received ELR feeds.

When data were limited to HIV records, the survey indicated:

- ~49% (range: 0-100%) of all HIV laboratory results are received electronically by health departments
- The volume of HIV-related laboratory results (paper or electronic) sent to the health departments every year is estimated to be ~3,250,000.
- This estimate includes results from tests that diagnose and monitor HIV infection and negative HIV test results from counseling and testing sites.

CONCLUSIONS

- Many jurisdictions do not have laws in place that support CD4 and VL reporting. At a minimum, regulations should require the reporting of:
 - All levels of CD4 and VL (detectable and undetectable) results
 - Laboratory results for residents of a jurisdiction and anyone receiving care in the jurisdiction (i.e., any lab ordered from a facility in the jurisdiction).
- Jurisdictions without adequate CD4 and VL reporting may be limited in their ability to track stage of disease and maximally use surveillance data to monitor care and treatment.
- Health departments are dealing with large volumes of HIV-related laboratory results and only half of HIV laboratory test results are received electronically.
- Use of ELR methods can assist in management of large numbers of laboratory tests, and may increase completeness and timeliness of HIV surveillance data.
- Programs should continue to work toward implementing state laws that support the reporting of HIV-related test results and implementing ELR to ensure surveillance data can be maximally used for public health action and monitoring progress toward the goals of the National HIV/AIDS Strategy.

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