Data and Definitions for Assessing HIV Care Continuum Outcomes

- Care Markers Database: Contains information on care markers for PLWH from several sources, including HIV Surveillance, Ryan White, AIDS Drug Assistance Program, Medicaid, and others
- Care Markers: Defined as evidence of a viral load, CD4 count, HIV-related medical visit or antiretroviral therapy (ART)
- Retention: 2 Care Markers in a 12-month period at least 90 days apart
- Viral Suppression: Last viral load in 12 month period at <200 copies/mL
- Demographics: Sex at birth, race/ethnicity, transmission risk, age at diagnosis, health region of HIV diagnosis
- Late Diagnosis: Persons who were diagnosed with AIDS at initial diagnosis or persons diagnosed with AIDS within one year of initial HIV diagnosis

Results

<table>
<thead>
<tr>
<th>Late Diagnosed Versus Non-Late Diagnosed Population</th>
<th>Retention in Care in 2014</th>
<th>Viral Suppression in 2014</th>
<th>Retention in Care in 2015</th>
<th>Viral Suppression in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td>1.7 (2.2, 2.4)</td>
<td>2.3 (1.7, 3.0)</td>
<td>1.8 (1.4, 2.3)</td>
<td>1.6 (1.1, 2.3)</td>
</tr>
<tr>
<td>RR</td>
<td>2.7 (2.0, 3.5)</td>
<td>2.2 (1.6, 3.0)</td>
<td>1.8 (1.3, 2.3)</td>
<td>1.6 (1.1, 2.3)</td>
</tr>
</tbody>
</table>

Odds Ratio adjusted by sex at birth, race/ethnicity, transmission risk, age at diagnosis, and health region of diagnosis

*Denotes statistically significant finding

Conclusions and Next Steps

- Persons who were diagnosed late in 2013 were more likely to be retained in care in 2014 and 2015 and virally suppressed in 2014 and 2015 than those persons who were not diagnosed late, after controlling for demographic characteristics.
- In unadjusted models, persons diagnosed in the predominantly rural Northwest region of Virginia were more likely to be diagnosed late than persons living in the predominantly urban Eastern region. After adjustment for age at diagnosis, health region of diagnosis was not statistically significant.
- Persons who were diagnosed at a younger age were less likely to be diagnosed late than persons 55 and older, even after controlling for health region of diagnosis.
- To impact timely diagnosis of HIV across the state, testing efforts should consider geographic areas and populations at greater risk for late diagnosis, in addition to current efforts within areas of high HIV incidence and prevalence.
- Continued analysis and exploration of late diagnosis by geography, age, and other social determinants of health is needed.

References


Acknowledgments

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An Exploration into Late Diagnosis of HIV on Health Outcomes in Virginia

Background

- Persons living with HIV (PLWH) who are diagnosed late, defined as an AIDS diagnosis within one year of HIV diagnosis, are at higher risk for reduced response to HIV treatment and mortality. 1
- Research suggests that there may be demographic disparities among persons who are diagnosed late and that late diagnosis may have an effect on retention and viral suppression among PLWH. 2
- Identifying persons in the early stages of HIV aligns with the 2020 National HIV/AIDS Strategy in the United States to reduce new HIV infection and improve health outcomes for PLWH. 3

Demographics of the Late Diagnosed Population, 2013

- Sex at Birth
  - Female 22%
  - Male 78%
- Race/Ethnicity
  - Black, non-Hispanic 58%
  - White, non-Hispanic 23%
  - Hispanic (all races) 15%
  - Other/Multi-race/Unknown: 10%
- Transmission risk and health region
  - Percent (%)
    - Transmission risk: 15%
    - Male to male sexual contact (MSM): 46%
    - Injection drug use (IDU): 1%
    - MSM/IDU: 3%
    - Nontreptoreal contact: 24%
    - Other/No reported or identified risk: 27%
  - Health region of diagnosis
    - Eastern 31%
    - Central 18%
    - Northern 30%
    - Southwest 12%
    - Other 9%
- Age at Diagnosis
  - %
    - <15 15%
    - 15-24 24%
    - 25-44 29%
    - 55+ 15%
- Virus load and CD4 count
  - Percent (%)
    - N= 946 for persons newly diagnosed and living in Virginia in CY 2013, N=244 (26% of 946) were late diagnosed population in 2013 (N=244)
  - 26 persons died in 2013 or 2014 and were excluded from the analysis.
  - N= 946 for persons newly diagnosed and living in Virginia in CY 2013, N=244 (26% of 946) were identified as late diagnoses.
- Table 1: Crude and Adjusted Odds Ratios (OR/aOR) for Retention in Care and Viral Suppression, 2014 and 2015 OR/aORs (95% Confidence Interval)

Table 2: Crude and Adjusted Odds Ratios (OR/aOR) for Late Diagnosis, 2013 OR/aORs (95% Confidence Interval)*

- Persons who were diagnosed late in 2013 were more likely to be retained in care in 2014 and 2015 and virally suppressed in 2014 and 2015 than those persons who were not diagnosed late, after controlling for demographic characteristics.
- In unadjusted models, persons diagnosed in the predominantly rural Northwest region of Virginia were more likely to be diagnosed late than persons living in the predominantly urban Eastern region. After adjustment for age at diagnosis, health region of diagnosis was not statistically significant.
- Persons who were diagnosed at a younger age were less likely to be diagnosed late than persons 55 and older, even after controlling for health region of diagnosis.
- To impact timely diagnosis of HIV across the state, testing efforts should consider geographic areas and populations at greater risk for late diagnosis, in addition to current efforts within areas of high HIV incidence and prevalence.
- Continued analysis and exploration of late diagnosis by geography, age, and other social determinants of health is needed.

Health Regions of Virginia

HIV Continuum of Care in Virginia, 2014-2015

- Transmission risk
  - Male to male sexual contact (MSM): 46%
  - Injection drug use (IDU): 1%
  - MSM/IDU: 3%
  - Nontreptoreal contact: 24%
  - Other/No reported or identified risk: 27%
- Care Markers Database: Contains information on care markers for PLWH from several sources, including HIV Surveillance, Ryan White, AIDS Drug Assistance Program, Medicaid, and others
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Retention in Care in 2014

<table>
<thead>
<tr>
<th>Late diagnosed population in 2013 (N=244)</th>
<th>Non-late diagnosed population in 2013 (N=972)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention in Care in 2014</td>
<td>Retention in Care in 2015</td>
</tr>
<tr>
<td>69%</td>
<td>71%</td>
</tr>
<tr>
<td>63%</td>
<td>48%</td>
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<tr>
<td>47%</td>
<td>59%</td>
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