Evaluating the HIV Continuum of Care within a Large Integrated Health System

Michael J. Williams, PharmD¹, Thomas J. Dilworth, PharmD, BCPS-AQ ID²  
¹PGY-1 Pharmacy Resident, Aurora Health Care Metro, Inc. ²Specialty Pharmacy Coordinator, Infectious Disease, Department of Pharmacy Services, Aurora St. Luke’s Medical Center

**Background**  
Human Immunodeficiency Virus (HIV)  
- Nearly 1 million persons ≥ 13 years of age in the United States are diagnosed and living with HIV¹  
- HIV is associated with 12,000 deaths from any cause²  
- Antiretroviral therapy (ART) induces viral suppression and allows survival rates of those with HIV to become nearly equivalent to people without HIV³  
- Viral suppression is defined by a viral load (VL) < 200 copies/mL

Acquired Immunodeficiency Syndrome (AIDS)  
- Untreated HIV may progress to AIDS defined by CD4 count < 200 cells/mL  
- 7,000 deaths per year are due directly to AIDS³

HIV Care Continuum  
- 2013 Centers for Disease and Control (CDC) initiative  
- Aimed to categorize the nation’s HIV-infected population  
- Wisconsin performed a statewide evaluation using similar methodology  
- In Wisconsin’s study, the proportion of patients diagnosed with concomitant HIV and AIDS decreased from 30% to 18% between 2012 and 2015⁴  
- Aurora Health Care (AHC), the largest not-for-profit health system in Wisconsin, sought to perform a similar evaluation within its 16 hospitals and 149 clinics

**Objectives**  
**Primary**  
- To describe the HIV continuum of care within the AHC system

**Secondary**  
- To identify opportunities within the continuum to improve care with a special focus on patients without ART and those not linked to care  
- To compare AHC data to national and statewide results

**Methods**  
**Patient Inclusion Criteria**  
- ≥ 13 years of age and still living at the end of the specified time period  
- Positive HIV rapid antigen and/or HIV antibody test within AHC between January 1, 2012 and August 1, 2016

**Patient exclusion criteria**  
- Known diagnosis of HIV prior to the positive test within AHC

**Data Collection**  
- All patients categorized below based upon data within one year from diagnosis⁴

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Result</th>
<th>Characteristic</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>71 (82.6%)</td>
<td>Caucasian, n (%)</td>
<td>43 (50%)</td>
</tr>
<tr>
<td>Age at diagnosis, years (IQR)</td>
<td>39 (35, 49)</td>
<td>CD4 count (cells/μL), median (IQR)</td>
<td>203 (33, 492)</td>
</tr>
<tr>
<td>Viral load (copies/mL), median (IQR)</td>
<td>63,327 (16,952, 226,391)</td>
<td>Lab services not specified collection setting, n (%)</td>
<td>52 (60.4%)</td>
</tr>
</tbody>
</table>

**Results**  
**Patient selection**  
- 211/79,442 (0.27%) patients initially queried had a reactive result  
- 66/211 (40.8%) unique patients remained after removing duplicate medical record numbers and those excluded per criteria

**Baseline Characteristics**

- Of those retained in care, 96.7% were prescribed ART  
- 83.3% of patients on ART achieved viral suppression  
- Dual diagnoses of HIV and AIDS were found in 43.7% of patients with no difference per annum. p=0.779 (likelihood ratio chi-square)

**Conclusions**  
- Retention to care was the largest disparity compared to national and state data with a strong correlation to viral suppression

- Current literature suggests improving HIV care via mobile reminders or HIV service coordinator positions, but research is ongoing⁵-⁷

- AHC aims to investigate external references and potentially create an internal referral network for newly HIV diagnosed patients

**References**


© Aurora Health Care, Inc.