The Impact of Patient Navigation Services for HIV-Positive Individuals on Retention and Viral Suppression in Virginia

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Conflict of Interest Disclosure
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Has no real or apparent conflicts of interest to report.
Background

• Patient Navigators (PNs) have begun to play an increasingly important role in HIV care.

• Virginia received funding through two federal grant programs to help link and retain persons living with HIV (PLWH) in HIV medical care.
  • Special Projects of National Significance (SPNS) Systems Linkages grant (2011-2015) from the Health Resources and Services Administration (HRSA)
  • Care and Prevention in the U.S. (CAPUS) grant (2012-2016) from the Centers for Disease Control and Prevention (CDC)

• Virginia coordinated a geographical approach to distributing PN and community health worker (CHW) programs across all five health regions of the state
Patient Navigation Sites in Virginia

Legend:
- Red dot: SPNS Patient Navigation
- Blue dot: CAPUS Patient Navigation
## HIV Patient Navigation in Virginia

### SPNS Patient Navigators
- Use of Motivational Interviewing and client centered communication, linkage, retention and transition plans
- PN programs co-located at medical sites
- Sites located in the Central and Southwest regions of the state

### CAPUS CHWs
- Community Health Worker (CHW) model
- Funded both medical sites and community based organizations
- Sites located in the Northern, Northwest and Eastern regions of the state
PN Clients Served 1/1/2014-12/31/2014 (n=572)

Current Age as of 12/31/2014

- Unknown: 10%
- 55+: 6%
- 45-54: 23%
- 35-44: 21%
- 25-34: 22%
- 18-24: 9%
- Under 18: 1%

Age at HIV Diagnosis

- Female: 28%
- Male: 72%

Transmission Risk

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Percent of SPNS PN Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male To Male Sexual Contact (MSM)</td>
<td>52.0%</td>
</tr>
<tr>
<td>Injection Drug Use (IDU)</td>
<td>5.0%</td>
</tr>
<tr>
<td>MSM &amp; IDU</td>
<td>3.0%</td>
</tr>
<tr>
<td>Heterosexual Contact</td>
<td>23.0%</td>
</tr>
<tr>
<td>No Risk Factor Reported or Identified</td>
<td>15.0%</td>
</tr>
<tr>
<td>Perinatal Exposure</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Race

- Black non-Hispanic: 65%
- Hispanic: 12%
- Multi-Race, Other or Unknown: 3%
- White non-Hispanic: 12%
Research Question

What is the impact of Patient Navigation services for PLWH on retention in HIV care and viral suppression?
# Methods

## Analysis Variables

<table>
<thead>
<tr>
<th>HIV Care Outcomes:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retained in Care in 2015:</strong> Evidence of at least two or more HIV care markers:</td>
</tr>
<tr>
<td>• Antiretroviral treatment</td>
</tr>
<tr>
<td>• HIV medical visit</td>
</tr>
<tr>
<td>• Viral Load test</td>
</tr>
<tr>
<td>• CD4 count test in Calendar Year (CY) 2015 at least 3 months apart.</td>
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</tbody>
</table>

| **Virally Suppressed in 2015:** |
| Last Viral Load taken in CY 2015 was <200 copies/mL. |

<table>
<thead>
<tr>
<th>Sociodemographic Factors:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Client Race</td>
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<tr>
<td>• Client Ethnicity</td>
</tr>
<tr>
<td>• Current age and age at HIV diagnosis</td>
</tr>
<tr>
<td>• Sex at birth</td>
</tr>
<tr>
<td>• Client Type (newly diagnosed, lost to care, at risk)</td>
</tr>
<tr>
<td>• Geographic location of PN program where client received services (urban vs. rural)</td>
</tr>
</tbody>
</table>
Methods

• HIV care outcomes from clients served with PN services at six sites across the state from January 1, 2014-December 31, 2014 were analyzed (n=572).

• Overall retention in care and viral suppression rates in Calendar Year (CY) 2015 were examined.

• Relationships between sociodemographic factors, client type, and geographic location of the PN program on HIV outcomes were examined.

• Backward elimination multivariate logistic regression was used to determine the relationship between these factors and outcomes in 2015.
Retention in care for 2015 was defined as having at least two or more HIV care markers (evidence of antiretroviral treatment, HIV medical visit or a Viral Load test or CD4 count measurement) in Calendar Year (CY) 2015 at least 3 months apart.

A client was considered virally suppressed in 2015 if the last Viral Load taken in CY 2015 was <200 copies/mL.

2015 outcome data is preliminary.

**HIV Care Outcomes Among Patient Navigation Clients vs. All PLWH in Virginia**

- Persons living with HIV as of 12/31/2015 (N=24,853)
- Patient Navigation Clients (N=572)

<table>
<thead>
<tr>
<th></th>
<th>Retained in Care 2015</th>
<th>Virally Suppressed 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons living with HIV</td>
<td>43%</td>
<td>28%</td>
</tr>
<tr>
<td>Patient Navigation</td>
<td>81%</td>
<td>69%</td>
</tr>
</tbody>
</table>

- Retention in care for 2015 was defined as having at least two or more HIV care markers (evidence of antiretroviral treatment, HIV medical visit or a Viral Load test or CD4 count measurement) in Calendar Year (CY) 2015 at least 3 months apart.
- A client was considered virally suppressed in 2015 if the last Viral Load taken in CY 2015 was <200 copies/mL.
- 2015 outcome data is preliminary.
Results- Retention in Care

Client Ethnicity

Hispanic clients were 2.6 times more likely to be retained in 2015 compared to non-Hispanic clients ([odds ratio (OR): 2.6, 95% confidence interval (CI), 1.1-6.2].

Geographic Location of PN Program

Clients served by rural programs were 2.5 times more likely to be retained in care in 2015 compared to those served by urban programs ([odds ratio (OR): 2.5, 95% confidence interval (CI), 1.5-3.9].
Results - Viral Suppression

Client Ethnicity

Hispanic clients were 2.1 times more likely to be virally suppressed compared to non-Hispanics ([adjusted odds ratio (OR): 2.1, 95% confidence interval (CI), 1.1-4.2].

Geographic Location of PN Program

Clients served by PN programs in rural areas were 2.0 times more likely to be virally suppressed compared to clients served by urban programs ([odds ratio (OR): 2.0, 95% confidence interval (CI), 1.3-2.8].
Conclusions and Future Work

• Compared to all PLWH in Virginia, retention and viral suppression rates are much higher among clients served by PN programs.

• Future analysis will include additional exploration of outcomes by client type (newly diagnosed patients vs. lost to care, etc.)

• Future analysis will include comparing short-term outcomes (while receiving PN services) and long-term outcomes (after receipt of PN services) to help inform transition and discharge practices to maximize long-term health outcomes among PN clients.
Questions?

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