The Care Continuum across clinics in Atlanta: The need for targeted interventions

Wendy Armstrong MD
Emory University
A Generalized Epidemic

Cluster = 1.34% prevalence

FIGURE 3. Overlay of prevalent HIV cases among males in a four-county area.

Frew et al., J Urban Health; 2011
## Emory HIV patients

<table>
<thead>
<tr>
<th></th>
<th>IDP</th>
<th>EUHM</th>
<th>VAMC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total active patients</strong></td>
<td>5208</td>
<td>1548</td>
<td>1490</td>
</tr>
<tr>
<td><strong>Male/Female (%)</strong></td>
<td>71/29</td>
<td>81/18</td>
<td>98/2</td>
</tr>
<tr>
<td><strong>White/Black (%)</strong></td>
<td>15/82</td>
<td>32/67</td>
<td>19/63</td>
</tr>
<tr>
<td><strong>≥45 yrs</strong></td>
<td>29%</td>
<td>43%</td>
<td>71%</td>
</tr>
<tr>
<td><strong>&lt;44 yrs</strong></td>
<td>71%</td>
<td>52%</td>
<td>29%</td>
</tr>
<tr>
<td><strong>&lt;100% FPL</strong></td>
<td>61%</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td><strong>101-200% FPL</strong></td>
<td>28%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td><strong>Medicaid/Medicare</strong></td>
<td>49%</td>
<td>37%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Self Pay/RW</strong></td>
<td>47%</td>
<td>9%</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Specific Aims

• Build the continuum of care for each Emory-affiliated site and compare data across systems
• Evaluate longitudinal retention in care versus “snapshot” retention and identify percentage of patients in churn
• Assess traditional but also non-traditional risk factors in those linked but not retained and assess the community viral load of this population
Atlanta VAMC

Mangal, Rimland, and Marconi, AIDS Res Hum Retro 2013; epub ahead of print
Longitudinal Outcomes-EUHM

Retention = 2 clinician visits separated by at least 90 days within each prior 12 month block

Viral Suppression = Most recent VL within prior 12 months <1000 copies/mL; if patient had no VL within that time period, considered to have viremia
High Rates of ART Prescribing

- **12 Months**: 83%
- **24 Months**: 83%
- **36 Months**: 83%

**ART Rx in Year 1**
- **12 Months**: 83%
- **24 Months**: 83%
- **36 Months**: 83%
Impact of Age (VA and EUHM)

Mangal et al, 2013

Retention

- HIV Diagnosed
- Linked to Care
- Retained in Care
- Eligible for cART
- Prescribed cART
- VL Suppressed

Viral Suppression

- < 45 yo
- ≥ 45 yo

P < 0.01
Presenting CD4 count with no effect on Retention nor Suppression

<table>
<thead>
<tr>
<th></th>
<th>CD4 ≥ 200</th>
<th>CD4 &lt; 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>157</td>
<td>82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Retention</th>
<th>Viral Suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Months</td>
<td>78%</td>
<td>52%</td>
</tr>
<tr>
<td>24 Months</td>
<td>79%</td>
<td>43%</td>
</tr>
<tr>
<td>36 Months</td>
<td>58%</td>
<td>46%</td>
</tr>
<tr>
<td>12 Months</td>
<td>54%</td>
<td>37%</td>
</tr>
<tr>
<td>24 Months</td>
<td>48%</td>
<td>35%</td>
</tr>
<tr>
<td>36 Months</td>
<td>48%</td>
<td>35%</td>
</tr>
</tbody>
</table>

12 Months 24 Months 36 Months
A look at churn
Gap in care > 365 days and returned to same clinic

New patients at EUHM followed 3 y

31/242 pts (12.8%)

Prior to LTFU

17 pts undetectable

14 pts viremia

11 pts undetectable

6 pts viremia

2 pts undetectable

12 pts viremia

At time of return to care
Lessons learned so far...

• Longitudinal data teaches additional lessons about the care continuum and the public health implications
• Obtaining data that is granular enough to provide this information is challenging
• Populations located even in very close proximity can show very different results that are likely not entirely explained by socio-economic factors
Much more work to be done

- Collect data at our third site, IDP and longitudinal data at the VA
- Merge this data with records from the GA DPH to assess patients that shift sites of care
- Quantify the effect of churn at other clinics
  - Clinic viral load?
- Assess non-traditional risk factors among those not longitudinally retained including social capital, stigma measures, transportation etc.

Targeted Interventions
The IDP Transition Center

<table>
<thead>
<tr>
<th></th>
<th>Pre TC</th>
<th>Post-TC</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% mos linked to care</td>
<td>81%</td>
<td>95%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>% time virologic suppression</td>
<td>9%</td>
<td>42%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>∆ CD4+ T cells (cells/ml)</td>
<td>-19/year</td>
<td>+36/year</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

- Positive factors
  - Mental health care
  - SA counseling
  - Social support
  - TC Staff
  - Pt/Prov relationship

- Negative factors
  - Substance abuse
  - Mental health
  - Homelessness
  - Transportation
  - Incarceration

Jessica Cohen, MS4 and Jodi Turner, MS4
Acknowledgements

- Jonathan Colasanti MD MSPH
- Carlos del Rio MD

Atlanta VA Medical Center
- Vincent Marconi MD
- David Rimland MD
- Jed Mangal MS4

Emory University Hospital Midtown
- Molly Eaton MD

GA Dept of Public Health
- Jane Kelly MD

Emory CFAR

Funding: NIH/NIAID CFAR (P30 AI050409)