What Effect Does HIV Case Management have on Retention and Viral Suppression?

Review of Ryan White HIV/AIDS Program Data

Marlene Matosky, MPH, RN
Health Resources and Services Administration

National HIV Prevention Conference
December 2015
Acknowledgements

Authors:
Emily Chew
Rupali Doshi
Pamela Klein
Marlene Matosky

Special thank you:
Vimal Rao
Background: Ryan White HIV/AIDS Program

- In 2013, Ryan White HIV/AIDS Program (RWHAP) served over half a million people living with HIV in the United States.
- RWHAP funds over 20 service categories, including outpatient ambulatory medical care, medical case management, and non-medical case management.
- Medical case management and outpatient/ambulatory health services are the two most funded RWHAP service categories.
- Retention in medical care and viral suppression are key quality measures within RWHAP and the National HIV/AIDS Strategy: Updated to 2020.
HIV Care Continuum Shows Where Improvements are Needed

In the US, 1.2 million people are living with HIV. Of those:

- 86% are diagnosed
- 40% are engaged in care
- 37% are prescribed ART
- 30% are virally suppressed

Sources: CDC National HIV Surveillance System and Medical Monitoring Project, 2011.

*Antiretroviral therapy

https://www.aids.gov/federal-resources/policies/care-continuum/
Achieving Viral Suppression: More People with HIV Need to be in Medical Care

- 30% Virally suppressed
- 70% Not virally suppressed

People living with HIV who were not virally suppressed:
- 4% In care but not on ART*
- 10% On ART but not virally suppressed
- 66% Diagnosed but not in care
- 20% Not diagnosed


https://www.aids.gov/federal-resources/policies/care-continuum/
# RWHAP Retention and Viral Suppression, 2012 - 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Retention</th>
<th>Viral Suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>82.1%</td>
<td>75.0%</td>
</tr>
<tr>
<td>2013</td>
<td>81.0%</td>
<td>78.6%</td>
</tr>
</tbody>
</table>

**Retention in outpatient ambulatory medical care:** People living with HIV who had at least 2 RWHAP-funded medical visits that were at least 90 days apart in the measurement year, with at least 1 visit prior to September 1st.

**Viral Suppression:** People living with HIV who had at least one RWHAP-funded medical visit with the last viral load in the calendar year <200 copies/mL.
Ryan White Services Report (RSR)

• Annual client-level data submission by RWHAP recipients and funded providers
• Data include demographics, services, and clinical information
• Data for each client are reported by a unique client identifier
• Data reported for calendar year
• Data were reported by all 50 states, Washington, D.C., Puerto Rico, the U.S. Virgin Islands, and U.S. territories
• RSR data do not include information about the AIDS Drug Assistance Program (ADAP)
Hypotheses and Inclusion Criterion

**Hypotheses:**

1. RWHAP-funded case management services do not have an impact on retention in RWHAP-funded outpatient ambulatory medical care (HIV medical care)
2. RWHAP-funded case management services do not have an impact on HIV viral suppression

RWHAP case management includes RWHAP medical case management and RWHAP non-medical case management

**Inclusion criteria:**

1. Clients who are HIV +
2. Clients who received at least one RWHAP-funded outpatient ambulatory medical care
Definitions

Retention in outpatient ambulatory medical care: Clients who had at least 2 RWHAP-funded medical visits that were at least 90 days apart in the measurement year, with at least 1 visit prior to September 1st

Viral Suppression: Clients receiving at least one RWHAP-funded medical visit with the last viral load in the calendar year <200 copies/mL

Newly Suppressed: Clients receiving at least one RWHAP-funded medical visit who ended the year virally suppressed (last viral load test) when they started the year unsuppressed
Medical Case Management

Medical Case Management is the provision of a range of client-centered activities focused on improving health outcomes in support of the HIV care continuum. Activities may be prescribed by an interdisciplinary team that includes other specialty care providers. Medical Case Management includes all types of case management encounters (e.g., face-to-face, phone contact, and any other forms of communication).

Case Management Services

Case Management Services (non-medical) provide guidance and assistance in accessing medical, social, community, legal, financial, and other needed services. Case management services (non-medical) may also include assisting eligible clients to obtain access to other public and private programs for which they may be eligible, such as Medicaid, Medicare Part D, State Pharmacy Assistance Programs, Pharmaceutical Manufacturer’s Patient Assistance Programs, other state or local health care and supportive services, or health insurance Marketplace plans. This service category includes several methods of communication including face-to-face, phone contact, and any other forms of communication deemed appropriate by the RWHAP Part recipient.
2013 Demographics of Clients Receiving Case Management and Outpatient Ambulatory Medical Care

- 350,072 clients received RWHAP case management
- 215,341 clients receive both RWHAP case management and outpatient ambulatory medical care
- Mean number of medical case management visits: 5.9

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>70.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>28.9%</td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>&lt;20</td>
<td>1.4%</td>
</tr>
<tr>
<td></td>
<td>20-40</td>
<td>30.9%</td>
</tr>
<tr>
<td></td>
<td>40-64</td>
<td>64.0%</td>
</tr>
<tr>
<td></td>
<td>≥ 65</td>
<td>3.8%</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>White</td>
<td>27.6%</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>46.8%</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>22.0%</td>
</tr>
<tr>
<td>Housing</td>
<td>Stable</td>
<td>82.8%</td>
</tr>
<tr>
<td></td>
<td>Temporary</td>
<td>12.5%</td>
</tr>
<tr>
<td></td>
<td>Unstable</td>
<td>4.7%</td>
</tr>
<tr>
<td>Risk</td>
<td>Heterosexual</td>
<td>41.8%</td>
</tr>
<tr>
<td></td>
<td>IDU</td>
<td>8.3%</td>
</tr>
<tr>
<td></td>
<td>MSM/IDU</td>
<td>2.1%</td>
</tr>
<tr>
<td>Health Care Coverage</td>
<td>No insurance</td>
<td>32.9%</td>
</tr>
<tr>
<td></td>
<td>Medicaid</td>
<td>22.3%</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>10.8%</td>
</tr>
<tr>
<td></td>
<td>Medicare</td>
<td>7.2%</td>
</tr>
<tr>
<td>Poverty (FPL)</td>
<td>&lt;100%</td>
<td>67.1%</td>
</tr>
<tr>
<td></td>
<td>101-200%</td>
<td>22.5%</td>
</tr>
<tr>
<td></td>
<td>201-300%</td>
<td>6.8%</td>
</tr>
<tr>
<td></td>
<td>≥300%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>
Retention and Viral Suppression
Results

- 83.2% of clients receiving RWHAP-funded HIV case management were retained in RWHAP-funded outpatient ambulatory medical care compared to 75.6% of clients not receiving RWHAP-funded HIV case management (p<.0001)

- 78.1% of clients receiving RWHAP-funded HIV case management were virally suppressed at last viral load test compared to 80.0% of clients not receiving RWHAP-funded HIV case management (NS)

- When starting the year unsuppressed, 39.6% of clients receiving RWHAP-funded HIV case management achieved viral suppression by the end of the year compared to 33.7% of clients not receiving RWHAP-funded HIV case management (p<.0001)
Retention and Viral Suppression by Race/Ethnicity, 2013

Retained in RWHAP-funded outpatient ambulatory medical care

Newly suppressed

*Significant at p<.0001
Retention and Viral Suppression by Gender, 2013

Retained in RWHAP-funded outpatient ambulatory medical care

<table>
<thead>
<tr>
<th></th>
<th>Retained</th>
<th>Newly Suppressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall*</td>
<td>80%</td>
<td>40%</td>
</tr>
<tr>
<td>Male*</td>
<td>75%</td>
<td>30%</td>
</tr>
<tr>
<td>Female*</td>
<td>85%</td>
<td>45%</td>
</tr>
<tr>
<td>Transgender*</td>
<td>70%</td>
<td>35%</td>
</tr>
</tbody>
</table>

No case management  Received case management

*Significant at p<.01
Retention and Viral Suppression by Risk, 2013

**Retained in RWHAP-funded outpatient ambulatory medical care**

- Overall*
- MSM*
- IDU*
- MSM/IDU*
- Heterosexual*
- Perinatal*

**Newly suppressed**

- Overall*
- MSM*
- IDU*
- MSM/IDU*
- Heterosexual*
- Perinatal*

No case management

Received case management

*Significant at p<.05
Retention and Viral Suppression by Federal Poverty Level (FPL), 2013

Retained in RWHAP-funded outpatient ambulatory medical care

- Overall
- 0-100% FPL
- 101-200% FPL
- 201-300% FPL
- >300% FPL

- No case management
- Received case management

Newly suppressed

- Overall
- 0-100% FPL
- 101-200% FPL
- 201-300% FPL
- >300% FPL

*Significant at p<.05
Retained and Viral Suppression by Health Care Coverage, 2013

Retained in RWHAP-funded outpatient ambulatory medical care

Newly suppressed

*Significant at p<.0001
Retention and Viral Suppression by Housing Status, 2013

Retained in RWHAP-funded outpatient ambulatory medical care

<table>
<thead>
<tr>
<th></th>
<th>Overall*</th>
<th>Stable*</th>
<th>Temp.*</th>
<th>Unstable*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained</td>
<td>85%</td>
<td>87%</td>
<td>83%</td>
<td>70%</td>
</tr>
<tr>
<td>Newly Suppressed</td>
<td>30%</td>
<td>35%</td>
<td>30%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Newly suppressed

<table>
<thead>
<tr>
<th></th>
<th>Overall*</th>
<th>Stable*</th>
<th>Temp.*</th>
<th>Unstable*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newly Suppressed</td>
<td>30%</td>
<td>35%</td>
<td>30%</td>
<td>25%</td>
</tr>
</tbody>
</table>

*Significant at p<.0001

No case management

Received case management

*Significant at p<.0001
Retention and Viral Suppression by Age, 2013

Retained in RWHAP-funded outpatient ambulatory medical care

Newly Suppressed

*Significant at p<.0001
Conclusions: Retention in HIV Medical Care

- RWHAP-funded case management plays an important role in facilitating retention in RWHAP-funded outpatient ambulatory medical care

- Vulnerable populations appear more likely to be retained in RWHAP-funded outpatient ambulatory medical care when they receive RWHAP-funded case management
Conclusions: Viral Suppression

• RWHAP case management appears to have a role in viral suppression – yet it is not entirely clear

• RWHAP case management appears to impact newly suppressed clients – especially vulnerable clients

• The impact of RWHAP-funded case management on retention may have “downstream” effects on viral suppression and transmission
Implications

• RWHAPs may consider offering case management services to vulnerable populations – especially:
  • Clients with lower rates of retention in HIV outpatient ambulatory medical care
  • Clients who are not currently achieving viral suppression

• Further explore the relationship between RWHAP-funded case management and viral suppression
  • Which case management models have a greater impact on viral suppression?
  • Which case management activities have a greater impact on viral suppression?
  • Which staff providing case management have a greater impact on viral suppression?
Limitations

- RWHAP case management programs may implement a variety of case management models with varying impact on client health outcomes
- RWHAP case management programs’ staffing patterns are diverse
- RWHAP case management caseloads vary greatly
- Minimal amount of missing data