Improvements in Retention in Care and Viral Suppression: Results from the First Year of the Medical Care Coordination Program in Los Angeles County

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Background

- In Los Angeles County (LAC) and across the US, approximately 50% of people living with HIV do not see a doctor regularly for their HIV medical care.

- Care coordination models have improved health outcomes for a number of chronic diseases; however, there is limited application in HIV care and management.

- In 2013, the LAC Division of HIV and STD Programs (DHSP) implemented the “Medical Care Coordination” program in its Ryan White (RW)-funded HIV medical homes to identify and manage patients’ medical and psychosocial needs.
HIV Linkage, Retention and Viral Suppression in LAC, 2009-2012

1. Linkage to Care: Percentage of persons 18+ linked to care within 3 months of their HIV diagnosis among persons 18+ diagnosed with HIV in each calendar year and residing in Los Angeles County.

2. Retained in Care: Percentage of persons 18+ with >=2 care visits at least 3 months apart among all 18+ persons living with HIV in each calendar year.

3. Viral Suppression: Percentage of persons with HIV viral suppression (most recent viral load <=200 copies/ml) in each calendar year.

Reported through 12/23/2013.
Overview of Medical Care Coordination (MCC)

• MCC is an integrated approach that combines medical and psychosocial support services

• Delivered by a clinic-based, multidisciplinary team:
  ▪ Registered nurse
  ▪ Licensed social worker (MSW)
  ▪ Case worker (BA/BS)

• Patients are assessed to determine acuity – level of medical and psychosocial service need

• Acuity drives service delivery to support retention in HIV care:
  ▪ Brief interventions: ART adherence, risk reduction, engagement in care
  ▪ Linked referrals: Mental and addiction treatment, housing, partner services
Sample Population

• HIV-positive patients at 25 RW-funded medical homes in LAC

• Patients identified as being at risk for poor health outcomes:
  – Not in HIV care (≥6 months);
  – Not on ART but CD4 count <500;
  – On ART with viral load >200 copies/mL;
  – Diagnosed with an STD in the past 6 months;
  – Multiple medical and/or psychosocial co-morbidities; and/or,
  – Referred by medical care provider

• 1,204 patients enrolled in MCC from January 1, 2013 through December 31, 2013
  – Enrolled=an initial assessment reported in DHSP RW data system during the evaluation study period
12-Month Evaluation Design

- A quasi-experimental pre-and post-test design was used to evaluate the impact of MCC on viral suppression and retention after 12 months.

Enrollment (Jan-Dec 2013)

Receipt of MCC

Time

12-months pre-enrollment (Jan-Dec 2012)

12-months post-enrollment (Jan-Dec 2014)
Outcomes and Methods

- **Outcome Measures:**
  - **Viral Suppression:** Most recent viral load <200 copies/mL in the second half of each 12-month observation period
  - **Retention in care:** Estimated as 2 or more CD4, viral load or resistance tests at least 90 days apart in the 12-month observation period

- **Statistical Methods:**
  - Analysis of outcome measures conducted using intent-to-treat approach in which missing values=failure
  - Comparison of outcomes measures pre-and post 12 months were performed using McNemar’s tests for paired data
Patient Characteristics at Enrollment (n=1,204)

- **Race**: 49% Latino, 26% African-American, 21% White, 4% other
- **Gender**: 85% male, 13% female, 2% transgender
- **Age**: 51% age 40 years and older
- **Income**: 78% at or below federal poverty level
- **Language**: 23% Spanish-speaking
- **Sexual Risk**: 23% diagnosed with an STD in past 6 months
- **HIV History and Care**:  
  - 7.7 mean years since HIV diagnosis (SD=7.3 years)
  - 33% most recent viral load <200 copies/mL
  - 73% currently prescribed ART
- **Psychosocial**
  - 64% current drug/alcohol use
  - 40% met screening criteria for depressive disorder (PHQ-9)

1 Provider reported; 2 laboratory report 3 patient self-report
Patient Acuity Level and Service Delivery Hours (n=1,204)

**Patients by Acuity Level**
- Low (n=221) - 18.4%
- Moderate (n=622) - 51.7%
- High (n=361) - 30.0%
- Severe (n=5) - 0.4%

**Median Service Hours per Patient by Acuity Level**
- Low (n=221) - 12.5
- Moderate (n=622) - 17.5
- High (n=361) - 20.9
- Severe (n=5) - 36.3
- TOTAL - 17.5

**Data source:** DHSP, Casewatch, Years 23-24 and MCC Assessment, Jan 2013-December 2013
Receipt of Brief Interventions (BI) among Patients with Identified Needs

- **ART Adherence (n=820):**
  - Received BI: 83%
  - Did Not Receive BI: 17%

- **Risk Reduction (n=511):**
  - Received BI: 78%
  - Did Not Receive BI: 22%

- **Engagement in Care (n=353):**
  - Received BI: 84%
  - Did Not Receive BI: 16%

Data source: DHSP, Casewatch, Years 23-24 and MCC Assessment, Jan 2013-December 2013
12-Month Outcomes

Changes in Viral Suppression and Retention 12m Pre- and Post-MCC (N=1,204)

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<thead>
<tr>
<th></th>
<th>12m Pre-MCC</th>
<th>12m Post-MCC</th>
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<tbody>
<tr>
<td>Viral Suppression</td>
<td>30%</td>
<td>60%</td>
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<tr>
<td>Retention in Care</td>
<td>52%</td>
<td>84%</td>
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Data source: DHSP, Casewatch, Years 22-24; DHSP, HIV Surveillance data 2012-2014, as of March 2015
Limitations

• Convenience sample

• Intent-to-treat approach may underestimate true effect size

• Individual HIV medical homes may implement additional retention in care strategies outside of MCC

• May not be generalizable to patients who are:
  – Not in Ryan White or other safety net HIV care systems
  – Not experiencing or at risk for poor health outcomes at time of screening for services
Conclusions

• At 12 months, patients in MCC programs at 25 safety net HIV clinics across Los Angeles County had significant improvements in retention in care and viral suppression

• These results suggest that MCC is a promising service model to:
  – Improve retention in care and viral suppression among persons at safety net HIV clinics in LAC; and,
  – To positively impact engagement in these key HIV care continuum components in LAC
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Questions
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MCC Service Guidelines and Assessment available at:
http://publichealth.lacounty.gov/dhsp/MCC.htm