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

Sonali P. Kulkarni, MD, MPH
Wendy Garland, MPH

Los Angeles County Department of Public Health
Division of HIV and STD Programs

Los Angeles County

- Most populous county in the U.S.
- Greater population than 42 individual states
- 88 incorporated cities and many unincorporated areas
- One of the most racially/ethnically diverse in the U.S.
- Urban, suburban, and rural areas
Background

• 58% of 47K PLWHIV in LA County are retained in care
• 56% have suppressed viral load (<200 copies/mL)

• 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
  – Provide clinics with additional support
  – Shift from stand alone case management services
  – Roll-out coincided with early ACA implementation in CA
Overview of Medical Care Coordination (MCC)

- MCC designed to be an **integrated approach** to combine medical and psychosocial support services **to improve retention in care and viral suppression**

- Delivered by a clinic-based, **multidisciplinary team**:
  - Registered nurse
  - Licensed social worker (MSW)
  - Case worker (BA/BS)
Key MCC Activities

• **Screen** clinic’s HIV patient panel to identify patients with poor outcomes
  • Not in HIV care (≥6 months)
  • Patients not on ART
  • On ART with viral load >200 copies/mL
  • Diagnosed with an STD in the past 6 months
  • Multiple medical and/or psychosocial co-morbidities
  • Referred by medical care provider

• **Assess and identify** medical and psychosocial needs at least every 6 months

• **Link** patients with identified need to support services or deliver brief interventions
MCC Assessment and Patient Acuity

- Assessment identifies medical and psychosocial factors that may affect patient’s health across 12 domains:
  - Health status
  - Adherence
  - Housing
  - Legal/End of Life
  - Risk Behaviors
  - Mental health
  - Quality of Life
  - Access to Care
  - Financial
  - Transportation
  - Alcohol/Drug Use
  - Support Systems

- Assessment performed at least every 6 months
  - Calculates patient acuity
  - Guides service plan development and use of interventions
  - Intensity of follow-up based on patient acuity
Population

- 25 RW-funded medical homes managed by 19 agencies in LAC

- All patients, regardless of insurance status, are eligible for MCC services

- 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
Medical Care and Coordination (MCC) Sites, 2013 Persons Living with HIV/AIDS by Census Tract
12-Month Evaluation Design

• A 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)
MCC Data Sources

• **Casewatch:**
  
  Required data reporting system for Ryan White Part A contracted providers
  
  • Demographic, assessment and service data
  
  • Laboratory data for those patients missing data in surveillance

• **HIV Surveillance Laboratory Data (iHARS):**
  
  Laboratory data reported to DHSP for HIV surveillance in LAC
  
  • Viral load, CD4 and resistance testing dates and results
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\(^1\): 49% Latino, 26% African-American, 21% White, 4% other
• Gender\(^1\): 85% male, 13% female, 2% transgender
• Age\(^1\): 51% age 40 years and older
• Income\(^1\): 78% at or below federal poverty level
• Language\(^1\): 23% Spanish-speaking
• Sexual Risk\(^1\): 23% diagnosed with an STD in past 6 months
• HIV History and Care\(^1\):
  – 7.7 mean years since HIV diagnosis\(^1\) (SD=7.3 years)
  – 31% most recent viral load <200 copies/mL\(^2\)
  – 73% currently prescribed ART\(^1\)
• Psychosocial\(^3\)
  – 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

- Self-Mng (n=221): 0.4%
- Moderate (n=622): 18.4%
- High (n=361): 51.7%
- Severe (n=5): 30.0%

Median Service Hours per Patient by Acuity Level

- Self-Mng (n=221): 11.3 hours
- Moderate (n=622): 16.5 hours
- High (n=356): 19.5 hours
- Severe (n=5): 34.1 hours
- TOTAL: 16.3 hours

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: 82%
  - Did Not Receive BI: 18%

- **Risk Reduction (n=511)**
  - Received BI: 76%
  - Did Not Receive BI: 24%

- **Engagement in Care (n=827)**
  - Received BI: 87%
  - Did Not Receive BI: 13%

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

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

<table>
<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>31%</td>
<td>60%</td>
</tr>
<tr>
<td>Retention in Care</td>
<td>52%</td>
<td>84%</td>
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</table>

Data source: DHSP, Casewatch, Years 22-24; DHSP, HIV Surveillance data 2012-2014, as of March 2015
*Significant difference from Pre- to Post-MCC (p<0.001)
12-Month Outcomes for Vulnerable Populations

• Transgender (n=26)
  – 112% improvement in viral suppression (31% to 65%)*
  – 110% improvement in retention (39% to 81%)*

• Youth Aged 12-24 (n=125)
  – 132% improvement in viral suppression (25% to 58%)*
  – 138% improvement in retention (34% to 80%)*

• Previously Incarcerated (n=461)
  – 73% improvement in viral suppression (32% to 55%)*
  – 45% improvement in retention (56% to 81%)*

• Homeless at Enrollment (n=110)
  – 50% improvement in viral suppression (31% to 65%)*
  – 110% improvement in retention (29% to 44%)*

Data source: DHSP, Casewatch, Years 22-24; DHSP, HIV Surveillance data 2012-2014, as of March 2015
*Significant difference from Pre- to Post-MCC (p<0.01)
Limitations

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

• Relies on data reported by contracted providers which may be subject to reporting delay or incomplete reporting

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

• A clinic-based integrated care coordination program improved 12 month retention and viral suppression for all patients, including youth, homeless, previously incarcerated, and transgender persons

• MCC is a promising service that can be funded with Ryan White funds to support safety net HIV clinics to address the complex needs of their patients to improve their health outcomes
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Contact Information

Sonali Kulkarni, MD, MPH
skulkarni@ph.lacounty.gov

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MCC Service Guidelines and Assessment available at:
http://publichealth.lacounty.gov/dhsp/MCC.htm
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 health and addiction treatment, housing, partner services