Lessons for Community Pharmacy from the USC / AltaMed CMMI Healthcare Innovation Award (Round 1)

Steven W. Chen PharmD, FASHP, FCSHP, FNAP
Associate Professor and Chair
Titus Family Department of Clinical Pharmacy and Pharmacoeconomics and Policy
William A. Heeres and Josephine A. Heeres Endowed Chair in Community Pharmacy
Co-Chair Emeritus, HRSA Patient Safety & Clinical Pharmacy Services Collaborative
chens@usc.edu
Learning Objectives

• Describe the steps taken to integrate a clinical pharmacy program into a safety net FQHC designed to maximize value while reducing costs

• List successes and lessons learned from the USC / AltaMed CMMI program applicable to the community pharmacy environment
What you will hear...

- Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI
- Rolling results from the HCIA program
- Community pharmacy practice applications
$12 USC / AltaMed CMMI Project: Specific Aims

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician

OUTCOME MEASURES
✓ Healthcare Quality
✓ Safety
✓ Total Cost / ROI
✓ Patient & provider satisfaction
✓ Patient access

Telehealth clinical pharmacy

Resident and technician training for expansion

Web-based pharmacist training and credentialing
USC Patient Targeting and Management Strategy

High cost patients

Frequent and recent acute care utilizers

48 EHR-embedded triggers to detect high risk patients

MD referrals

Comprehensive Medication Management

Treatment Goal Reached?

Yes

Clinical pharmacy tech “check-ins” every 2 months

No

Unstable
• Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI

• Rolling results from the HCIA program
Outcome: Recruit high risk patients

- Enrolled 6,000 patients since Oct 2012
  - Predominantly Hispanic, non-elderly women
- $\frac{3}{4}$ths have hypertension, 36% uncontrolled
- $\frac{2}{3}$rds have diabetes, 60% uncontrolled
- High rates of hospitalizations
Outcome: Improvement in Clinical Markers

**Systolic Blood Pressure**

- Baseline: 155
- 3 Months: 145
- Most Recent: 135

**Diastolic Blood Pressure**

- Baseline: 88
- 3 Months: 78
- Most Recent: 72

*Among those with uncontrolled hypertension at baseline*
Outcome: Improvement in Clinical Markers

A1C Levels

- Less than 7
- 7 to 8
- 8 to 9
- 9 to 10
- Greater than 10

Baseline, 6 months, Most Recent
Outcome: Hospitalizations are declining
Control Group Selection

Propensity scoring to match CPS enrollees (treatments) to similar patients receiving care at non-treatment clinics (controls) in three steps:

• Wave 1 treatment patients
• PACE treatment patients from Wave 2
• Non-PACE treatment patients from Wave 2

Covariates used to model the propensity score:

• Demographics
• Health status
• Utilization
• Other
Summary of Difference-in-Differences Results (Treatment – Control)

Clinical results

HbA1C average change in 6 months, uncontrolled at baseline -11%
BP % under control in 6 months, uncontrolled at baseline -9.3%

Utilization results (Probit Analysis)

Readmissions per year per patient (6 month panel) -16%
Readmissions per year per patient primarily attributed to medications (6 month panel) -33%
Medication-Related Problems Identified Through CMMI Clinical Pharmacy Program
67,169 problems among 5,775 patients (Avg 11.6 per patient)
### Top Actions Taken by Pharmacists to Resolve Medication-Related Problems (excluding education)

<table>
<thead>
<tr>
<th>Action</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Dose or Drug Interval</td>
<td>14,981</td>
</tr>
<tr>
<td>Add Medication</td>
<td>5,554</td>
</tr>
<tr>
<td>Order test</td>
<td>4,230</td>
</tr>
<tr>
<td>Discontinue Medication</td>
<td>3,847</td>
</tr>
<tr>
<td>Substitute Medication</td>
<td>2,665</td>
</tr>
</tbody>
</table>
Patient Satisfaction

Year 1 (n=168)
- Average score = 9.6

Year 2 (n=269)
- Average score = 9.7
Value Proposition - Comprehensive Medication Management

CMM provided by pharmacists for high-risk patients:

- Lowers total healthcare costs (↓hospitalizations / readmits)
- Improves healthcare quality measures (Pay for performance)
- Improves medication safety (priority for CMS, others)
- Improves provider access (PCMH measure, video telehealth) and satisfaction (less staff turnover)
- Improves patient satisfaction (retention)
- SAVES LIVES
• Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI
• Rolling results from the HCIA program
• Community pharmacy practice applications
Community Pharmacy Practice Applications

1- Secure support from senior medical leadership

2- Align program with partnering organization’s financial incentives and enroll highest-risk patients for comprehensive medication management
   • Lower readmissions (hospitals, full-risk entities)
   • Performance linked to payments (pay for performance, valued-based)
   • 340B program
* Consider pre-program gap analysis

3- Develop clinical pharmacy collaborative practice agreements that integrate into existing workflows
4- Access to reliable data (clinical decisions, quality improvement monitoring / program evaluation)

5- Host frequent team + leadership calls / meetings

6- Maximize role of pharmacy technicians
   a. Baseline elements of medication review
   b. Medication adherence tools (pill boxes, charts, etc.)
   c. Solicit patient enrollment
   d. Perform appointment support functions (scheduling, labs, etc.)
   e. Manage Patient Assistance Program (PAP)
   f. Reinforce education
   g. Follow-up check-ins after patients reach goals
<table>
<thead>
<tr>
<th>Patient Engagement / Retention Keys</th>
<th>Engagement</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily availability for walk-ins / “warm hand-offs”</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PCP endorsement to targeted / enrolled patients</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Match team member language skills</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Clinical pharmacy technicians</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Engage family and caregivers</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Consider selective home visits</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Extended hours / weekend availability</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Flyers / media explaining program in lay terms</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Consider peer-led group appointments</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Continuity of pharmacist / tech provider</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>