Comprehensive Medication Management (CMM) for Hypertension Patients: Driving Value and Sustainability

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Learning Objectives

At the conclusion of this presentation, the participants will be able to-

1. Distinguish between blood pressure treatment target vs. goal
2. Explain methods of maximizing the efficiency of CMM services
3. List at least 3 funding sources / methods for CMM
My assumptions....

• This group has drank the pharmacy Kool-Aid
• Be There San Diego has already had great successes

We’re just better than the rest of you!

...because you don’t have any Medical Director Navy Seals....
Questions to Run on....

• What lessons were learned from spending $12 million on a comprehensive medication management program?
• How can we foster an effective community partnerships for managing hypertension?
$12 Million USC / AltaMed CMMI Project: Specific Aims

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician

Telehealth clinical pharmacy

Resident and technician training for expansion

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

Web-based pharmacist training and credentialing

UNIVERSITY OF SOUTHERN CALIFORNIA
National Conference on Best Practices and Collaborations to Improve Medication Safety and Healthcare Quality
Feb 2014 & 2016
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

Clinical Pharmacy
USC School of Pharmacy
Comprehensive Medication Management is a New Standard of Care

Ensures each patient’s medications are individually assessed.

Assessment determines if medication is:

• appropriate for the patient
• effective for the medical condition
• safe given the comorbidities and other medications being taken
• able to be taken by the patient as intended

PCPCC Resource Guide- Integrating Comprehensive Medication Management to Optimize Patient Outcomes
https://www.pcpcc.org/sites/default/files/media/medmanagement.pdf
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>MTM</th>
<th>CMM</th>
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</thead>
<tbody>
<tr>
<td>Conduct a comprehensive medication therapy review to identify all medication-related problems</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Confirm medication-related problems including assessment, point-of-care testing, medication-related labs</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Assess ALL medications and medical conditions</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Develop individualized medication care plan to address medication-related problems and ensure attainment of treatment goals</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Add, substitute, discontinue, or modify medication doses</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Generate complete medication record</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Document care delivered and communicate to health care team</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ensure care is coordinated with other health care providers</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Provide follow-up care in accordance with treatment-related goals</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Requires collaborative practice agreement between pharmacist and physician</td>
<td></td>
<td>✓</td>
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</table>
USC Patient Targeting and Management Strategy

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Comprehensive Medication Management

Treatment Goal Reached?

Yes

Unstable

Clinical pharmacy tech “check-ins” every 2 months

No
• Enrolled 6,000 patients since Oct 2012
  • Predominantly Hispanic, non-elderly women
• 3/4ths have hypertension, 36% uncontrolled
• 2/3rds have diabetes, 60% uncontrolled
• Low-moderate rates of hospitalizations
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
### Changes in Clinical Measures

(% of Patients with **Uncontrolled** Disease)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Managed Patients</th>
<th>Unmanaged Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>6 months</td>
</tr>
<tr>
<td>High blood pressure (SBP/DBP)</td>
<td>100</td>
<td>39%</td>
</tr>
<tr>
<td>Elevated cholesterol (LDL)</td>
<td>100</td>
<td>38%</td>
</tr>
<tr>
<td>Elevated Blood Sugar (HgA1c)</td>
<td>100</td>
<td>34%</td>
</tr>
</tbody>
</table>

Sample restricted to patients with *uncontrolled* condition at baseline. **Unmanaged** patients received *usual care* from AltaMed primary care physicians.

**Interpretation**: Program reduced rates of uncontrolled blood sugar (diabetes) by 23 percentage points relative to the unmanaged group (34% vs. 57%).
Summary of Difference-in-Differences Results for Utilization (Treatment – Control, Probit Analysis)

At 6 month follow-up:

Readmissions per year per patient -16%

Readmissions per year per patient primarily attributed to medications -33%
Untreated (Cohort) Versus Treated Patients, Preliminary Findings, USC CMMI Program

Mortality rates

- 25.7% absolute difference

Months after enrollment

0.001 0.002 0.003 0.004 0.005 0.006 0.007 0.008 0.009 0.01
1 2 3 6 9 12
Medication-Related Problems Identified Through CMMI Clinical Pharmacy Program

67,169 problems among 5,775 patients (Avg 11.6 per patient)

- **Medication Nonadherence**: 14,059, 21%
- **Insufficient Patient Self-Management**: 8,267, 12%
- **Safety Issues**: 13,352, 20%
- **Misc**: 9,222, 14%
- **Appropriateness / Effectiveness**: 22,229, 33%
Top Actions Taken by Pharmacists to Resolve Medication-Related Problems (excluding education)

- Change Dose or Drug Interval: 14,981
- Add Medication: 5,554
- Order test: 4,230
- Discontinue Medication: 3,847
- Substitute Medication: 2,665
Physician Satisfaction

- Pharmacy team is accessible
- Pharmacy team is respectful and courteous
- Pharmacists are knowledgeable
- Agree with pharmacists' recommendations
- SOAP notes are completed and forwarded in a timely manner
- Encourage the utilization of CPS
- CPS improves my patients' care
- Support having CPS in my clinic

Legend:
- □ Strongly disagree
- □ Disagree
- □ Neutral
- □ Agree
- □ Strongly agree
Patient Satisfaction

Year 1 (n=168)
- 3.6% (0-6)
- 92.2% (9-10)
Average score = 9.6

Year 2 (n=269)
- 6.3% (0-6)
- 93.3% (9-10)
Average score = 9.7
CMMI CMM Program Value Proposition

• ↓ healthcare costs (for patients at risk for readmissions)
• Improves NQF-aligned healthcare quality measures
• Resolves medication-related problems including medication safety (key value of engaging pharmacists)
• ↑ physician access / availability
• ↑ physician satisfaction (less burnout)
• ↑ patient satisfaction / retention
• ↓ mortality for very high-risk patients
Questions to Run on....

• What lessons were learned from spending $12 million on a comprehensive medication management program?

• How can we foster an effective community partnerships for managing hypertension?
Can barbers cut BP too?

Ron Victor, M.D.
Burns & Allen Chair in Cardiology Research Professor of Medicine, UCLA
Director, Hypertension Center
Associate Director, Cedars-Sinai Heart Institute
BARBER-2 Trial (in Los Angeles): How to optimize intervention potency?

Barber fidelity
Patron acceptance

Better medical treatment

Non-Adherence

Physician inertia

Pharmacists?
The LA Blood Pressure Barbershop Study

- PI: Ronald Victor, MD
- NIH-funded R01 grant
- 2015-2019
- ClinicalTrials.gov Identifier NCT 02321618
40 Barbershops randomized
(500 patrons)

Baseline
20 barbershops
15 patrons/shop

Enhanced Intervention
Barber-pharmacist BP mgt.

6 Month Follow up
Extension Study
12 Month Follow up

Baseline
20 barbershops
15 patrons/shop

Active Comparator
Barber health educator

6 Month Follow up
Extension Study
12 Month Follow up
Setting
Enhanced Intervention

Barber’s Blood Pressure Work Station

Wireless transmission

The LA Barbershop Blood Pressure Study

Cohort member card with barcode

Pharmacist visits
Inland Empire Health Plan

• Pay for performance program network community pharmacists

• Initial targets
  – Hypertension
  – Asthma

• Next steps: CMM Collaborative
The California Right Meds Collaborative

- A comprehensive medication management (CMM) collaborative for the state of California, initially focusing on key counties as well as Cook County in Chicago that will advance the ability of community pharmacists to provide high-impact services for high-risk / high-cost patients with chronic diseases

- An ongoing source of best practices, tools, resources, support, coaching, and expertise that will ensure the success of CMM programs in improving the Quadruple Aim

- Financial Support: LA County Dept of Public Health (CDC 1422 grant), American Heart Association
Patient Safety and Clinical Pharmacy Services Collaborative (PSPC)

“Committed to saving and enhancing thousands of lives a year by achieving optimal health outcomes and eliminating adverse drug events through increased clinical pharmacy services for the patients we serve.”
Vision for Success of Clinical Pharmacy Services

Integrated Clinical Pharmacy Services

Health Status

Adverse Drug Events
About the PSPC Collaborative

- The leading practices are codified in the Collaborative Change Package
  - A menu of proven, peer reviewed strategies and actions that teams are using to test out practices in their own organizations
- All teams are requested to use the same metrics for tracking
  - Increased clinical pharmacy services
  - Improvements in health outcomes
  - Reductions in adverse drug events.
About the PSPC Collaborative

• Based on the Institute for Healthcare Improvement’s Collaborative Model for Achieving Breakthrough Improvement
  – 2 live meetings annually + monthly webinars
  – Share best practices, tools and resources
  – Short, powerful presentations followed by discussion and sharing of insights
  – All meetings end with Offer, Request, Action Commitment
  – Deployment of local experts / coaches

• Iterative rapid cycle improvement process (PDSA)
• Rapidly grew from 68 teams in year 1 to over 400 after 4 years from all states
• Close partnership with CMS, FDA
National spread of clinical pharmacy services with the HRSA PSPC- Over 400 teams, + CMS Quality Improvement Organizations (QIOs)
The California Right Meds Collaborative: Next Steps

• Continuity of training following APP CMM certification
• Finalize senior leadership team representing important geographies and key stakeholders, including schools of pharmacy
• Finalize Change Package and Workbook
• Host 2 launch webinars to generate interest and enrollment in select areas
• First live meeting targeted for May 2018 (Q 6 months)
• Monthly webinars
• Develop pool of regional coaches
• Funding: Mix of external funding and modest membership dues (CE-level) from participants
Whole Person Care, Health Homes Section 2703
BP > 130/80 mmHg after ≥ 3 months of care with PCP identified through:
- Monthly health plan data query
- Team member referral
- Patient self-referral

Collect: Review medical and personal history, medications, labs (order relevant tests as needed)

Assess: Measure VS², interview patient to identify all barriers to achievement of treatment goals including medication-related problems

Comprehensive Medication Management Service per collaborative practice agreement¹

Plan: Individualized, patient-centered plan in collaboration with other healthcare team members considering evidence-based optimal treatment and costs

Implement: Educate and engage, make treatment modifications, reinforce self-management goals including adherence, make referrals as needed

Follow-up: More frequent initially; continue activating and engaging patient, modifying plan

Treatment goal reached?

Pharmacy tech (OT?) “checks in” every 3 months

¹Service delivered in-person, video telehealth, or phone / text
²VS measured in pharmacy, with validated home BP monitor, or at BP kiosks on campus
Business Case for Spread and Sustainment of Advanced Practice Pharmacist Programs

- **Cost savings / ROI:** Reduction in acute care utilization for high-risk populations (e.g., Whole Person Care)
- **Direct billing:** LA County Dept of Mental Health (85% of physician payment rate)
- **Gain sharing / P4P**
- **340B program**
- **Medicare Quality Payment Program:** [https://qpp.cms.gov/](https://qpp.cms.gov/)
- **Traditional fee-for-service billing:** Incident-to +/- hospital fee or POC testing, diabetes self-management, chronic care management, care transitions, Annual Medicare Wellness visits
### 2018 Proposed California Legislation to Help Pharmacists Improve Patient Health While Lowering Costs

<table>
<thead>
<tr>
<th>SB</th>
<th>Description</th>
<th>Sponsor</th>
<th>Status</th>
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<tbody>
<tr>
<td><strong>1264</strong></td>
<td>Medi-Cal: hypertension medication management: pharmacists.</td>
<td>Stone</td>
<td>Senate - Pending Referral</td>
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<tr>
<td><strong>1285</strong></td>
<td>Health care coverage: advanced practice pharmacist.</td>
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<td>Senate - Pending Referral</td>
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<tr>
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<td>Medi-Cal: comprehensive medication management.</td>
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</table>
• What successes and challenges have you had in improving hypertension control?

• What did you hear that might be adapted to overcome some challenges?

• What requests, offers, or commitments to action can you make to move towards improving blood pressure control for your patients?