Integration of Pharmacy Teams into Primary Care

May 12th, 2015

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Webinar sponsored by:
The Center for Excellence in Primary Care and the Center for Care Innovations
Who are we?
Facilitating Care Integration

Nearly half of adults with health issues report problems with the coordination of their care in the United States. As Community Health Centers (CHCs) and other safety net settings transform into Patient-Centered Medical Homes, their role in the larger medical neighborhood will become pronounced. However, challenges with care coordination are magnified in the safety net setting and continue to be increasingly complex.

In 2014, the UCSF Center for Excellence in Primary Care, with funding from the Blue Shield of California Foundation, completed a comprehensive literature review outlining strategies CHCs use to integrate into the medical neighborhood in the domains of primary care-specialty care, primary care-diagnostic imaging, primary care-oral health, and primary care-hospital care. A conceptual model which was used to classify innovations and strategies for integration can be found in the full report here.

The UCSF Center for Excellence in Primary Care has partnered with the Center for Care Innovations to develop this online resource center. The purpose of this Care Integration site is to disseminate...
Improving Healthcare Quality and Safety While Reducing Costs Through Clinical Pharmacy Service Integration

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Hygeia Centennial Chair in Clinical Pharmacy
Co-Chair Emeritus, HRSA Patient Safety & Clinical Pharmacy Services Collaborative

Michael Hochman, MD, MPH
Medical Director for Innovation
AltaMed Health Services
Questions to Run on...

• What are some successes your organization has had in improving medication-related quality and safety for patients at risk for cardiovascular disease?

• How can your organization adapt the approaches shared to provide optimal medication therapy outcomes for your patients?

• What barriers prevent your organization from integrating clinical pharmacy services?
Outline

• Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI
• Early results from the HCIA program
• Medical leadership perspective
• Patient perspective
• Stepwise process for implementation
Medication Safety Problems in U.S.

• 1.5 million people are injured each year due to medications
• ~25% of ambulatory patients experience adverse drug events
• 90% of chronic diseases require medications as first-line therapy
• “…for every dollar spent on ambulatory medications, another dollar is spent to treat new health problems caused by the medication.”

School of Pharmacy receives $12 million grant for safety-net project

By Kukla Vera
June 18, 2012

The Centers for Medicare & Medicaid Services (CMS) has awarded the USC School of Pharmacy a $12,007,677 grant, the largest ever received by the school, that will bring pharmacists into safety-net clinics in Southern California as a way to improve medication adherence and safe and appropriate use of prescription drugs, with the intended result of optimizing patient health while reducing avoidable hospitalizations and emergency visits.

**USC Personnel:**
Geoffrey Joyce, PhD- CoPI
Steven Chen, PharmD
Kathleen Johnson, PhD, PharmD
R. Pete Vanderveen, Ph.D.
Kathy Johnson: Innovative leader who championed for underserved patients

Tributes from colleagues of Kathy Johnson

The University of Southern California School of Pharmacy is a model for success achieved through community engagement, and Kathy was the unassuming leader who brought vision and partnerships together to create this success. I admired how she balanced the unique needs of underserved communities and the resource limitations of safety net organizations with the scholarship expectations of an academic institution.

A key to Kathy's success was that she realized that pharmacy practice needed to adapt to the needs of the patients and the organizations served, not the other way around. With that philosophy, she was able to build a strong base of support that spanned local and federal government agencies, private foundations, commercial payers, health systems, and the pharmacy practice community. While it is true that our profession is better because of Kathy's work, more importantly, underserved patients of Los Angeles are healthier because of her leadership.

Todd D. Sorensen, PharmD
Professor and Associate Dean, Department of Pharmaceutical Care and Health Systems
University of Minnesota College of Pharmacy

One thing about Kathy Johnson was her infectious enthusiasm and compassion for her work. No matter what we were doing, it didn't take long to get excited about the potential to do something innovative that would help others. Maybe it was studying the evolution of MTM services in the United States, or maybe it was discussing her work with pharmacists providing services to needy patients in the Los Angeles area. Kathy would focus on the benefits of completing the work, as if no obstacles were present. She was able to bring energy to projects to pull them together, obtain support, and then conduct them effectively. In addition to being a skilled scientist, Kathy Johnson was committed to advancing the profession of pharmacy by addressing the needs of vulnerable patients. She serves as a role model for us all.

William R. Doucette, PhD
Professor and Head, Health Services Research Division
University of Iowa College of Pharmacy

There are so many positive words I could use to describe Kathy Johnson. Enthusiastic, Leader, Advocate, Collaborator, Role model, Researcher, Devotee. The pharmacy community has lost a positive force.

I knew Kathy professionally and had the privilege of working with her on several initiatives. Her success and leadership in the practice-based pharmacy research community are remarkable, and her impact will be felt among us for decades to come.

Her bright soul was an indelible influence on those with whom she interacted. I extend my heartfelt sympathy to her family, friends, and USC colleagues. Kathy Johnson was a tremendous individual, and I am so very glad that I knew her.

Karan B. Farris, PhD
Charles R. Walgreen III Professor of Pharmacy Administration
University of Michigan College of Pharmacy
USC / AltaMed CMMI Project: Specific Aims

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician
USC / AltaMed CMMI Project: Specific Aims

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician

Telehealth clinical pharmacy
USC / AltaMed CMMI Project: Specific Aims

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician

Telehealth clinical pharmacy

Resident and technician training for expansion
USC / AltaMed CMMI Project: Specific Aims

- **10 teams**
  - Pharmacist + Resident + Clinical Pharmacy Technician

- Telehealth clinical pharmacy

- Resident and technician training for expansion

- Web-based pharmacist training and credentialing
USC / AltaMed CMMI Project: Specific Aims

OUTCOME MEASURES

- Healthcare Quality
- Safety
- Total Cost / ROI
- Patient & provider satisfaction
- Patient access

10 teams
Pharmacist + Resident + Clinical Pharmacy Technician

Telehealth clinical pharmacy

Resident and technician training for expansion

Web-based pharmacist training and credentialing
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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 20-21, 2014
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
USC Patient Targeting and Management Strategy

High cost patients

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Comprehensive Medication Management

Clinical Pharmacy USC School of Pharmacy
USC Patient Targeting and Management Strategy

High cost patients

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MD referrals

Comprehensive Medication Management

Treatment Goal Reached?

No
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

Clinical Pharmacy
USC School of Pharmacy

Comprehensive Medication Management

Treatment Goal Reached?

Clinical pharmacy tech “check-ins” every 2 months
High cost patients

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
Outline

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

• Early 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

* 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
Outcome: Improvement in Clinical Markers

A1C Levels

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<thead>
<tr>
<th>Category</th>
<th>Baseline</th>
<th>6 months</th>
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<tr>
<td>Less than 7</td>
<td>15.0%</td>
<td></td>
</tr>
<tr>
<td>7 to 8</td>
<td></td>
<td>20.0%</td>
</tr>
<tr>
<td>8 to 9</td>
<td>25.0%</td>
<td></td>
</tr>
<tr>
<td>9 to 10</td>
<td>30.0%</td>
<td></td>
</tr>
<tr>
<td>Greater than 10</td>
<td>35.0%</td>
<td></td>
</tr>
</tbody>
</table>
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

-16.8%
-21.0%
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

Inpatient hospital visits per year per patient (12 month panel) -10%
Emergency room visits per year per patient (12 month panel) -10%
Medication-Related Problems Identified Through CMMI Clinical Pharmacy Program, 10/112-8/28/13
19,696 problems, 1,993 patients (9.9 per patient)

- Medication Nonadherence, Misuse: 5313, 27%
- Safety Issues: 3495, 18%
- Appropriateness / Effectiveness: 8545, 43%
- Misc: 2343, 12%
Appropriateness / Effectiveness of Drug Therapy Problems Identified Through CMMI Clinical Pharmacy Program 10/1/12 to 8/28/13 (N = 8,545)

- Inadequate dosing for Tx goals: 4613
- Tx not optimal per guidelines / evidence: 2045
- Monitoring stds not followed: 1439
- Untreated medical problem: 487

 appropr. / effect. 43%
Top Actions Made by Pharmacists to Resolve Medication-Related Problems

- Change Dose or Drug Interval: 5699
- Patient Education: 5621
- Add Medication: 1708
- Discontinue Medication: 1248
- Substitute Medication: 668
Physician Satisfaction

- Pharmacy team is accessible: 10.4% Strongly disagree, 89.6% Strongly agree
- Pharmacy team is respectful and courteous: 6.3% Strongly disagree, 93.7% Strongly agree
- Pharmacists are knowledgeable: 8.3% Strongly disagree, 91.7% Strongly agree
- Agree with pharmacists' recommendations: 22% Strongly disagree, 73.3% Strongly agree
- SOAP notes are completed and forwarded in a timely manner: 4.4% Strongly disagree, 88.9% Strongly agree
- Encourage the utilization of CPS: 14.6% Strongly disagree, 85.4% Strongly agree
- CPS improves my patients' care: 8.3% Strongly disagree, 91.7% Strongly agree
- Support having CPS in my clinic: 6.3% Strongly disagree, 93.7% Strongly agree
Unsolicited letter from AltaMed Physician

”I am writing to you today of my own accord, I have offered to make my opinion known about the excellent work that USC pharmacy team is doing without solicitation because I think pharmacy team has done an extraordinary job.”

“Both Dr. Oh and Dr. Lin are extremely diligent and knowledgeable professionals, with very good rapport with their patients. I know that most of my patients actually look forward to having their sessions with the pharmacy team and have learned a great deal regarding their chronic disease self-management. Improving patient clinical parameters are an excellent proof of that.”

“Dr. Oh in particular has been an integral part of the work that we do here, as a resident she goes above and beyond to make sure the patient are well care for. We have had some really mutually beneficial academic discussions and she has helped changed my practice on a few occasions while bringing in new research to my knowledge. I am really grateful to have the opportunity to work with Dr. Oh and Dr. Lin and look forward to their continued mutually beneficial relationship with us.”
What are some successes you have had in improving medication-related quality and safety for your most challenging patients?
Outline

• Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI
• Early results from the HCIA program
• Medical leadership perspective
WHY WE DID THIS
WHY WE DID THIS

Clinical Pharmacy

Total Health Care Expenditures
Percent of GDP, 1960-2008

Source: U.S. Department of Health and Human Services
WHY WE DID THIS
WHY WE DID THIS

- Doctors don’t like to follow protocols …
- Pharmacists manage drug therapy better through collaborative practice agreements!
OVERCOMING ANXIETY

- Can pharmacists do this?
- Will they communicate with us?
- Why did I go to medical school?
- Liability?
FEEDBACK SO FAR

- Staff love it
- Patients love it
- Quality team loves it
- Unexpected benefits:
  - patient assistance programs
  - help with medication errors
  - staff education
Clinical Pharmacy

MAJOR CHALLENGE
BUSINESS CASE

• Does clinic pharmacy save money?
• Is clinical pharmacy a high-value service?
• If yes, how do we pay for it?
OPTIONS

- Billing policy changes
- Pay for performance
- Health Home Demonstration
- More risk-bearing, capitated payment arrangements
Outline

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

Year 1 (n=168)
- 0-6: 3.6
- 7-8: 6.3
- 9-10: 92.2
Average score = 9.6

Year 2 (n=269)
- 0-6: 6.3
- 7-8: 3.6
- 9-10: 93.3
Average score = 9.7
Unsolicited letter from AltaMed patient

• I wanted to take this time to commend and congratulate Alta Med Healthcare in implementing such a vital and useful program for their patients. The *Clinical Pharmacy Service* is a benchmark that all other Health Care providers could learn from and try to emulate. And in an era where severe cuts are the norm at the State and Local levels, I can’t begin to express how fortunate I feel to be a benefactor of this program. It is well staffed with professionals who seem to want to make a positive difference in their community outreach. I was made aware that the *Clinical Pharmacy Service* was established through a grant to maintain a more efficient protocol between Dr. and patient. In reflective thought I can’t think of money better spent.

• However when I was first introduced to this program I was quite leery to say the least... I’m quite busy and after seeing my primary care physician the last thing I wanted to do is spend more time with a clinical pharmacist... But after my first visit with Dr. Hamai I became a true believer. I was so taken back and impressed with her immeasurable knowledge and seasoned professionalism.
Patient letter (cont.)

• Being insulin dependent for over a quarter century I thought I had a real grasp on my condition, but she opened my eyes to a number of things that I wasn’t even aware existed. Long term complications from diabetes can be quite devastating; to say the least and I really felt she had my best interest in mind. Not only was Dr. Hamai instrumental in shedding insight regarding my condition, but her team of Gabriella and Wendy also proved to be more than worthy on the support side. In fact Gabriella brought to my attention that I might not be getting the most efficient readings from my glucometer given the way I was administering my blood sample. Wendy’s phone follow-up was more than I could have asked for with respect to having a trusted liaison to the program.

• As I look at this program in retrospect, I can only see the positive long term effects and cost savings to the community at large. Cost savings in the way of much needed education and support that can make all the difference from falling victim to one’s disease or gaining the upper hand in living and controlling it. My hopes are that the Clinical Pharmacy Service program does not fall victim to any budget shortfall in the future and continues to thrive in the community. Knowledge is power and this program embraces that statement ever so.
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• Overview of the USC / AltaMed Healthcare Innovation Award (HCIA) program from CMMI
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The Patient-Centered Medical Home:
Integrating Comprehensive Medication Management to Optimize Patient Outcomes

A RESOURCE GUIDE

https://www.pcpcc.org/sites/default/files/media/medmanagement.pdf
“...medication management services demonstrated an ROI of as high as 12:1 and an average of 3:1 to 5:1.”
The Expanding Role of Pharmacists in a Transformed Health Care System

Executive Summary
Pharmacists practice in a variety of health care settings. Although they are most often associated with dispensing medications in retail pharmacies, their role is evolving to include providing direct care to patients as members of integrated health care provider teams.¹

The critical role that medication management plays in treating chronic diseases suggests that the integration of pharmacists into chronic-care delivery and regulations governing the profession to address the challenges to pharmacists practicing to the full scope of their professional training.

Introduction
The health care system is undergoing a significant transformation in both the finance and delivery of health care services. States, in particular, are examining their health care systems to define policies that create efficient models of care focused
Value Proposition - USC Clinical Pharmacy Services

Integration of clinical pharmacy services 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)
USC School of Pharmacy
Collaborations to Develop High-Impact, Sustainable Results
Stepwise Process for Implementation

1- Secure support from senior medical leadership

2- Align program with partnering organization’s financial incentives
   - ↑ Value-based payment system, ↑ $ Incentives (many aligned w/ pharmacy)
   - Readmissions, pay for performance
   - 340B program
Stepwise Process for Implementation

3- Identify high-risk populations with the greatest potential benefit from clinical pharmacy
   – Consider pre-program data audit

4- Staff the program. Many options: Start with single pharmacist from organization or college of pharmacy faculty, start a residency, seek local foundation grants, 340B contribution.

5- Develop clinical pharmacy collaborative practice agreements for targeted patient populations and integrate program processes into existing workflow
   – Flow diagram
   – Disrupt support staff workflow = No support
Stepwise Process for Implementation

6- Ensure that reliable data is available for evaluating program impact

7- Host frequent team + leadership calls / meetings, integrate into key committees

8- Manage hazardous or misaligned partnerships

9- Maximize efficiency and productivity
Clinical Pharmacy Tech Competencies

1. Collect accurate information about medications from patients (Rx, OTC, supplements, herbals)
2. Prepare medication adherence tools (pill boxes, charts, etc.)
3. Behave and communicate professionally
4. Solicit participation of targeted patients in pharmacy program
5. Perform appointment support functions (scheduling appointments, lab orders, etc.)
6. Manage a Patient Assistance Program (PAP) including
7. Provide education reinforcement / support
8. Conduct follow-up check-ins with patients after reaching treatment goals
Impact of Clinical Pharmacy Technician on Team Efficiency

- Med Rec
- CMM Appointment with Clinical Pharmacist: 5 min
- Orders & Chart: 15-30 min
- Clinical Teaching Reinforcement & Sched f/u Appt: 5-10 min
- Clinical Teaching Reinforcement & Sched f/u Appt: 5-15 min

Time of visit: 20 - 40 minutes
Dependent on initial vs. follow up visit
40-50% more patients seen each day
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### Modes of Clinical Pharmacy Service Delivery

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<thead>
<tr>
<th>Mode</th>
<th>Description</th>
<th>Examples</th>
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<tbody>
<tr>
<td>1. <strong>Medical Groups</strong></td>
<td>(Pay for Performance, Chronic Disease Management)</td>
<td>Cedars-Sinai, Sharp, USC</td>
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<tr>
<td>2. <strong>Integrated into Medical Homes</strong></td>
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<td>VA, Kaiser, safety net clinics including AltaMed, QueenCare, LA Christian</td>
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<tr>
<td>3. <strong>Community Pharmacies</strong></td>
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<td>Ralphs, Walgreens, independents</td>
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<tr>
<td>4. <strong>Video Telehealth</strong></td>
<td></td>
<td>VA, USC, Heritage ACO</td>
</tr>
<tr>
<td>5. <strong>Telephonic</strong></td>
<td></td>
<td>MEDCO, Kaiser Permanente, USC, Heritage ACO</td>
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Higher complexity corresponds to limited scale, while lower complexity corresponds to broader scale.

http://www.pcpcc.net/files/medmanagepub.pdf
• How can you adapt the approaches shared to provide optimal medication therapy outcomes for your patients?

• What barriers prevent you from integrating clinical pharmacy services?

• What can you do next Tuesday to begin offering clinical pharmacy services in your organization?
Questions

Care Integration Resource Center