PRISM Collaborative: Transforming the Future of Pharmacy
PeRformance Improvement for Safe Medication Management

Mission: To improve the health of the people of Connecticut through safe and effective medication use

Skills-Based Education
- Interprofessional Education
- Workforce Development
- Continuing Professional Development

Practice-Based Research
- Medication Management
- Medication Safety
- Medication Adherence

Health Services Policy Research
- Policy Development
- Policy Evaluation
- Health Disparities
- Practice Innovation and Transformation
- Workforce Development

Team-Based Care Delivery
- Medical Homes
- ACOs
- Community-based Health Teams
- Care Transitions
Positioning Pharmacists Across Transitions in Care: The Pittsburgh Experience

Keith T. Kanel, MD, MHCM, FACP
Chief Medical Officer, Pittsburgh Regional Health Initiative
Clinical Associate Professor of Medicine, University of Pittsburgh

Toni Fera, PharmD
Independent Pharmacist Consultant
Pittsburgh Regional Health Initiative

PRISM Collaborative Webinar
May 28, 2015
Objectives

• Description of the Primary Care Resource Center Project
• Drivers of successful readmission reduction
• The role of pharmacists in building a disease-specific care transition team
• Creative deployment of a pharmacy technician to optimize pharmacist performance
• Sustainability – building the business case
Pittsburgh Regional Health Initiative

- Non-profit regional health improvement collaborative
- Founded 1997 by Pittsburgh business community to identify greater value for the healthcare dollar
- Comprised of physicians, nurses, pharmacists, researchers, designers, and community activists
- Trained over 5,000 caregivers worldwide in Lean
- Core focus on patient safety, quality improvement, readmission reduction, behavioral health integration, long-term care
- Catalyze experiments in new models of care

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PCRC Project Executive Summary

• Create and test a **new model of care**

• Hospital-based centers to coordinate care of complex patients, enabling community health systems to engage in **population health** and **readmission reduction**

• **Interdisciplinary teams** of nurse care managers and pharmacists, with specialized training in advanced disease management, quality improvement, and motivational interviewing

• Funded by CMS Innovation Center 2012-6

• Launched 2012 in 7 community health systems in Pennsylvania and West Virginia, with focus on reducing readmissions for **COPD**, **heart failure**, and **myocardial infarction**
30-Day Readmission Rate for Pittsburgh HRR is Among Highest in US

SOURCE: Dartmouth Atlas interactive website (www.dartmouthatlas.org)

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### Western Pennsylvania 30-Day Readmission Rates by MS-DRG, 2007-8

<table>
<thead>
<tr>
<th>Targeted Condition</th>
<th>Number</th>
<th>Readmit Rate</th>
<th>Ranking Among Medical MS-DRGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Failure</td>
<td>3,392</td>
<td>26%</td>
<td>1</td>
</tr>
<tr>
<td>COPD</td>
<td>2,716</td>
<td>23%</td>
<td>3</td>
</tr>
<tr>
<td>AMI</td>
<td>1,010</td>
<td>23%</td>
<td>7</td>
</tr>
<tr>
<td>Depression</td>
<td>640</td>
<td>18%</td>
<td>14</td>
</tr>
<tr>
<td>Asthma</td>
<td>355</td>
<td>10%</td>
<td>32</td>
</tr>
<tr>
<td>Diabetes</td>
<td>618</td>
<td>21%</td>
<td>16</td>
</tr>
</tbody>
</table>


Abstraction PHC4 database of 408,925 all-cause admissions to 44 acute care facilities in the 11 counties of SWPA (October 2007 through September 2008)

50% of COPD discharges had comorbid CHF and/or CAD
Building the PCRC Teams

- Typical PCRC team comprised of:
  4 nurse care managers
  1 pharmacist
  1 administrative assistant

- Pharmacist was felt essential to team because nearly every target disease patient is on one or more medications

- 1 site also experimented with a PCRC pharmacy technician
PCRC Project Training

All PCRC team members (nurses, pharmacists, therapists) trained together

1. **Quality Improvement** – 3 day all-project PRHI Perfecting Patient Care University, given in Pittsburgh prior to launch dates

2. **Motivational Interviewing** – 1 day split-sessions after launch, with 3-5 private coaching sessions with each team PCRC provider

3. **Advanced Disease Management** – 1 day split-session sessions
   a) Advanced COPD Care – presented by the COPD Foundation
   b) Advanced Cardiac Care – presented by the American Heart Association
   c) Inhaler Self-Management Techniques and Instruction
   d) Spirometry Screening
Conceptual Care Management Framework

**ADMISSION:** Trigger Tool activates PCRC team

PCRC Team implements **PERFECT DISCHARGE BUNDLE** during admission

**DISCHARGE:** Post-discharge telephone contact within 72 hours

**HOME VISIT** from PCRC team offered within first 5 days

Integrate longitudinal care with primary care office

Population Management Database

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# The Perfect Discharge Bundle

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> <strong>ROOT CAUSE ANALYSIS</strong> At admission, addressed in D/C plan</td>
<td>100%</td>
</tr>
<tr>
<td><strong>2.</strong> Disease-specific <strong>BEDSIDE EDUCATION</strong> for 30 minutes</td>
<td>100%</td>
</tr>
<tr>
<td><strong>3.</strong> <strong>MEDICATION MANAGEMENT</strong> by pharmacist</td>
<td>100%</td>
</tr>
<tr>
<td><strong>4.</strong> <strong>DISCHARGE ACTION PLAN</strong> review with patient, family, and physician</td>
<td>100%</td>
</tr>
<tr>
<td><strong>5.</strong> <strong>SBAR COMMUNICATION</strong> to PCP within 72 hours</td>
<td>100%</td>
</tr>
<tr>
<td><strong>6.</strong> <strong>POST-DISCHARGE TELEPHONE CALL</strong> with 72 hours</td>
<td>100%</td>
</tr>
</tbody>
</table>
Pursuing the Perfect Discharge Bundle: A Culture of Continuous Quality Improvement

Structured Morning Team Huddles

Value Stream Mapping of Key Workflows

Maintaining a Visual Management Board

Quarterly Reviews and Brainstorming Sessions
Make Data Collection Part of Everyday Work

• Don’t make data collection more work; make it everyday work

• 6 PCRCs configured their hospital EHR to accept PCRC data entry templates

• Data automatically downloaded to PRHI via FTP

• PRHI data warehouse created on 24th floor SQL server
Continuous Quality Improvement to Improve Compliance with Perfect Discharge Bundle

Perfect Discharge Bundle adherence by component, all PCRCs, 2013-5
The Role of the PCRC Team Pharmacist
Comprehensive Medication Review by Pharmacist

- Medication History
- Adherence History
- Reconcile Medications

- Drug Efficacy
- Contraindications
- Achievement of Therapeutic Goals

- Physician
- PCRC Team
- Community Pharmacy
- Prescription Capture

- Medication Adherence
- Medication Action Plan
- High-Risk/Priority Medications

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Points of Patient Engagement Across Transitions: Pharmacist Care Framework

**Upon Admission:**
- Reconcile medications
- Comprehensive medication review (within +/-5 days of discharge)
- Patient education and motivational interviewing

**At Discharge:**
- Address potential medication-related problems
- Ensure medication access
- Create medication action plan
- Communicates with physician and care team

**Post-Discharge:**
- Conduct phone follow-up (within 72hr of discharge)
- Reinforce medication action plan and adherence
- Reinforce prevention measures (e.g. vaccines and smoking cessation)
Integrating the Pharmacist Into the Team

- **Training**
  - Motivational Interviewing
  - Disease state-specific training
  - Quality improvement

- **Pharmacist Care Framework**
  - Create standard work
  - Proactively address medication-related problems (MRPs)

- **Quality Improvement**
  - Monitor performance dashboards
  - Implement small tests of change

- **Patient Engagement**
  - Reinforce patient education/self-management
  - Ensure the appropriate use of medications
  - Facilitate patient access to medications (patient assistance)

- **Team Resource**
  - Provide information to team on medication-related matters
  - Train team on new medications
  - Quickly identify adverse drug reactions/side effects and interactions
What is Uniquely “Pharmacy”?  

• Applies broad knowledge of drug interactions, drug therapy modifications required because of co-morbidities (e.g. adjusting doses for renal insufficiency), and identification of possible adverse drug reactions
  
  • High-hazard medications such as anticoagulants
  
  • Evidence-based therapies optimized

• Through the medication reconciliation process, readily identifies and addresses prescribing discrepancies

• Serves as a credible drug information resource to physicians and other providers; including identifying therapeutic alternatives, making drug therapy recommendations, and ensuring compliance with core measures

• Facilitates adherence by improving patient access to medications (e.g. patient assistance programs), and providing tools to assist with managing their medications (packaging, schedules, medication plans, etc.)
  
  • Motivational interviewing
  
  • Patient adherence strategies

• Provides patient education and reinforces the medication plan.

• Participate in data analysis and responding to trends in population management.
We asked the care managers: “What is the value-add of the pharmacist to the PCRC team?”

“Pharmacists can help patients to navigate the system and address concerns with costly medications by working finding a less costly alternative, to discontinue unnecessary medication and investigate options for patient assistance.”

“The pharmacist is an expert on medications, more comprehensive knowledge, so is more accurate and efficient with med rec and interactions, a more complete review.”

“The pharmacist knows how drugs interact with everything else that patient is takings, and disease states, like ESRD, complicating factors and co-morbidities.”

“The pharmacist takes the time needed to really help the patients understand all of their medications and how they work together.”
A Day in the Life of a PCRC Pharmacist

- Participate in Morning Huddle
  - New Admissions
  - Patients with MRPs
- Review Charts
  - Medication History and Reconciliation
- Interview Patient
  - Adherence Assessment
  - Comprehensive Medication Review
- Address Issues
  - Optimize Therapy
  - Patient Assistance
  - Self-Management Gaps
- Communicate and Coordinate with Other Providers
  - Summary to Physician
  - Care Manager Update
  - Chart Documentation
- Conducts Post-Discharge Follow-up
  - Phone Calls
  - Physician Follow-up Apt
  - Reinforce Plan of Care

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Pharmacists Role in Management of COPD Patients

### Comprehensive Medication Review
- Medication reconciliation
- Prevention of drug interactions and adverse drug events
- Ensure appropriate monitoring of high-hazard medications

### Patient Education
- Importance of medications in managing COPD
- Appropriate inhaler use

### Medication Adherence
- Bronchodilators
- Systemic corticosteroids
- Antibiotics

### Prevention
- Smoking cessation counseling
- Immunizations

### Support Referrals
- Pulmonary rehabilitation
- Nutrition services

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PERCENTAGE OF ENCOUNTERS WITH A PHARMACY INTERVENTION FOR ALL PCRCs AND ALL TARGET DISEASES
July 2013-June 2015 n=7,273*

*There may be multiple interventions per encounter.
Pharmacist Contribution-Stakeholder Survey

- Four overarching characteristics of PCRC services were continuously mentioned by interviewees as different from standard care, including:
  
  (a) Time to develop relationships with patients and families
  
  (b) Ability to provide patient education in both inpatient and outpatient settings
  
  (c) Care continuity across the inpatient-outpatient spectrum
  
  (d) Pharmacist involvement at all levels

- The project survey noted that the majority of CEOs championed the role of pharmacists within the PCRC Project.

- Care managers universally felt that pharmacists enhanced the team.
Challenges

- Timely identification of patients
- Ensuring access to timely information/integration of information
- Coordinating activities with other providers, including physicians
- Ability to engage all target patients due to high patient volume
- Lack of aligned payment incentives to support the business case
Performance Improvement: The PCRC Pharmacy Technician

Assists With Patient Identification and Enrollment
- Prepares and maintains active patient roster and pending discharges
- Identifies discrepancies between disparate systems’ medication records
- Monitors for pending discharges

Provides Administrative Support
- Manages patient medication assistance forms
- Coordinates hospital-to-home program vouchers
- Assembles patient medication education cards
- Transmits the pharmacist care note to the PCP

Assists with Data Management
- Retrieves laboratory and diagnostic tests relevant to the target diseases
- Assists with data collection and documentation
- Updates medication databases for pharmacist verification
Improved Pharmacist Efficiency

Pharmacist Efficiency: Comprehensive Medication Reviews (CMRs) Per Staffed Pharmacist Hour*

<table>
<thead>
<tr>
<th></th>
<th>6 Months Pre-Technician</th>
<th>6 Months Post-Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMRs Per Staffed Pharmacist Hour</td>
<td>0.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*p=0.0049

Average Time (Minutes) Per Chart Review by the Pharmacist*

<table>
<thead>
<tr>
<th></th>
<th>6 Months Pre-Technician</th>
<th>6 Months Post-Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Minutes Per Chart Review</td>
<td>35</td>
<td>20</td>
</tr>
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</table>

*p<.0001

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Project Outcomes and Sustainability
## PCRC Accomplishments By The Numbers 2013-2015

<table>
<thead>
<tr>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,947</td>
<td>Unique target disease (COPD, HF, AMI) patients</td>
</tr>
<tr>
<td>14,279</td>
<td>Admissions engaged at point-of-care</td>
</tr>
<tr>
<td>40,541</td>
<td>Face-to-face inpatient contacts</td>
</tr>
<tr>
<td>34,617</td>
<td>Telephone calls</td>
</tr>
<tr>
<td>2,333</td>
<td>Home visits (including skilled nursing)</td>
</tr>
<tr>
<td>8,865</td>
<td>Person-hours of PRHI staff training</td>
</tr>
</tbody>
</table>

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PCRC Project Final Outcomes 2013-2015

Change in **30-day readmissions** over 2 years  
↓ 25%*

Change in **31-60 day readmissions** over 2 years  
↓ 29%†

Change in **emergency department visits** over 2 years  
↓ 11%

Change in **observation stays** over 2 years  
↑ 34%

* *p=0.001  †p=0.014

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PRHI Training to Hospital Communities

Project Self Management (1,115 hours)
LEAN Quality Improvement (5,744 hours)
Data Control (107 hours)
End-of-Life Planning (277 hours)
Disease Management Updates (882 hours)
Motivational Interviewing (907 hours)

8,865 person-hours of PRHI training to PCRC Staff

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<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Change</th>
<th>Savings Before Adjusted</th>
<th>Savings After Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Costs</td>
<td>↓ 39%</td>
<td>↓ $3,425</td>
<td>↓ $2,826 adjusted</td>
</tr>
<tr>
<td>Outpatient Costs</td>
<td>↑ 12%</td>
<td>↑ $343</td>
<td>↓ $34 adjusted</td>
</tr>
<tr>
<td>Professional Fees</td>
<td>↓ 17%</td>
<td>↓ $559</td>
<td>↓ $496 adjusted</td>
</tr>
<tr>
<td>Drug Costs</td>
<td>↑ 3%</td>
<td>↑ $28</td>
<td>↓ $44 adjusted</td>
</tr>
<tr>
<td>TOTAL</td>
<td>↓ 23%</td>
<td>↓ $3,613</td>
<td>↓ $3,400 adjusted</td>
</tr>
</tbody>
</table>
Sustainability

• Activation of existing Medicare billing codes:
  - Chronic Care Management (CCM) codes
  - Transitional Care Management (TCM) codes

• Possible commercial reimbursement

• Investing in PCRC as a first step on the road to Alternate Payment Models
  - Accountable Care Organizations through MSSP
  - Advanced Primary Care models
  - Bundled Payment Initiatives

• Preparation for MACRA-based payment reform in 2019
Thank You

For More Information:

Keith T. Kanel, MD
Chief Medical Officer
Pittsburgh Regional Health Initiative

kkanel@prhi.org

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