Keystone Beacon Community

Beacon Initiatives: Best Practices

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Chief Administrative Officer,
Geisinger Insurance Operations
Keystone Beacon Community

**Learning Objectives**

1. Describe the Keystone Beacon care management model.
2. Highlight the most common care gaps identified.
3. Discuss the analytical challenges faced in a multi-payor, multi-provider initiative.
What is the Beacon Award?

- $16 million 3-year award from ONC
- Leveraging care innovation and information technology to improve care coordination and reduce costs
- 17 awards across the nation
- Started in April 2010 and runs thru March 2013
17 Beacon Communities

- Beacon Community of Inland Northwest
  - Spokane, WA

- Eastern Oregon Beacon Community

- Southeastern Minnesota Beacon Community
  - Rochester, MN

- Southeast Michigan Beacon Community
  - Detroit, MI

- Delta BLUES Beacon Community
  - Stoneville, MS

- Southern Piedmont Beacon Community
  - Concord, NC

- San Diego Beacon Community
  - San Diego, CA

- Colorado Beacon Community
  - Grand Junction, CO

- Utah Beacon Community
  - Salt Lake City, UT

- Central Indiana Beacon Community
  - Indianapolis, IN

- Western New York Beacon Community
  - Buffalo, NY

- Rhode Island Beacon Community
  - Providence, RI

- Greater Cincinnati Beacon Community
  - Cincinnati, OH

- Keystone Beacon Community
  - Danville, PA

- Keystone Beacon Community
  - Hilo, HI

- Great Tulsa Health Access Network Beacon Community
  - Tulsa, OK

- Crescent City Beacon Community
  - New Orleans, LA

From Craig Brammer et al ONC 3/2012 Beacon update at HIMSS
Care Management Model

Coordination Across the Care Continuum
Keystone Beacon Community

Patient-focused, evidence-based, community-wide care coordination supported by Health IT

HF and COPD in 5 counties in rural Pennsylvania
24 organizations over 60 locations across the care continuum
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Developing a Care Coordination Model for Success

**HIT**
- ED notification
- Decision support tools

**TOC**
- Medication reconciliation
- Timely outreach to PCP

**High Risk Management**
- Proactive ID
- Acute care protocols

Aligning the Community to one standard of care
Expanding Nursing’s Role

• Inpatient Discharge Liaison
  – Medications & condition management
  – “Teach back”
  – Hand off to outpatient teams

• Transitions of Care Call Center
  – 30 day follow-up
  – Medications, safety and “action plans”

• Outpatient medical homes
  – Proactive identification of HF & COPD
  – Medication management, SMAPs for acute exacerbation management
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Case Managers at work
Keystone Beacon Community

Targeted Providers of Care in the Community

- Hospitals & Specialists
- Primary Care
- Home Health
- Nursing Homes
- Case Management
Keystone Beacon Community Care Management Timeline

**Keystone Beacon Year 1**
- April 2010: Start
- Nov: CM rounding in 1 SNF
- Jan: IP CM at Hosp A, trainer & reg’l mgr hired
- Feb: IP CMs at Hosp B & C
- Mar: 2nd IP CM at Hosp D, 5 IP CMs total

**Keystone Beacon Year 2**
- April 2011: TOC opened in April, Care gaps documented
- June: 2 OP CMs at 2 physician practices
- Sept: CMs rounding in 2 SNFs
- Dec: New MMAs begin assisting CMs

**Keystone Beacon Year 3**
- April 2012: 14 OP CMs covering 16 physician practices and 1 free clinic
- June: CM positions unfilled
- Sept: 6 OP CMs covering 8 physician practices
- Dec: CMs rounding in 5 SNFs total

**CM Ends April 2013**
- Jan-Mar: 8 CM positions unfilled

*CM = Care Manager
MMA = Medical Management Associate
TOCC = Transitions of Care Center

*Between the time periods of May 2012 and January 2013 several care managers left the project and others shifted assignments to cover as many of the participating facilities and ambulatory practices as possible, albeit at smaller volumes in some settings.*
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Assessments

ID: Beacon OP CM
Entry By: WARG

Multiple Responses: Potential Gaps in Care Identified (Please check all that apply):

- None Identified
- Medication Errors
- Discharge Disposition
- Treatment Plan Revision (Excl. Med Order changes)
- Follow-up appointment not scheduled
- Discharge Instructions
- Advanced Illness Planning
- Other (Please describe below):

Other Responses:

Cancel Close
Keystone Beacon Community

Assessments panel showing various fields and options for documentation and assessment.

- ID: 16079
- Beacon OP CM
- Entry By: WARG

CARE GAPS:
- Potential Gaps in Care Identified (Please check all that apply):
- If Medication errors identified above, please explain in more detail:
- If Discharge Disposition errors identified above, please explain in more detail:
- If Discharge Instructions Errors identified above, please explain in more detail:

Multiple Responses: If Medication errors identified above, please explain in more detail:
- Dosage Error
- Missing or Omitted Information
- Incorrect Medication
- Drug Allergy
- Duplicate Order
- Medication order not discontinued
- Failure to renew medication
- Drug - Drug Interaction
- Any other medication order issue

Strategies pursued by CM to close Care Gaps (Please check all that apply):

Cancel Close

Quality Review History
## Keystone Beacon Community

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<thead>
<tr>
<th>Medication Errors</th>
<th>Treatment Plan Revision (Excluding Medications)</th>
<th>Follow-Up Appointments Not Scheduled</th>
<th>Unsafe Discharge Disposition</th>
<th>Inadequate Discharge Instructions</th>
<th>Incomplete Advanced Illness Planning</th>
<th>Other</th>
<th>Total Care Opportunities Addressed</th>
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<td>125</td>
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<td><strong>Grand Total</strong></td>
<td><strong>898</strong></td>
<td><strong>410</strong></td>
<td><strong>2614</strong></td>
<td><strong>364</strong></td>
<td><strong>744</strong></td>
<td><strong>346</strong></td>
<td><strong>6062</strong></td>
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6,945 opportunities addressed in 6,670 admissions

Care Gaps Closed
Health Information Technology

Enhancing Connectivity
New features for Clinician Viewer:

- Alerts/Notification
- Secure Messaging (DIRECT)
- View Continuity Care Documents “CCD”
- Upload paper documents
Nnna Zzghs
Gender: Male  Date of Birth: August 25, 1960

Patient Information

Continuity of Care Document

Allergies and Adverse Reactions
<table>
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<tr>
<th>Allergy</th>
<th>Noted Date</th>
<th>Severity</th>
<th>Reactions</th>
<th>Comment</th>
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<td>Bee Venom</td>
<td>10/30/2001</td>
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<tr>
<td>Codeine</td>
<td>10/17/2011</td>
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<td></td>
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<tr>
<td>Iodinated Diagnostic Agents</td>
<td>05/27/2003</td>
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<tr>
<td>Morphine</td>
<td>10/17/2011</td>
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<td>Penicillin</td>
<td>03/11/2010</td>
<td>Medium</td>
<td>Nausea/Vomiting</td>
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Modifications

<table>
<thead>
<tr>
<th>Prescription</th>
<th>Sig</th>
<th>Dep</th>
<th>Refills</th>
<th>Start Date</th>
<th>End Date</th>
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<tbody>
<tr>
<td>COZAAR 25 MG PO TABS</td>
<td>1 pill daily</td>
<td>100 Tab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCOCET 5-325 MG PO TABS</td>
<td>1 or 2 pills by mouth every 4 hours as needed for pain</td>
<td>40 Tab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYLENOL WITH CODEINE #3 300-30 MG PO TABS</td>
<td>This is a test, not real patient</td>
<td>6 Tab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCOCET 5-325 MG PO TABS</td>
<td>This is a test, not real patient</td>
<td>6 Tab</td>
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<td></td>
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<tr>
<td>PERCOCET 5-325 MG PO TABS</td>
<td>This is a test, not real patient</td>
<td>6 Tab</td>
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<td></td>
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<tr>
<td>FLAVIX 75 MG PO TABS</td>
<td>One pill by mouth once a day</td>
<td>30 Tab</td>
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<tr>
<td>FLAVIX 75 MG PO TABS</td>
<td>One pill by mouth once a day</td>
<td>30 Tab</td>
<td></td>
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<td>METOPROLOL TARTRATE 50 MG PO TABS</td>
<td>1 tablet 2/day by mouth</td>
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<tr>
<td>ALEVY 220 MG PO TABS</td>
<td>One to two pills by mouth every 12 hours as needed</td>
<td>1</td>
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<td></td>
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<tr>
<td>TYLENOL/CODEINE #3 300-30 MG PO TABS</td>
<td>Two pills by mouth every 6 hours as needed. Warning: Could make you drowsy</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TYLENOL CHILDREN 80 MG PO CHEW</td>
<td>Test, Tommy</td>
<td>20</td>
<td></td>
<td></td>
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<tr>
<td>TYLENOL CODEINE #4 300-80 MG PO TABS</td>
<td>One pill by mouth every 4 hours as needed for pain</td>
<td>40</td>
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</table>
Keystone Beacon Community

- Web-based personal health record (PHR)
- View personal records in KeyHIE®
- Automatic flu-shot reminder
- Exchange secure e-mail with care team
- Upload paper records (“3-ring binder”)
- Validated health information (Medline Plus)

*One health system and two colleges participating*
### My Records

Need Immediate Service? Please call your healthcare provider directly.

- ![Upload Documents](image)

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Source Institution</th>
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<tbody>
<tr>
<td>09/20/2012</td>
<td>CHEMISTRY STUDIES~Lipid panel</td>
<td>Geisinger Health System</td>
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<tr>
<td>09/20/2012</td>
<td>CHEMISTRY STUDIES~Glucose</td>
<td>Geisinger Health System</td>
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<td>09/20/2012</td>
<td>CHEMISTRY STUDIES~TSH</td>
<td>Geisinger Health System</td>
</tr>
<tr>
<td>09/20/2012</td>
<td>HEMATOLOGY STUDIES~CBC w/ Differential Panel</td>
<td>Geisinger Health System</td>
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</table>
Long-term Care and Home Health

- 15,000+ Nursing Homes are Medicare certified

- 12,000+ Home health agencies are Medicare certified

- Few of these with EHRs can produce a CCD
The “Gobbler”

MDS 3.0 or OASIS

Long-term care & home health “get in the game”

Keystone Beacon Community

The “Gobbler”

Health Information Exchange

Medical Summary

Copyright 2012 Keystone Health Information Exchange®
Remote Patient Tele-monitoring

– Current vendor Advanced Monitored Caregiving

– Benefits of telemonitoring:
  • Extends care manager reach
  • Helps prioritize the patients to focus on
  • Provides that daily “touch” with the nurse for the patient
  • Provides early warning signs
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• Current Case Management Telemonitoring Programs:
  – Bluetooth scales and/or IVR for Heart Failure
  – Post D/C – IVR post discharge
  – HTN: Bluetooth BP cuffs with nephrology

• Future (in development):
  – Diabetes
  – COPD
  – Kiosks
  – In-home video monitoring
Developing Meaningful Analytics
Data Warehouse & Analytics

- Hospital Bills
- Care-Coordination Team
- Patients
- KeyHIE

- Secure Data Transport
- Data Extraction
- Community Data Warehouse

- Project-Management Reports
- Care-Coordination Reports
- Hospital Reports
- Clinic Reports
- ONC Reports
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**Analytic Challenges**

- Staffing
- Understanding need & execution of data agreements
- Lack of trust regarding appropriate use of data
- Clear communication of data needs
- Technical abilities of source data resources
- Depth of data available
- Lack of financial incentives for hospitals
- Providing meaningful data back to hospitals
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- **Community Data Warehouse**
  - Secure IT infrastructure with appropriate security levels
  - Secure data transmission (FTP)
  - Searchable Care-Coordination information

- **Custom Reports (dashboards)**
  - Care Coordination
    - Provides both high level and patient detail information. The majority of the information provided within here is updated weekly and used to identify patients that can be targeted for KBC Care Management.
  - Hospitals
    - Monthly reports to all KBC participants with new readmission and care management information.
    - (Clinics) – In Development

- **Automated data feeds**
  - Hospitals, Care-management software, KeyHIE

- **Data Access Policy (aggregated data)**
  - Task-appropriate access
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CM Dashboard

Filters
Available Metrics
Hospital Reports

Data Section
Graph / Chart Section
### 30 Day Readmission Rates: KBC Eligible VS KBC Care Managed

#### CHF

<table>
<thead>
<tr>
<th>Calendar Quarter</th>
<th>CHF KBC Eligible</th>
<th>CHF KBC Care Managed</th>
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<tr>
<td>Q4 2010</td>
<td>18.64%</td>
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</tr>
<tr>
<td>Q1 2011</td>
<td>18.15%</td>
<td>20.57%</td>
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<td>Q2 2011</td>
<td>19.95%</td>
<td>17.01%</td>
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<tr>
<td>Q3 2011</td>
<td>19.70%</td>
<td>15.26%</td>
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<tr>
<td>Q4 2011</td>
<td>19.95%</td>
<td>16.40%</td>
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<tr>
<td>Q1 2012</td>
<td>18.74%</td>
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<td>Q2 2012</td>
<td>19.50%</td>
<td>14.01%</td>
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<tr>
<td>Q3 2012</td>
<td>18.91%</td>
<td>16.83%</td>
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#### COPD

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<td>19.07%</td>
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<td>16.27%</td>
<td>16.40%</td>
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<td>16.10%</td>
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**ED Visits 30 Days Post Discharge: KBC Eligible VS KBC Care Managed**

**CHF**

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**COPD**

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<td>13.27%</td>
<td>15.14%</td>
</tr>
<tr>
<td>Q3 2012</td>
<td>10.47%</td>
<td>14.53%</td>
</tr>
</tbody>
</table>
**Healthcare challenge:** Post-surgical patient was having significant side effects that she thought were related to her surgery.

**Resolution:** Careful assessment led the Keystone Beacon CM to suspect the side effect was related to a medication dose and timing. The CM contacted the patient’s physician who recommended changes in the medication dosage and timing, eliminating the side effect as well as a potential emergency room visit.