PCMH to ACO: Carilion Clinic’s Journey

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Patient-Centered Primary Care Collaborative
National Briefing
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Carilion Clinic Overview

- 8 hospitals
- Patient Centered Medical Home (“PCMH”) Sites
  - 1st site – 2009; 30 current sites; expanding to total of 45
  - 156 physicians / 30 residents / 48 NPs/PAs / 31 care coordinators with additional 9 hires budgeted.
  - Correlation seen between patient care metrics (such as BMI, A1c, BP with hypertensive and diabetes patients) and interaction with Care Coordinators.
  - Goal is to reduce the need for high-cost services, such as the hospital and emergency room, through proactive management of the patient’s needs.
- Medicare Shared Savings Program (MSSP) participant, effective 1/1/13.
- Innovative healthcare system and corporate culture:
  - One of 107 successful applicants to CMS’ Healthcare Innovation Challenge; 3,000 total applicants.
- Multi-specialty physician group with 575 physicians representing 60 specialties at more than 160 practice sites.
- 1 million person service area
- $1.4 Billion in net revenue
- A1/A+ credit rating
# Carilion PCMH Outcomes

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1. Body Mass Index (BMI) Measured for Patients &lt;18 Years of Age</td>
<td>39.5%</td>
<td>92.9%</td>
<td>135.2%</td>
</tr>
<tr>
<td>2. Pneumococcal Vaccination for Patients ≥65 Years of Age</td>
<td>74.2%</td>
<td>79.0%</td>
<td>6.5%</td>
</tr>
<tr>
<td>3. Breast Screening for Female Patients 40-69 Years of Age</td>
<td>56.2%</td>
<td>66.8%</td>
<td>18.9%</td>
</tr>
<tr>
<td>5. A1c Testing for Diabetics 18-75 Years of Age</td>
<td>85.2%</td>
<td>91.9%</td>
<td>7.9%</td>
</tr>
<tr>
<td>6. Persistent Asthmatics with Controller Medications Prescribed</td>
<td>86.2%</td>
<td>93.1%</td>
<td>8.0%</td>
</tr>
<tr>
<td>7. Diabetics with Blood Pressure Controlled at &lt; 140 / 90</td>
<td>68.4%</td>
<td>72.2%</td>
<td>5.6%</td>
</tr>
<tr>
<td>8. Hypertensive Patients with Blood Pressure Controlled at &lt; 140 / 90</td>
<td>64.6%</td>
<td>67.6%</td>
<td>4.6%</td>
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**Source:** 70,000 patient study in 20 Carilion mature medical homes during the period 2009 – 2012 (submitted for publication)
Distribution of FCM & IM Patients' Last A1C Value

N = 23,473 patients with type 2 DM

Median = 6.8
Average = 7.3

80%
Care Coordination – Early Success in Quality Metrics

Two Year Retrospective Study
2,800 DM Patients with Care Coordination compared to 30,000 usual DM care in Carilion Clinical Outcome Data

Diabetic Patients in PCMH Sites who received Care Coordination

<table>
<thead>
<tr>
<th>Metric</th>
<th>No Care Coordination</th>
<th>Care Coordination</th>
<th>Relative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1c</td>
<td>- 0.07</td>
<td>- 0.60</td>
<td>8.5</td>
</tr>
<tr>
<td>LDL</td>
<td>- 9.5</td>
<td>-14.2</td>
<td>1.5</td>
</tr>
<tr>
<td>BMI</td>
<td>- 2.8</td>
<td>- 5.0</td>
<td>1.8</td>
</tr>
<tr>
<td>DBP</td>
<td>- 2.1</td>
<td>- 3.8</td>
<td>1.8</td>
</tr>
<tr>
<td>SBP</td>
<td>- 2.8</td>
<td>- 5.0</td>
<td>1.8</td>
</tr>
</tbody>
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Carilion PCMH Strategies That Supported ACO Development

Integration of medical homes with other Carilion patient care sites allows for efficient management of the patient across the care continuum.

Central repository for all records of patient care; provides for standardization of care across all PCMH providers.

Physician leadership ensures that patient care receives the highest priority.

Measurement of outcomes of patient care fosters a culture of continuous improvement.

Registries allow for the efficient management and reporting on patients with chronic conditions and other high risk criteria.

Proactive, standardized management of health for all medical home patients will result in better health and lower cost.

Clinical integration ensures that Care Coordinators have face-to-face interactions with patients with chronic conditions and other members of clinical team.

Common Care Delivery Across All Patients

Chronic Disease Registries

Integrated Delivery Network

Enterprise Wide Electronic Medical Record (EMR)

Physician Leadership

Clinical Integration of Care Coordinators

Quality Measurement & Reporting

Key Medical Home Strategies
## Carilion ACO Model

### Key Facts:
- 575 employed Carilion physicians are Doctors Connected ACO participants.

### Medicare Strategy

**Key Facts:**
- MSSP Participant, start date 1/1/2013
- Shared savings based upon achievement of quality benchmarks and cost reduction
- 46,400 beneficiaries
- Qualitative application process; Carilion medical home strategies very helpful for questions regarding quality, care coordination, beneficiary engagement, evidence-based medicine, and reporting.

### Commercial Strategy

**Key Facts:**
- ACO product with Aetna, start date 1/1/2012 (in addition to collaboration on Medicaid, Medicare Advantage, and Employee programs)
- Participating in other payors’ shared savings initiatives (Anthem PC2 for example)

### Carilion Clinic Support

**Key Facts:**
- Dedication of senior leadership to ACO strategy and development.
- Recruitment of a Chief Strategy Officer
- Development of a comprehensive enterprise data warehouse (EDW) for integration of EMR data and healthcare claims.
- Creation of a Transformation Oversight Committee of senior leadership to develop care delivery strategies for key disease states (CHF, COPD, Diabetes).