Informatics, PCMHs and ACOs: A Brave New World

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Engagement Executive with Health Catalyst
Objectives

- Define data analytics
- Describe Accountable Care Organizations
- Describe Patient Centered Medical Homes
- Describe how analytics can be used with ACO’s and PCMH’s
Define Data Analytics

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- Describe Accountable Care Organizations
- Describe Patient Centered Medical Homes
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Defining Analytics

Analytics is the discovery and communication of meaningful patterns in data. It is especially valuable in areas rich with recorded information. Analytics relies on the simultaneous application of statistics, computer applications and operations research to quantify performance.
Other Important Analytic Definitions

- **Decision Support** – much more than alerts and reminders! Decision Support includes:

- **Business Intelligence (BI)** – computerized for managerial decision making

- **Business Performance Management (BPM)** – combines enterprise information systems (EIS) and BI for decision making. BPM feeds your rapid cycle improvement processes, such as LEAN, Six Sigma, or Plan-Do-Check-Act, which help measure your progress toward improving your **key performance indicators**

- **Visual analytic tools** – Scorecards, dashboards (with drill down)
Along with definitions there is an important relationship...

Data → Information → Knowledge → Wisdom (DIKW)
Understanding DIKW

Data = vital sign data, static values

Information = electronic medical record

Knowledge = Analytics

Wisdom = Application
Understanding the yield with the DIKW curve

Yield = intellectual dividends per measure of effort invested.
Examples: increased clarity, deeper understanding.
The Decision Support - Analytics Process

• Identify Problem
• Intelligence – Do your research and identify your alternatives
• Choice – Select your course of action
• Implementation – Deploy
• Evaluation – and adjustment
Describe Accountable Care Organizations

- Define data analytics
- Describe Accountable Care Organizations
- Describe Patient Centered Medical Homes
- Describe how analytics can be used with ACO’s and PCMH’s
Observation

- An ounce of prevention is worth a pound of cure
- Transition from healthcare to health
Definition

“...a set of health care providers—including primary care physicians, specialists, and hospitals—that work together collaboratively and accept collective accountability for the cost and quality of care delivered to a population of [fee for service] Medicare patients.”

- AccountableCareFacts.org
Background: How it all began...Triple Aim

• Improving the individual experience of care
• Improving the health of populations
• Reducing the per capita cost of care for populations

- Don Berwick, 2008
Life Space

- 525,600 minutes in a year
- 100 minutes in a provider's office
- .02% spent in provider's care

- LTG Patricia Horoho, 2012
Key Principles of ACO’s

• Provider-led organizations with a strong base of primary care that are collectively accountable for quality and total per capita costs across the full continuum of care for a population of patients

• Payments linked to quality improvements that also reduce overall costs

• Reliable and progressively more sophisticated performance measurement, to support improvement and provide confidence that savings are achieved through improvements in care
Quality Measures

• Overarching categories
  – Patient/caregiver experience
  – Care coordination/patient safety
  – Preventive care
  – At risk populations

Click here to learn of different quality measures stated by CMS
National Committee for Quality Assurance

- Offers accreditation, based on NCQA PCMH program
- Includes HEDIS measures
Describe Patient Centered Medical Homes

- Define data analytics
- Describe Accountable Care Organizations
- Describe Patient Centered Medical Homes
- Describe how analytics can be used with ACO’s and PCMH’s
Definition of Patient Centered Medical Home

“...a way of organizing primary care that emphasizes care coordination and communication to transform primary care into "what patients want it to be." Medical homes can lead to higher quality and lower costs, and can improve patients’ and providers’ experience of care.”

- National Committee for Quality Assurance (NCQA)
Key Principles of PCMH

• Get the right team member to the patient at the right time
• Every team member practices to the limit of their license
• Face to face may not be needed
• Primary care arena, not specialties
Common Business Model – Patient Centered?

Requirement for more volume

More visits per day

Less time spent per patient

Demand for appointments increases

Fewer problems addressed per visit

Quality of Care diminishes. Loss of patient trust.

New Business Model

Healthcare Team

- Acute Care
- Preventive Services
- Chronic Disease Monitoring
- Medication Refills
- Test Results
- Point of Care Testing
- Acute Behavioral Health Complaint
- Chronic Disease Compliance Barriers

Other providers

? ? ?
BAMC clinics earn national recognition as Patient Centered Medical Homes

The Fort Sam Houston Family Medicine Service Clinic and the Taylor Burck Clinic at Joint Base San Antonio-Camp Bullis were each recognized by the National Committee for Quality Assurance as a Level 3 Army Patient Centered Medical Home. NCQA, a non-profit organization dedicated to improving health care quality, reviewed hundreds of documents submitted by clinic staff that provided evidence each clinic conducted business as a true Medical Home.

The Patient Centered Medical Home is a team-based model of care led by a personal physician who provides continuous and coordinated care throughout a patient’s lifetime to maximize outcomes according to the American College of Physicians website. “We have great people in our clinics working together to provide consistent, high-quality patient care to our service members and their families every day,” said Col. Ronny Fryar, BAMC’s officer in charge of external clinics and support. “This recognition is a tribute to their hard work.”

The NCQA measures the ability of medical facilities to provide quality health care through standardized, objective measurement guidelines. NCQA requires recognized facilities to enhance access to care and patients’ continuity with their provider teams, keep track of patient data to help manage patients’ wellness, plan and manage care using evidence-based practices, provide self-care support and community resources, as well as track and coordinate tests, referrals and other care for patients. Finally, clinics have to show they measure their performance and patients’ feedback to continue improving the quality of care.

“The attainment of Level 3 recognition by the NCQA as a Patient Centered Medical Home is a testimony to the dedication of the Taylor Burck Clinic staff and our department leadership,” said Dr. Susan Moon, clinic chief.

“Over the past two years, our personnel have implemented countless changes and improvements to clinical practices, all to the end goal of providing patient-centered care through a comprehensive, continuous and coordinated team-based approach.”

Army Medicine’s goal is to have all of its primary care facilities in the continental U.S. and overseas achieve NCQA recognition and transform to the Patient Centered Medical Home model of care no later than Oct. 1, 2014.

The transition to the PCMH model of care is part of Army medicine’s overall shift from a health care system to a system for health.

What patients can expect from a Patient Centered Medical Home:

- **A personal provider**: Each patient has an ongoing relationship with a personal physician, physician assistant or nurse practitioner who is trained to provide first contact, continuous and comprehensive care.

- **Physician-directed medical practice**: The personal physician leads a team at the practice level that collectively takes responsibility for ongoing patient care.

- **Whole person orientation**: The personal provider is responsible for providing all of the patient’s health care needs or for arranging care with other qualified professionals.

- **Coordinated and integrated care**: Each patient’s care is coordinated and integrated across all elements of the health care system and the patient’s community.

- **Quality and safety focus**: All members of the health care team focus on ensuring high quality care in the medical home.

- **Improved access**: In the PCMH, enhanced access to care options are available through open scheduling, same-day appointments, secure messaging and other innovative options for communication between patients, their personal physician and practice staff.
ACOs & PCMHs represent a transition from Medical Management to Population Health

Old Model - “Mother May I?”

- **Restrict** Access, Control Utilization, & Cost – Goal of profit not do what is best for the patient
- **Eligibility** — Check eligibility & benefits of the plan – pit providers against plans
- **Utilization management** – Get the patient discharged and restrain use of unnecessary services
- **Case management** – Assist member to get necessary care and follow up
- **Disease management** – telephonic nurse advice and coaching focused on disease states

New Model

- **Enhance** Access & Continuity
- **Identify & Manage Patient Populations**
- **Provide self-care & Community Support**
- **Plan & Manage Patients (Engage Patients)**
- **Track & Coordinate Care**
- **Measure & Implement Performance Improvement**
Implications for Health IT

• Neither ACO nor PCMH require EMR
• How will you get the data?
• How will you communicate with patients?
• How will you communicate with external entities?
• Can your system support workflow changes?
How to use analytics with ACOs and PCMHs

- Define data analytics
- Describe Accountable Care Organizations
- Describe Patient Centered Medical Homes
- Describe how analytics can be used with ACO’s and PCMH’s
ACOs include Population Health

Definition of Population Health:
“The health outcomes of a group of individuals, including the distribution of such outcomes within the group”

Steps in Population Health

Identify & Stratify

Strategic Evaluation
- Network analysis
- Population analysis
- Opportunity assessment
- Risk-stratification
- Clinical and financial data integration

Triage, Coordinate Care & Engage

Efficient Execution
- Quality program automation
- Initiative management
- Care management/Patient engagement
- Physician engagement

Study & Evaluate Performance

Outcome Analysis
- Performance management
- Peer comparison and benchmarking
- Monitor and adjust patient engagement
What the Model Looks Like

Before you can measure you need to determine what to measure

Physician Attribution Rules

1. Unit of Analysis - patient versus episode of care

2. Signal for responsibility – costs versus visits, relative value units (RVUs) or choice of how costs are aligned – professional cost, evaluation & management (E&M)

3. Number of physicians that can be assigned responsibility – single or multiple (physicians often work in groups)
<table>
<thead>
<tr>
<th>Title of Attribution Rule</th>
<th>Unit of Care</th>
<th>Signal for Responsibility of Care</th>
<th>Number of Physicians that Can be Assigned Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episode, costs, majority</td>
<td>Episode</td>
<td>Professional costs</td>
<td>Single</td>
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<tr>
<td>Episode, visits, plurality</td>
<td>Episode</td>
<td>Evaluation and management visits</td>
<td>Single</td>
</tr>
<tr>
<td>Patient, costs, plurality</td>
<td>Patient</td>
<td>Professional costs</td>
<td>Single</td>
</tr>
<tr>
<td>Patient, visits, plurality</td>
<td>Patient</td>
<td>Evaluation and management visits</td>
<td>Single</td>
</tr>
<tr>
<td>Episode, costs, multiple physicians</td>
<td>Episode</td>
<td>Professional costs</td>
<td>Multiple</td>
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<td>Episode, visits, multiple physicians</td>
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<td>Patient</td>
<td>Evaluation and management visits</td>
<td>Multiple</td>
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### CMS ACO 33 Measures (1-13)

<table>
<thead>
<tr>
<th>Domain</th>
<th>ACO Measure Title and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Patient/Care Giver Experience</td>
<td>Clinician/Group CAHPS: Getting Timely Care, Appointments, and Information</td>
</tr>
<tr>
<td>2 Patient/Care Giver Experience</td>
<td>Clinician/Group CAHPS: How Well Your Doctors Communicate</td>
</tr>
<tr>
<td>3 Patient/Care Giver Experience</td>
<td>Clinician/Group CAHPS: Patients’ Rating of Doctor</td>
</tr>
<tr>
<td>4 Patient/Care Giver Experience</td>
<td>CAHPS: Access to Specialists</td>
</tr>
<tr>
<td>5 Patient/Care Giver Experience</td>
<td>Clinician/Group CAHPS: Health Promotion and Education</td>
</tr>
<tr>
<td>6 Patient/Care Giver Experience</td>
<td>Clinician/Group CAHPS: Shared Decision Making</td>
</tr>
<tr>
<td>7 Patient/Care Giver Experience</td>
<td>Medicare Advantage CAHPS: Health Status/Functional Status</td>
</tr>
<tr>
<td>8 Care Coordination/Transitions</td>
<td>Risk-Standardized, All Condition Readmission: The rate of readmissions within 30 days of discharge from an acute care hospital for assigned ACO beneficiary population.</td>
</tr>
<tr>
<td>9 Care Coordination/Patient Safety</td>
<td>Ambulatory Sensitive Conditions Admissions: Chronic Obstructive Pulmonary Disease [AHRQ Prevention Quality Indicator (PQI) #5]</td>
</tr>
<tr>
<td>10 Care Coordination/Patient Safety</td>
<td>Ambulatory Sensitive Conditions Admissions: Congestive Heart Failure [AHRQ Prevention Quality Indicator (PQI) #8]</td>
</tr>
<tr>
<td>11 Care Coordination/Patient Safety</td>
<td>Percent of PCPs who successfully qualify for an EHR incentive program payment</td>
</tr>
<tr>
<td>12 Care Coordination/Transitions</td>
<td>Medication Reconciliation: Reconciliation After Discharge from an Inpatient Facility</td>
</tr>
<tr>
<td>13 Care Coordination/Patient Safety</td>
<td>Falls: Screening for Fall Risk</td>
</tr>
</tbody>
</table>
## CMS ACO Quality Measures (14-25)

<table>
<thead>
<tr>
<th>Domain</th>
<th>ACO Measure Title and Description</th>
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<tbody>
<tr>
<td>14 Preventive Health</td>
<td>Influenza Immunization</td>
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<tr>
<td>15 Preventive Health</td>
<td>Pneumococcal Vaccination</td>
</tr>
<tr>
<td>16 Preventive Health</td>
<td>Adult Weight Screening and Follow-up</td>
</tr>
<tr>
<td>17 Preventive Health</td>
<td>Tobacco Use Assessment and Tobacco Cessation Intervention</td>
</tr>
<tr>
<td>18 Preventive Health</td>
<td>Depression Screening</td>
</tr>
<tr>
<td>19 Preventive Health</td>
<td>Colorectal Cancer Screening</td>
</tr>
<tr>
<td>20 Preventive Health</td>
<td>Mammography Screening</td>
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<tr>
<td>21 Preventive Health</td>
<td>Portion of Adults 18+ who have had their Blood Pressure measured within the preceding two years</td>
</tr>
<tr>
<td>22 At Risk Population - Diabetes</td>
<td>Diabetes Composite (All or Nothing Scoring): Hemoglobin A1c Control (&lt;8%)</td>
</tr>
<tr>
<td>23 At Risk Population - Diabetes</td>
<td>Diabetes Composite (All or Nothing Scoring): Low Density Lipoprotein (LDL) (&lt;100)</td>
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<tr>
<td>24 At Risk Population - Diabetes</td>
<td>Diabetes Composite (All or Nothing Scoring): Blood Pressure &gt; 140/90 mmHg</td>
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<tr>
<td>25 At Risk Population - Diabetes</td>
<td>Diabetes Composite (All or Nothing Scoring): Tobacco Non Use</td>
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<td>Measure</td>
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<tr>
<td><strong>26</strong> At Risk Population - Diabetes</td>
<td>Diabetes Composite (All or Nothing): Aspirin Use: Daily Aspirin use for patients with Diabetes and Cardiovascular Disease</td>
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<tr>
<td><strong>27</strong> At Risk Population - Diabetes</td>
<td>Diabetes Mellitus: Hemoglobin A1c Poor Control (&gt;9%)</td>
</tr>
<tr>
<td><strong>28</strong> At Risk Population - Hypertension</td>
<td>Hypertension (HTN): Blood Pressure Control: Percentage of patient visits for patients aged 18 years and older with a diagnosis of HTN with either systolic blood pressure $\geq 140$ mmHg or diastolic blood pressure $\geq 90$ mmHg with documented plan of care for hypertension.</td>
</tr>
<tr>
<td><strong>29</strong> At Risk Population - Ischemic Vascular Disease</td>
<td>Ischemic Vascular Disease (IVD): Complete Lipid Profile and LDL Control $&lt;100$mg/dl</td>
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<tr>
<td><strong>30</strong> At Risk Population - Ischemic Vascular Disease</td>
<td>Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic</td>
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<tr>
<td><strong>31</strong> At Risk Population - Heart Failure</td>
<td>Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)</td>
</tr>
<tr>
<td><strong>32</strong> At Risk Population - Coronary Artery Disease</td>
<td>Coronary Artery Disease (CAD) Composite: All or Nothing Scoring: Drug Therapy for Lowering LDL-Cholesterol</td>
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<tr>
<td><strong>33</strong> At Risk Population - Coronary Artery Disease</td>
<td>Coronary Artery Disease (CAD) Composite: All or Nothing Scoring: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Patients with CAD and Diabetes and/or Left Ventricular stolic Dysfunction (LVSD). Percentage of patients aged 18 years and older with a diagnosis of CAD who also have Diabetes Mellitus and/or LVSD (LVEF &lt;40%) who were prescribed ACE inhibitor or ARB therapy.</td>
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</tbody>
</table>
Sources for Analytics

• Clinical claims
• Pharmacy claims
• Lab results
• Health Reimbursement Arrangements (HRAs)
• Biometric data
• EHRs
• Ancillary claims
• Hospital cost and use data (ADT, patient accounting, GL)
# Patient Segmentation and Gaps in Care

## Overall Composite

<table>
<thead>
<tr>
<th></th>
<th>26%</th>
<th>52%</th>
<th>27%</th>
<th>19%</th>
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<tr>
<td>Patients</td>
<td>708</td>
<td>83</td>
<td>9</td>
<td>38</td>
<td>128</td>
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</table>

## Treatment Needs

### Diabetes
- HbA1c Screening: 36 / 46 / 59
- HbA1c Control: 4 / 2 / 1
- LDL Screening: 46 / 58 / 62
- LDL Control: 6 / 3 / 0
- Hypertrophy Monitoring: 15 / 22 / 32
- BP Control: 38 / 45 / 56

### Cardio
- LDL Screening: 7 / 8 / 9
- LDL Control: 1 / 0 / 0

### Preventative
- Flu Immunization: 504 / 597 / 597
- Pneumococcal Immunization: 83 / 84 / 85
- Chlamydia Screening: 29 / 32 / 32
- Cervical Cancer Screening: 301 / 331 / 331
- Breast Cancer Screening: 115 / 133 / 135
- Colorectal Cancer Screening: 139 / 135 / 135

### Meds Mgmt

## Patients (708)

<table>
<thead>
<tr>
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<th>Last Visit</th>
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<td>7</td>
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</table>
Summary

- Defined data analytics
- Described Accountable Care Organizations
- Described Patient Centered Medical Homes
- Described how analytics can be used with ACO’s and PCMH’s
Thoughts to leave you with

- The Brave New World of Health Reform and achieving the Triple Aim has arrived

- Informatics nurses are critical to the success of ACOs and Patient Centered Medical Homes

- Be brave and use analytics to measure and monitor your metrics to drive performance improvement

- Keep the patient and the population of patients at the center of this new world
Thank you

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Clark Campbell, robert.c.campbell34.mil@mail.mil