How to Use Technology to Create Value

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The MetroHealth System

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HealthSpan
Disclosure

Presenters reported no financial interest relevant to this presentation
Objectives

- Summarize the concept of value based health care and ACOs.
- Explore the role of EHR technology to report and close care gaps especially.
- Identify a new strategy to bring back to your systems to enhance value based care.
Outline

- Introductions
  - Who you are and affiliation
  - What you hope to get out of this session
  - Any example of health information technology to create value (optional)

- Overview of Healthcare Value
- Healthspan Examples
- MetroHealth Examples
- Value and Technology Take-home Points
- Discussion
Outline

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- MetroHealth Examples

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Healthcare Value

Value = Quality/Cost
(maximize quality; minimize costs)
(how do we measure quality; how do we measure cost)

"Magic Quadrant"
Payers Moving to Value

- Payers starting to collect/look more closely at quality
- Payers moving towards “pay for performance”
- Measures consolidating and aligning (HEDIS, NQF, NCQA)

ACO – Accountable Care Organization
CHIPRA – Children’s Health Insurance Program Reauthorization
HEDIS – Healthcare Effectiveness Data and Information Set
MU – Meaningful Use
NCQA – National Committee for Quality Assurance
NQF – National Quality Forum
PQRS – Physician Quality Reporting System
Need to measure to improve

The Data Governance Maturity Model

Level 1: Local data; no governance
- Leadership Awareness & Initial Governance Structure
- Conflicting Data
- Data in Spreadsheets

Level 2: Pooling resources; enterprise data points
- Descriptive Analytics
- Dept. Dashboards
- Dept. Data Experts

Level 3: Collective vision; improving process and structure
- Enterprise Chartered Governance
- Enterprise Data Warehouse
- Standardized Reporting

Level 4: Predictive modeling; data-driven organization
- Data Driven Leadership
- Predictive Modeling
- Closed Loop Analytics
- Real-time Analytics

Better Health Greater Cleveland
An Alliance for Improved Health Care
Healthcare Value and Technology

Direct Support for High-Risk Patients
Provide frequent, direct system resources for high-risk patients

Independent Tools for Ongoing Self-Management
Equip patients with resources to motivate self-management

High-Risk Patient Groups

Low-Risk Patient Groups

Care Team Deployment

Technology Deployment

Remote Monitoring of Specific Groups
Track long-term patient health status, recognize early indicators of complications

Source: Health Care Advisory Board interviews and analyses.
Outline

- **Introductions**
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- **Overview of Healthcare Value**
- **Healthspan Examples**
- **MetroHealth Examples**
- **Value and Technology Take-home Points**
- **Discussion**
Pop care at Healthspan

- Lab outreach (Mychart, letters, IVR)
  - Focus on delinquent labs
    - A1c, LDL, MAU, BMP
  - 4 LPNs
- Disease management
  - (focus on DM control)
    - PharmD x 4
    - RNs
    - Typically one on one phone calls
Epic population care (Healthy Planet)

- Registries
- Reporting workbench
- Bulk Orders
- Bulk Communication
- Track Outreach
Actionable Report

- Follow up on individual patients or groups of patients.

- Review a patient's chart or open an encounter to place an order for a patient.

- When following up on several patients, contact them all, or place a bulk order for a procedure they all need.
ACO: Diabetes Measures

- A1c < 8 & within 12 mos
- LDL < 100 & within 12 mos
- BP < 140/90 & within 12 mos
- No tobacco use
- ASA/antiplatlet/anticoagulant/ASA allergy
  - Among those w concurrent ischemic vascular disease [IVD]
# Reporting Workbench (RWB)

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## Diabetic Provider Level Report

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<th>IVD on ASA</th>
<th>D5 Aggregate Score</th>
<th>H/M Status &gt; 40</th>
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</table>

- **Members**: # of diabetics
- **# at all targets**: # of pts meeting all 5 D5 metrics
## CARE Manager Performance Report

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<th>BP &lt;140/90</th>
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<th>IVD on ASA</th>
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<th>H/M Statin &gt;</th>
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Outline

- Introductions
  - Who you are and affiliation
  - What you hope to get out of this session
  - Any example of health information technology to create value (optional)

- Overview of Healthcare Value
- Healthspan Examples
- MetroHealth Examples
- Value and Technology Take-home Points
- Discussion
MetroHealth

- 1 tertiary care academic hospital
- 21 outpatient facilities
- 300+ resident/fellow physicians
- 500 staff physicians
- 1,200 nurses
- 30,000 inpatient stays/year
- 100,000 ED visits/year
- 1,000,000 outpatient visits/year
- Affiliated with Case Western Reserve University

- 1 million patients
- 15 million visits
- 120 million labs/pathology
- 750,000 imaging studies
- 15 years of data in Epic

- 1999 - Epicare (w/ Cadence, Prelude, and Resolute)
- 2004 - ASAP
- 2009 - Inpatient Epic (w/ Willow)
- 2011 - CareEverywhere, e-Rx, MyChart
- 2012 - Epic Enterprise Contract, MU 1
- 2014 - ADT, Bedtime, OpTime, SBO
- Current Version – 2012 IU3

1st public healthcare system in the US to install Epic in the outpatient setting
## Risk Registries

### Search Summary

Find Patients in Disease Registries with
Disease Registry:
- CARE COORDINATOR REGISTRY AND
- WELLNESS REGISTRY-ADULT

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<th>Age</th>
<th>Sex</th>
<th>Current POP</th>
<th>Comorbidity (Metric)</th>
<th>Payor</th>
<th>Num of ED Visits</th>
<th>Num of IP Admissions</th>
<th>No-show rate (metric)</th>
<th>Last Visit Date</th>
<th>虚拟医疗机构</th>
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<td>53 year old Female</td>
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<td>COX, DIETRA 2</td>
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<td>54 year old Male</td>
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<td>NG, RANIER 3</td>
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<td>SCHROEDER, RHEGAN</td>
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<td>59 year old Female</td>
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<td>BEACHY, ROCHELLE M</td>
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<td>MABANDA, MARYWUNI</td>
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<td>67 year old Female</td>
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<td>Female</td>
<td>CAMPBELL, PATRICIA D</td>
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<tr>
<td>52 year old Female</td>
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<td>Female</td>
<td>ELLEN J, DENISE</td>
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<td>45 year old Male</td>
<td>45</td>
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<td>VAITE, PAUL</td>
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<td>0.59</td>
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<tr>
<td>67 year old Female</td>
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<td>PALICKYER, CORINA D</td>
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</tbody>
</table>
# Comparative Quality Measures

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>Your Medical Group Practice’s Performance</th>
<th>Performance of All 1,032 Groups with at Least 100 Eligible Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Eligible Cases</td>
<td>Performance Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bone, Joint, and Muscle Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteoporosis Management in Women ≥ 67 Who Had a Fracture</td>
<td>35</td>
<td>14.3%</td>
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<tr>
<td><strong>Chronic Obstructive Pulmonary Disease (COPD)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Spirometry Testing to Diagnose COPD</td>
<td>570</td>
<td>30.7%</td>
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<tr>
<td><strong>Diabetes Mellitus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dilated Eye Exam for Beneficiaries ≤ 75 with Diabetes</td>
<td>2,328</td>
<td>57.7%</td>
</tr>
<tr>
<td>HbA1c Testing for Beneficiaries ≤ 75 with Diabetes</td>
<td>2,328</td>
<td>93.0%</td>
</tr>
<tr>
<td>Nephropathy Screening Test or Evidence of Existing Nephropathy for Beneficiaries ≤ 75 with Diabetes</td>
<td>2,328</td>
<td>85.2%</td>
</tr>
<tr>
<td>Lipid Profile for Beneficiaries ≤ 75 with Diabetes</td>
<td>2,328</td>
<td>92.5%</td>
</tr>
<tr>
<td><strong>Ischemic Vascular Disease</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipid Profile for Beneficiaries with Ischemic Vascular Disease</td>
<td>1,290</td>
<td>61.9%</td>
</tr>
<tr>
<td>Adherence to Statin Therapy for Beneficiaries with Coronary Artery Disease</td>
<td>223</td>
<td>64.6%</td>
</tr>
<tr>
<td><strong>Mental Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidepressant Treatment for Depression:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Initial Phase Treatment (at least 12 weeks)</td>
<td>116</td>
<td>44.5%</td>
</tr>
<tr>
<td>2. Continuation Phase Treatment (at least 6 months)</td>
<td>119</td>
<td>25.2%</td>
</tr>
<tr>
<td><strong>Medication Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipid Profile for Beneficiaries Who Started Lipid-Lowering Medications</td>
<td>1,458</td>
<td>46.7%</td>
</tr>
<tr>
<td>Preventive Care Measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast Cancer Screening for Women Ages 40-69</td>
<td>2,743</td>
<td>65.2%</td>
</tr>
</tbody>
</table>
26% of adolescents messaged received at least one overdue immunization
(Need to message 4 adolescents to immunize 1)
(~$0.50 to bring one person for immunization)
Referral Completion

Consults/procedure orders written yesterday not completed or scheduled today.

After 12 months (2/2012-2/2013) the 30-day consult and procedure completion/schedule rate went from 48% to:

Answer: 61%

~6700/month additional initial consults (61,939) and procedures (18,936) completed/scheduled (and ~$1,000,000/month in new gross revenue).
Personal Health Records

MetroHealth uses patient entered:
• Weight
• Blood Pressure
• Blood Sugar

MetroHealth shows preventative/health maintenance reminders to patients (and allows self-scheduling).
Technology Driven Value Paradigm

- Use technology (data and tools) to identify value (↑quality and/or ↓costs) opportunities

- Use technology to encourage/automate/self-service higher value activities:
  - Tests
  - Visits
  - Healthier behaviors/outcomes
  - Screenings/Preventative health services

- Use technology to discourage lower value activities:
  - Tests
  - Visits
  - Unhealthy behaviors
Hepatitis C Screening – The Future?

CDC and USPSTF (2013) – recommends once lifetime screening for hepatitis C for anyone born 1945-1965 (estimated 800,000 undiagnosed cases)

1. **Data Mining** - Use electronic health record data and tools to identify all patients meeting screening criteria (based on DOB and no hepatitis screening or diagnosis and healthcare provider/system is “medical home”)

2. **Automated orders** - Automatically generate orders for hepatitis C screening test on all identified patients.

3. **Automated messaging** - Automatically message identified patients (personal health record, text, phone, letter/postcard) of need to hepatitis C screening test and how to get it.

4. **Obtain blood sample** - Patient comes to lab to have blood drawn.

5. **Automated messaging of “negative” results** - Automatically message identified patients (and primary care provider?) with “negative” results.

6. **Manual messaging of “positive” results** - Route “positive” results to hepatitis C clinic/providers (and primary care provider?) for personal follow-up with patient.
Outline

- Introductions
  - Who you are and affiliation
  - What you hope to get out of this session
  - Any example of health information technology to create value (optional)

- Overview of Healthcare Value
- Healthspan Examples
- MetroHealth Examples
- Value and Technology Take-home Points
- Discussion
Using technology to derive value

- Data
- Tools
- People
- Processes

Exploiting Health IT to Improve Health Value!
Using technology to derive value

- **Data**
  - Use health information systems to determine the right quality and cost data

- **Tools**
  - Need the right technology tools to present the data

- **People**
  - Need the right people using the tools to see the data

- **Processes**
  - Need right processes for the people using the tools to see the data to realize the value

**NEED OVERALL PLAN!**

**PLAN WILL BE RELATIVELY UNIQUE IN EACH HEALTHCARE SYSTEM/SETTING!**
Outline

- Introductions
  - Who you are and affiliation
  - What you hope to get out of this session
  - Any example of health information technology to create value (optional)

- Overview of Healthcare Value
- Healthspan Examples
- MetroHealth Examples
- Value and Technology Take-home Points
- Discussion
Thank You!!!

Questions/Comments/Discussion?

Can you think of one new way you/your healthcare system can leverage technology to improve value?