Homes and Accountable Care Organizations: Two Sides of the Same Coin
Implications for Technology Requirements

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Environmental Factors

- Evidence is produced at an astonishing rate, but not effectively put into practice
- “System” of care is fragmented, uncoordinated and inefficient
- Reimbursement mechanisms are inadequate
- Primary care continues to be marginalized and threatened
Healthcare Reform
The Role of HIT

Coverage for All

Payment Reform
Align incentives
Pay for Value
Strengthen Primary Care

Health Information Technology

Tools to Rebuild and Restructure Health Care
Patient Centered Medical Home Activities

- Enhanced Access
- Team approach
- Registries
- Active care coordination
- Quality systems
- Advanced patient engagement
- Information systems foundation

*The PCMH “requires a new “mental model” of how primary care delivers value”*
Today’s Practices Have a Long Way to Go

Significant Gap Exists in Medical Home Core Competencies

Current Adoption of Medical Home Practice Characteristics

Family Physicians, 2008

- Chronic Care Management: 46.8%
- Open-Access Scheduling: 28.9%
- Test Tracking, Follow-Up Systems: 23.4%
- Team Approach: 22.1%
- Registries or Patient Tracking System: 20.7%
- Self-Care Management Support: 13.4%
- Outcomes Analysis: 11.3%
- Patient Population Management: 9.8%
- Group Visits: 8.4%

AAFP Practice Profile I Survey, Table 1. Use of Patient-Centered Medical Home Components by Family Physicians, July 2008
Center for eHealth Information Adoption and Exchange

“Meaningful Connections” (published 2009)

- Identified health IT as a “critical platform” of the PCMH.
- (Re) Conceptualized health IT as an e-platform and set of tools.
- Health IT functional priorities to support a PCMH.
- Critical capabilities to engage consumers with health IT.
- Explored the current use of health IT by primary care physicians.

*It is apparent that many EMR’s do not have HIT capabilities which are critical to patient centric care or medical home activities such as quality improvement activates*
“Meaningful Connections”
Capabilities and Functionalities Foundational to the PCMH

Exchange
• Ability to collect, store, exchange and manage relevant PHI.
• Ensure that relevant health information is accessible at the point of care (anytime, anywhere).

Measure
• Ability to measure and report on processes of care.

Collaborate
• Ability for team members to communicate among themselves.
• Team access to information during the process of care delivery.

Enable
• Enable decision support for evidence-based treatments and tests.

Participate
• Facilitate consumer access, education, empowerment, and participation tools for decision-making related to their health and medical condition.
HIT-Enabled Health Reform

“Meaningful Use” - an iterative approach

2009 2011 2013 2015

HIT-Enabled Health Reform

Nation-wide regional extension program to assist primary care providers achieving ‘meaningful use” of HIT
Achieving HIT Objectives
Two Major Paradigm Shifts

- Electronic Health Record (Modular EHR Technologies)
  - HIT Policy Committee reinterprets the statutory “certified or qualified EHR” to mean "A wide array of health IT tools and communications technologies that fully support the goals of meaningful use.....certified EHR technology may be assembled from several replaceable and swappable EHR modules”
    - HIT Policy Committee, July 2009

- National Health Information Network (NHIN Direct)
  - HIT Standards Committee reinterprets concept from “A wired network that provides point to access to hospitals via health information exchanges” to “A set of policies, standards, and services that allow the internet to be used for meaningful exchange to improve health and healthcare”
    - HIT Standards Committee, Jan. 2010
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Health Information Technology and Exchange

New frontiers of applications, services, and connectivity

“A wide array of health IT tools and communications technologies” accessible through the web (virtualization technologies)
Using SOA technology and a SaaS platform, whole regions can be “clinically networked’ in as little as a few months – exchanging discrete data elements across existing HIS and ambulatory EHR systems.
## Defining HIE

The action of HIE versus governance

<table>
<thead>
<tr>
<th>Health Information Exchange</th>
<th>Private HIO</th>
<th>Community HIO</th>
<th>RHIO</th>
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<tbody>
<tr>
<td>the act, process or an instance of sharing health information</td>
<td>Local</td>
<td>Community</td>
<td>Statewide</td>
</tr>
<tr>
<td></td>
<td>Single non-gov’t organization</td>
<td>Multiple orgs w/in geography</td>
<td>Owned or led by state gov’t</td>
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<td></td>
<td>Focus on clinical integration of workflows across care continuum</td>
<td>Focus on sharing patient info for workflows across the community</td>
<td>Focus on broad, generalized use cases and state public health</td>
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<td></td>
<td>Self-sustainable based on value provided to the local health system</td>
<td>Mixed sustainability dependent on value delivered to collaborative</td>
<td>Minimal sustainable model based on lack of value to providers</td>
</tr>
</tbody>
</table>
The ultimate goal of meaningful use of an Electronic Health Record is to enable significant and measurable improvements in the population through a transformed health care delivery system.”

The ultimate vision is one in which all patients are fully engaged in their healthcare, providers have real-time access to information and tools to help ensure quality and safety of the care provided while also affording improved access and elimination of health care disparities.”
“Meaningful Use” of HIT by consumers is a critical concept in a patient-centric system of care.
Patient Perspectives on e-Visits

Henry Ford Health System
- 2400-bed system in Midwest
- Launched e-visit service in Aug 2006

Percentage of Patients Answering "Strongly Agree" or "Agree"

- In the online e-visit, my physician got me in at a reasonable time: 97%
- In the online e-visit, I was satisfied with the quality of the response: 97%
- In the online e-visit, I felt as though I was getting good medical information: 91%
- The online e-visit was easy to use: 87%
- The online e-visit saved me time: 91%
- I would use the online e-visit again: 100%
- I would recommend the online e-visit to others: 100%
- Having online access to my physician is important to me: 100%

The Connected Medical Home
Centering Care Around the Patient

- Improved patient/clinician communications
- Scheduling appointments
- Access to personal health information
- Prescription refills, lab results, etc.
- Education, self-care, empowerment, decision support
Meaningful Use
HIT&E that Promotes Better Care

This is NOT about boxes in doctors offices – it is about fostering true “meaningful use” with HIT

- Centering care around the “patient” not the practice
- Involving patients in their own information and care decisions
- Supporting decisions by clinicians at the point of care
- Collecting real-time performance information for measurement on care delivered
- Promoting innovation and new ways of care delivery
Case Study

*Group Health Cooperative of Puget Sound*¹

- Transformed a HIT enabled PC clinic into a PCMH
  - Decreased panel, longer visits, dedicated time to PCMH activities, MI trained staff, dedicated time for “desktop medicine”, morning “huddles”, patient record access, ER and hospital follow-up, etc.

- Despite significant investment, all costs were recouped within the first year
  - 29% decrease in ER visits
  - 11% decrease in hospitalizations
  - 6% decreased office visit, with increased use of secure e-mail, telephone, etc.

- Patients received better care and were more satisfied!

PCMH in Action
Vermont “Blueprint” model

A Coordinated Health System

- Hospitals
- PCMH
- PCMH
- PCMH
- PCMH
- PCMH
- Community Care Team
  - Nurse Coordinator
  - Social Workers
  - Dieticians
  - Community Health Workers
  - Care Coordinators
  - Public Health Prevention Specialist
- Public Health Prevention
- Specialists

Health IT Framework
Global Information Framework
Evaluation Framework
Operations
Accountable Care Organizations
The overarching structure in which other reforms can thrive

Source: Brookings & Dartmouth Institute, 2009

Pilot Activity

Health Information Technology

The Need for Transformation

A foundational shift in Health Information Technology (HIT) *must occur* in order to drive widespread adoption of the Patient Centered Medical Home (PCMH) model, and support the Accountable Care Organization (ACO)
Anchoring the EHR in the traditional visit based care delivery model limits the potential of the medical home to generate paradigm shifting care delivery transformation and positive outcomes.

1 Zayas-Caban, T., Finkelstein, J., Kotharim, P., Quinn, M., Nace, D. “Cyberinfrastructure for the Patient Centered Medical Home: Current and Future Landscape” (in press)
Problems Reported in Adopting PCMH Adoption of EHRs

- Poor cross-system communications and response times
- Costly implementations and interfaces
- Failure to support *role-based* access, teamwork, and shared decision making
- Huge challenges in managing medication lists, problem lists, and care plans across HIT platforms
- Inefficiencies caused by non-integrated, “bolt-on”, and silo’d applications and databases
- Failure to meaningfully engage the consumer\(^2,3\)

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\(^2\) Bates, DW, Bitton A. The Future Of Health Information Technology In The Patient-Centered Medical Home, Health Affairs, 29, no. 4.

\(^3\) Fernandopulle R, Patel N. —How The Electronic Health Record Did Not Measure Up To The Demands Of Our Medical Home Practice — Health Affairs, 29, no. 4 (2010): 622-628
To support PCMH (practice) and ACO (enterprise) practice transformation, an interconnected HIT network with key capabilities acts to optimize engagement, coordinate care, and implement value based payments.
Capabilities of HIT related to Access

- Secure Messaging
- Telephonic / Cellular (routing, texting, twitter, etc.)
- Same Day / Convenience Scheduling
- Access to Team Members
- Remote Monitoring
- PHR / EHR Access (Patient-centric Record)
- Access to Care Plan (Shared)
- Patient / Family Feedback to Practice (QI)
- Patient Engagement Tools
Capabilities of HIT Related to Coordination of Care

- Reminders / Outreach
- Team Coordination
- Referral Management
- Diagnostics Results Management
- Care Transitions Management
- Holistic Care Coordination (360 degree)
- Case / Condition Management
- Care Plan / Medication Adherence
- Shared Decision – support Tools
Capabilities of HIT Related to Payment Reform

- Tracking of Non-FFS Activities
- Quality and Efficiency Measurement
- Pay for Performance Reporting
- Integrated Clinical / Practice Management Information
- Gain Sharing Contribution Tracking
- Episode of Care Tracking
- Risk and Acuity Measurement
- Predictive Modeling
- Comparative Effectiveness Analytics
Challenges of the HIT Marketplace

Lack of collaboration, fractured approaches, and no unified industry leadership

Many voices, different motivations

Challenging to keep-up with emerging policies and standards
The EHR market is going to change in a similar fashion as the web/internet-browser/application.

The market is a mess- very confused- a side effect of some very good work.

HIT will need to support evolving workflows, not cementing current FFS driven workflows in place.

Modularity will be an important part of this market shift.
Scoping the Problem
An unending explosion in medical knowledge

Medical knowledge expanding exponentially

Lack of timely, accessible evidence based information

Molecular diagnostic tests growing 10-20% a year, new test every 3-5 days > outpaces assembling evidence-basis for test efficacy, utility, and interpretation
Enabling the PCMH
Advanced primary care needs a systems approach

1950’s

Today
Conclusions

- Health information technology has enormous potential to improve primary care, and plays a pivotal role in implementing both the PCMH (micro) and ACO (macro) models.

- In order to promote development of an HIT infrastructure that unlocks the potential of technology in transforming the quality, efficiency, and safety of clinical care, HIT will have to address multiple barriers on several levels.
Accountable Care
Reform Initiatives Interconnected – one dependent on another

Payment Reform

Health Information Technology Adoption

Hospitals

Specialists

Primary Care

Care Delivery Reform