Homes and Accountable Care Organizations: Two Sides of the Same Coin
Implications for Technology Requirements
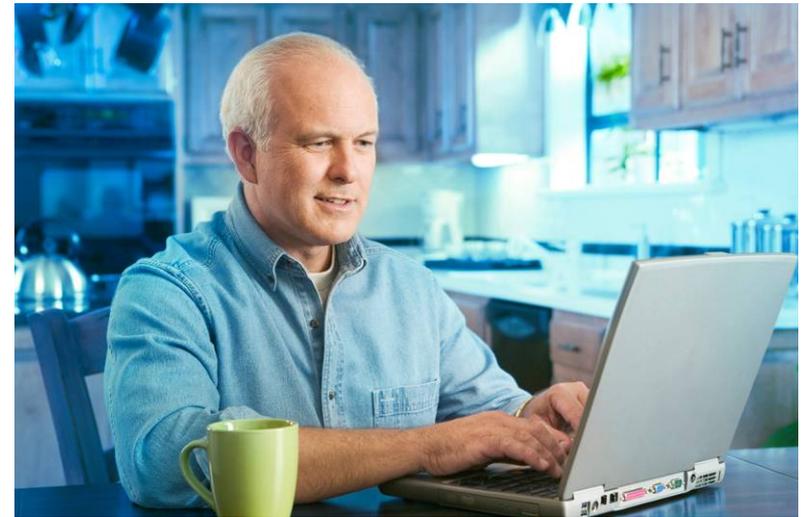
David K. Nace MD, Medical Director, McKesson Corporation & RelayHealth

Chair, Center for eHealth Adoption and Exchange (PCPCC)

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
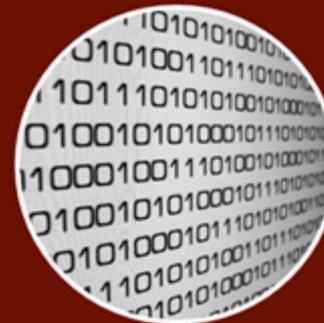
Healthcare Reform
The Role of HIT

Coverage for All

Payment Reform
Align incentives
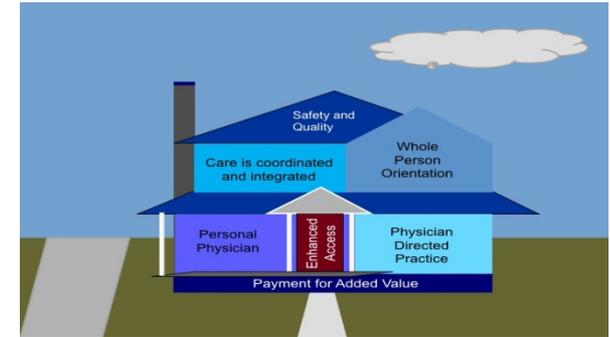Pay for Value
Strengthen Primary Care

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**
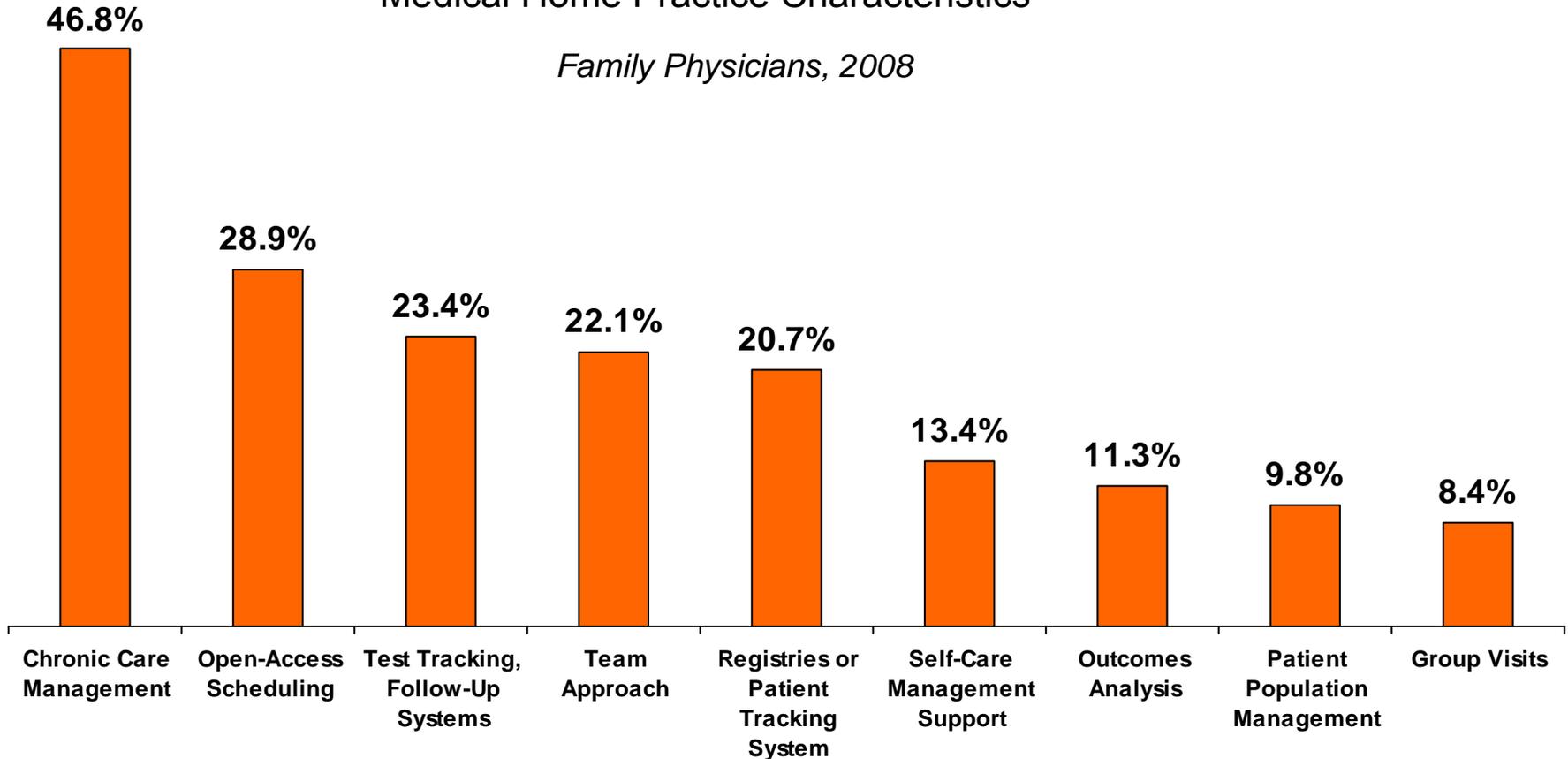- **Information systems foundation**

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

| Characteristic	Percentage
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.
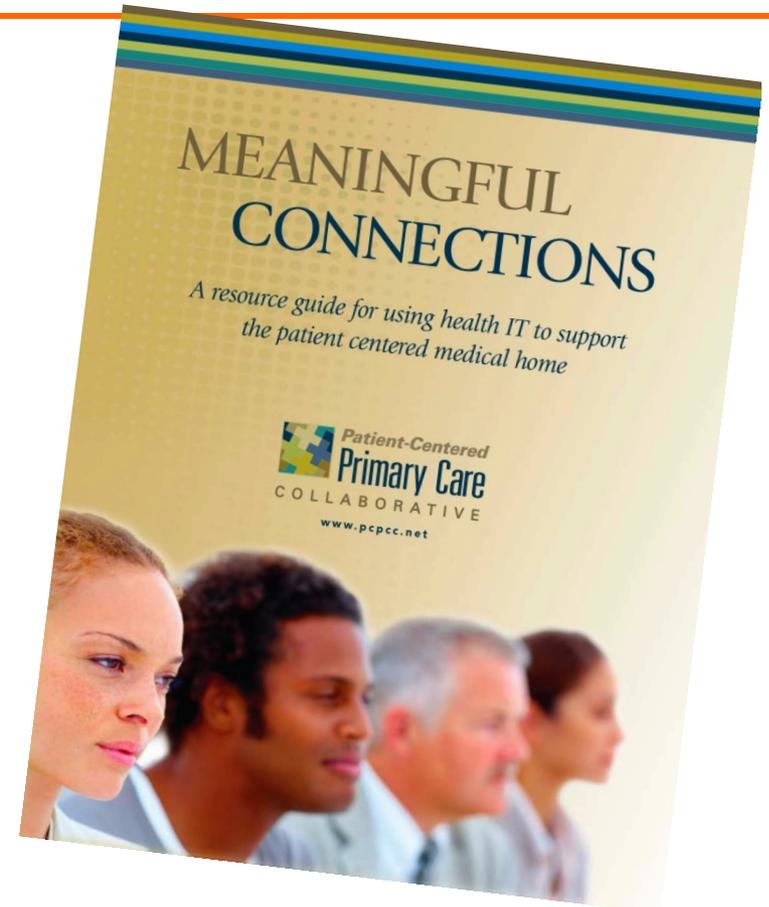
*It is apparent that many EMR's do not have **HIT capabilities** which are critical to patient centric care or medical home activities such as quality improvement activates*

"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.
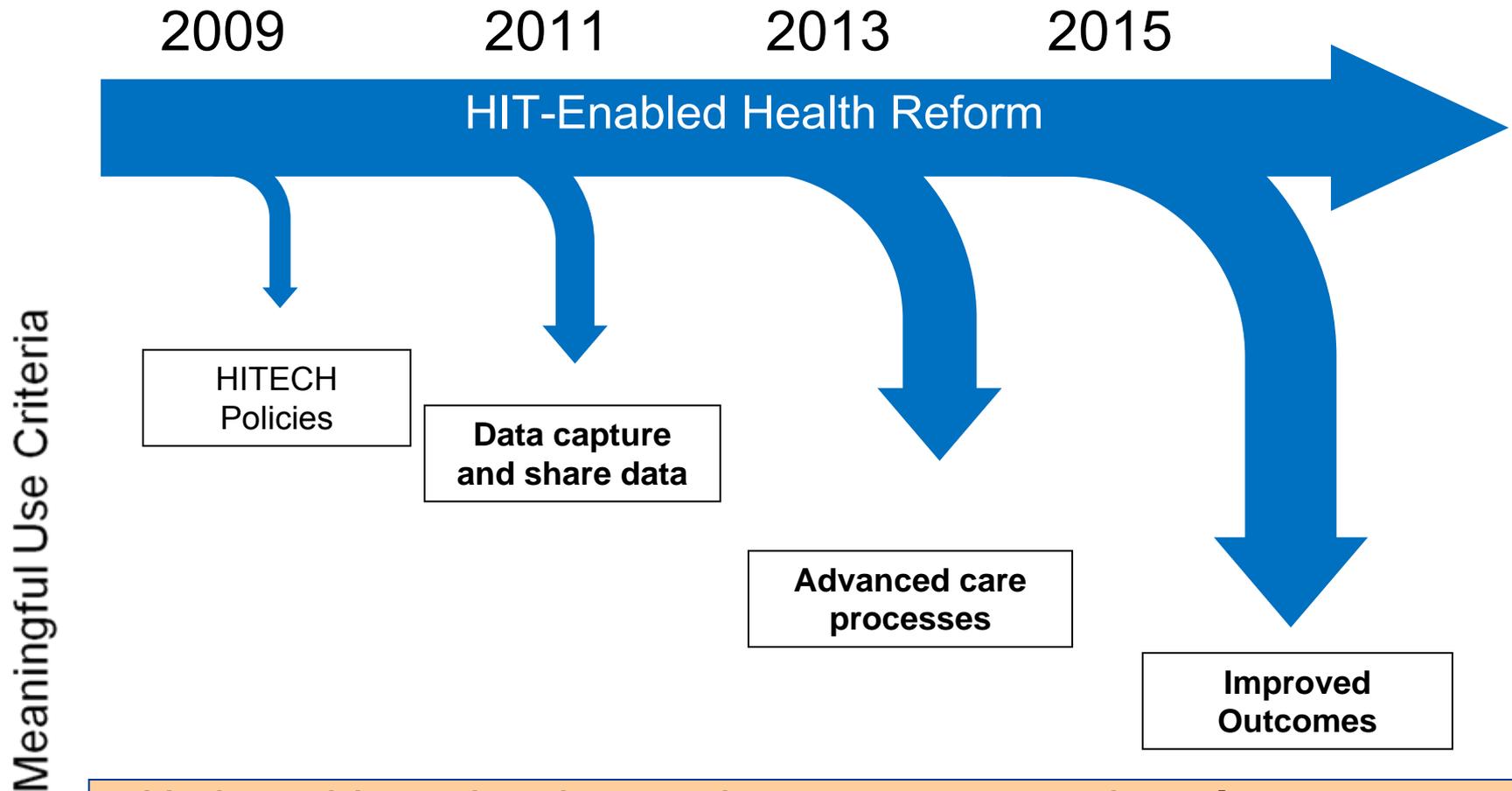- Team access to information during the process of care delivery.

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

Meaningful Use Criteria

2009   2011   2013   2015

HIT-Enabled Health Reform

- HITECH Policies
- **Data capture and share data**
- **Advanced care processes**
- **Improved Outcomes**

*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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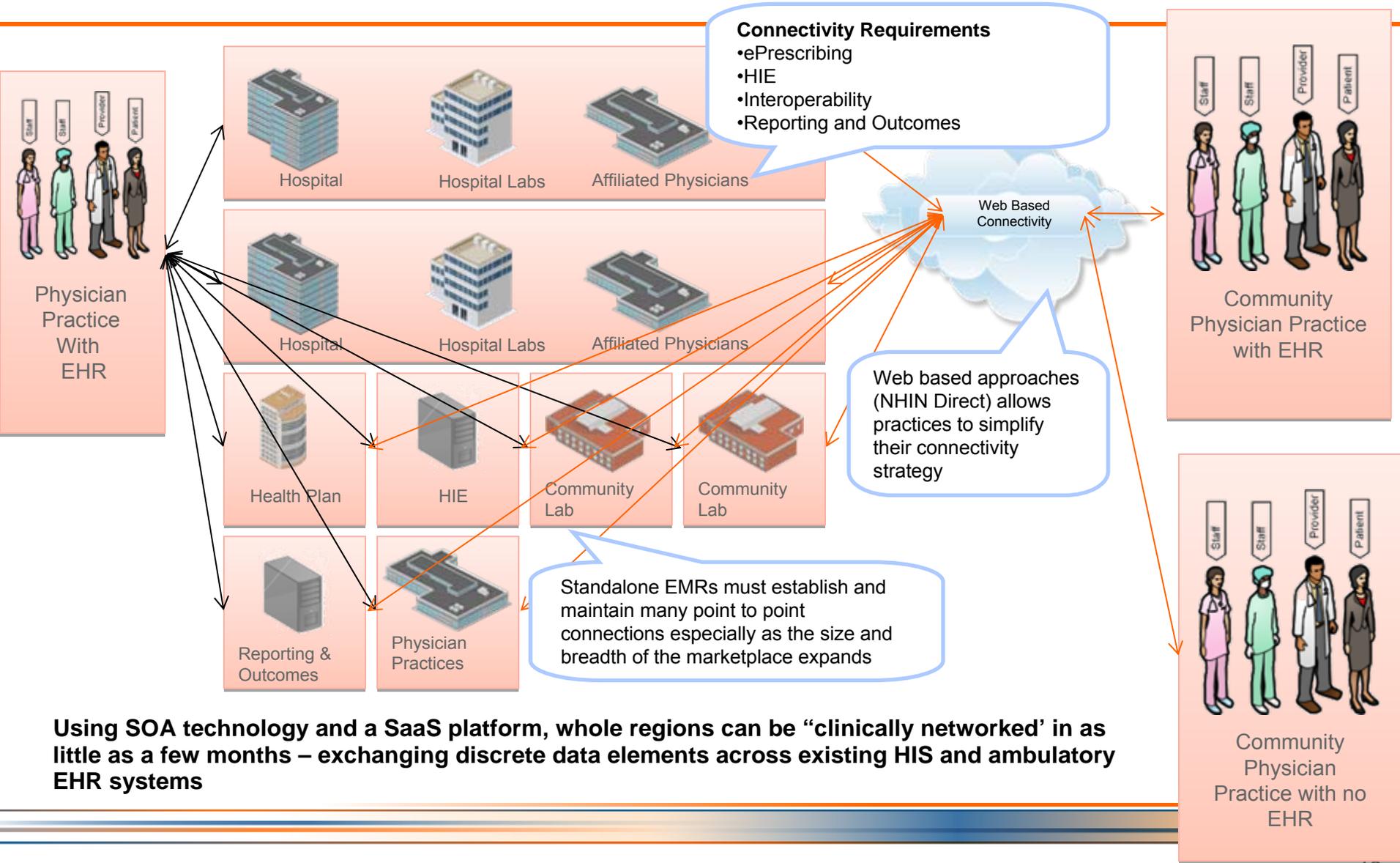
- HIT Standards Committee, Jan. 2010

Health Information Technology and Exchange
New frontiers of applications, services, and connectivity
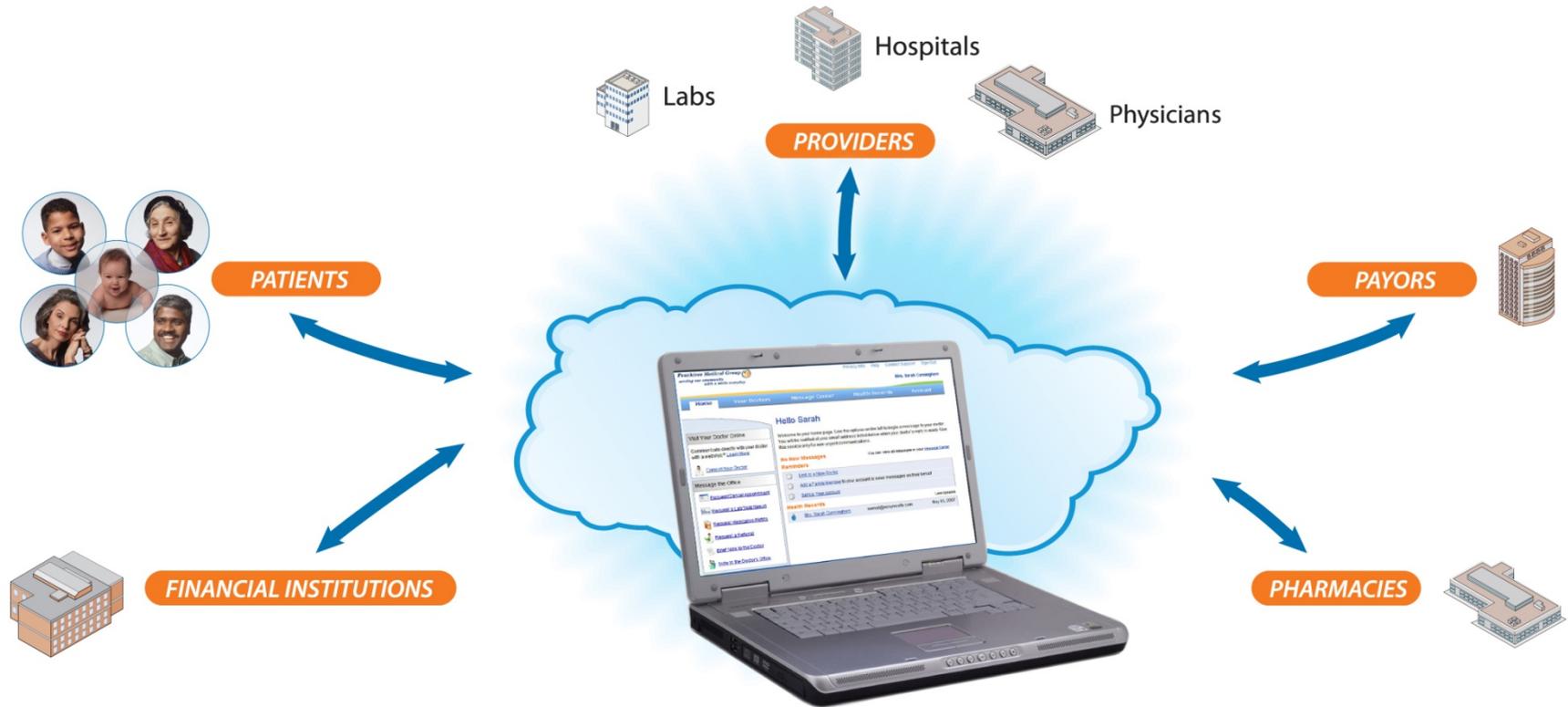
"A wide array of health IT tools and communications technologies" accessible through the web (virtualization technologies)

Enterprise Health Information Exchange
Facilitating System, Regional, and National Connectivity

Connectivity Requirements
- ePrescribing
- HIE
- Interoperability
- Reporting and Outcomes

Hospital

Hospital Labs

Affiliated Physicians

Hospital

Hospital Labs

Affiliated Physicians

Health Plan

HIE

Community Lab

Community Lab

Reporting & Outcomes

Physician Practices

Physician Practice With EHR

Web Based Connectivity

Community Physician Practice with EHR

Web based approaches (NHIN Direct) allows practices to simplify their connectivity strategy

Standalone EMRs must establish and maintain many point to point connections especially as the size and breadth of the marketplace expands

Community Physician Practice with no EHR

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

Health Information Exchange

the act, process or an instance of sharing health information

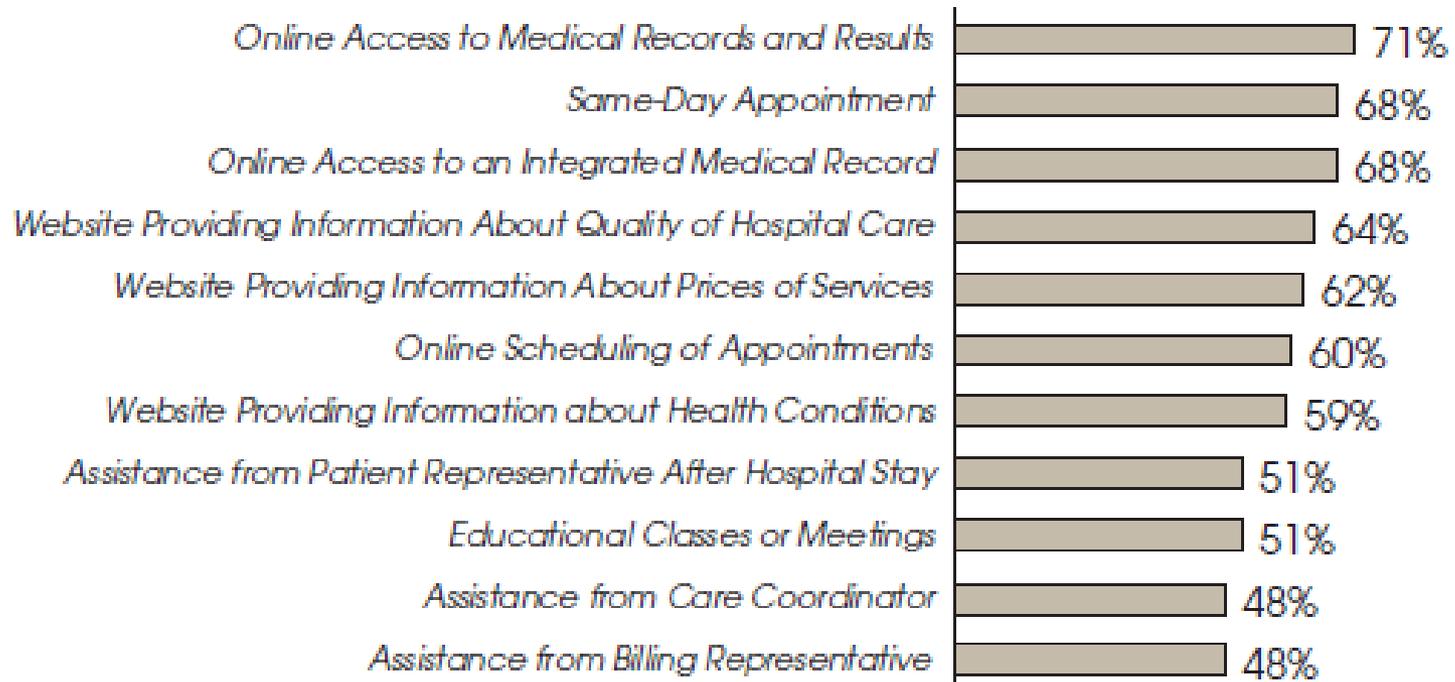| Private HIO	Community HIO	RHIO
Local	Community	Statewide
Single non-gov't organization	Multiple orgs w/in geography	Owned or led by state gov't
Focus on clinical integration of workflows across care continuum	Focus on sharing patient info for workflows across the community	Focus on broad, generalized use cases and state public health
Self-sustainable based on value provided to the local health system	Mixed sustainability dependent on value delivered to collabrative	Minimal sustainable model based on lack of value to providers

HIT Policy Committee

Meaningful Use Framework (June 2009)

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"*

Patient Preferences for Health-Related Internet Applications

Application	Percentage
Online Access to Medical Records and Results	71%
Same-Day Appointment	68%
Online Access to an Integrated Medical Record	68%
Website Providing Information About Quality of Hospital Care	64%
Website Providing Information About Prices of Services	62%
Online Scheduling of Appointments	60%
Website Providing Information about Health Conditions	59%
Assistance from Patient Representative After Hospital Stay	51%
Educational Classes or Meetings	51%
Assistance from Care Coordinator	48%
Assistance from Billing Representative	48%

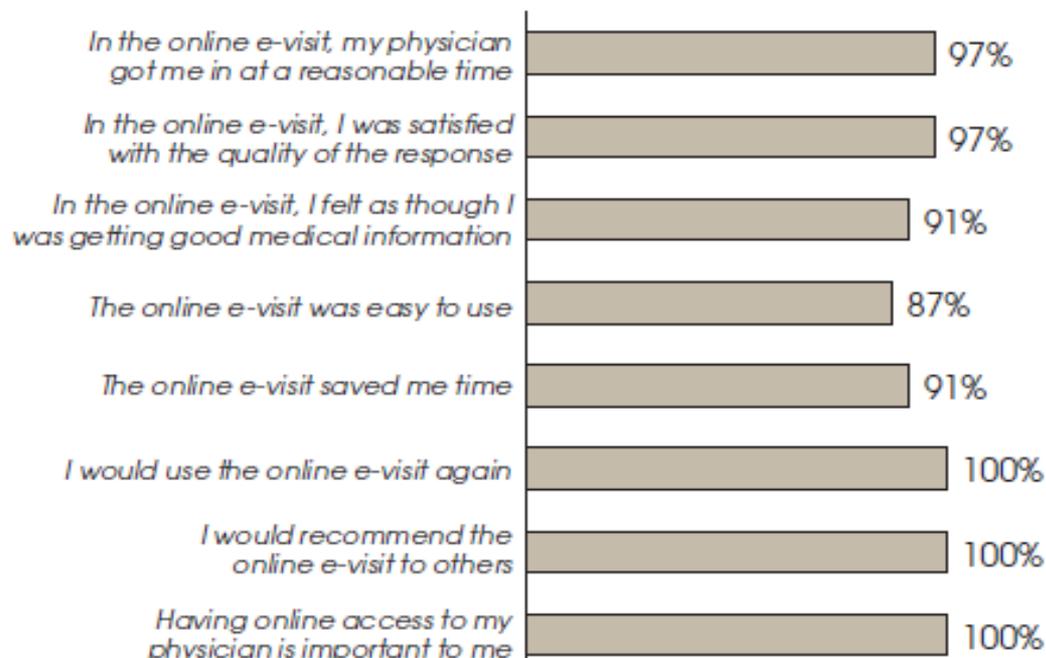*Source: Deloitte Center for Health Solutions, www.deloitte.com*

"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"

Statement	Percentage
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%

*Source: **Next Generation Website Strategy: The State of the Online Consumer Experience**, The Advisory Board Company 2008*

The Connected Medical Home
Centering Care Around the Patient

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!

[1]*Reid, Robert J. et al, Am Journal of Managed Care, vol.15, no.5, p.71-87, 2009*

PCMH in Action
Vermont "Blueprint" model

A Coordinated Health System

Hospitals

PCMH

PCMH

Specialists

Community Care Team
Nurse Coordinator
Social Workers
Dieticians
Community Health Workers
Care Coordinators
Public Health Prevention Specialist

PCMH

PCMH

Public Health Prevention

Health IT Framework

Global Information Framework

Evaluation Framework

Operations

Accountable Care Organizations
The overarching structure in which other reforms can thrive
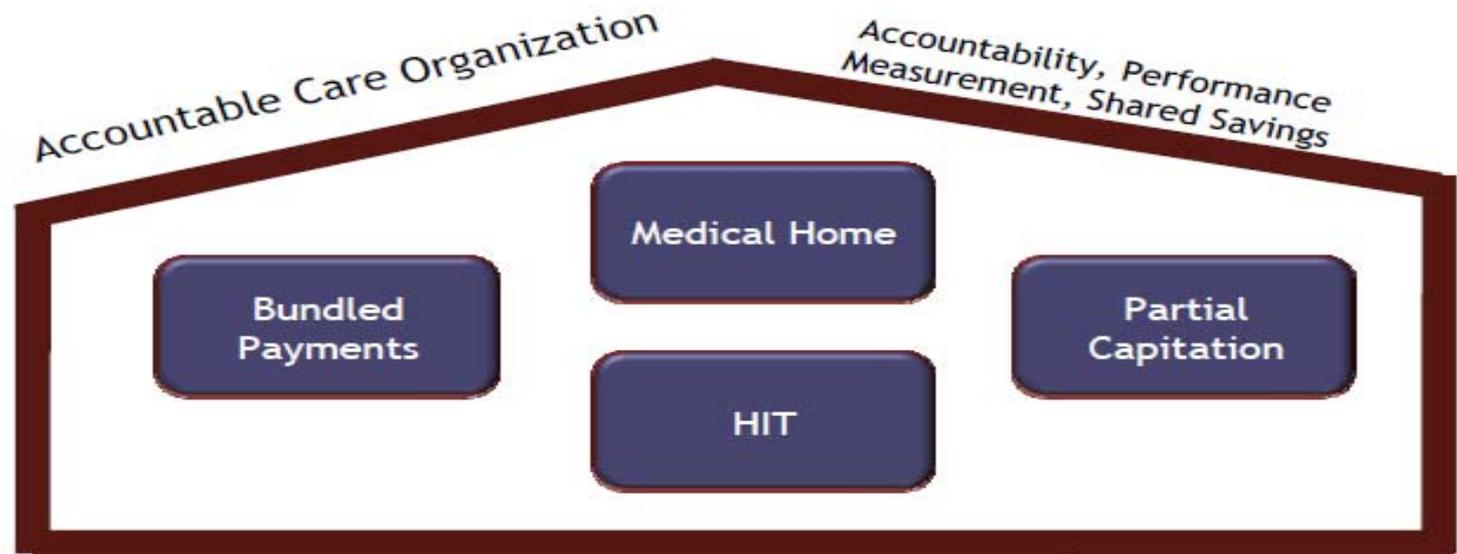
Source: Brookings & Dartmouth Institute, 2009

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)

The Nature of the Problem

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]

[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]

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

PCMH and ACO Practice Transformation

HIT as an *enabler* of Access, Care Coordination and Payment Reform

To support PCMH (practice) and ACO (enterprise) practice transformation, an interconnected HIT network with key capabilities acts to optimize engagement, coordinate care, and implement of 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

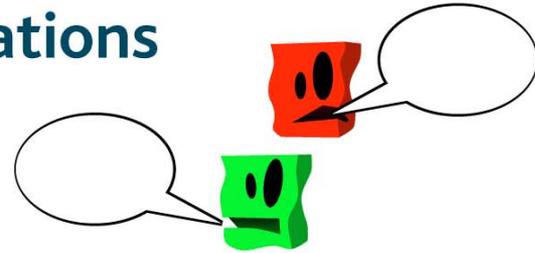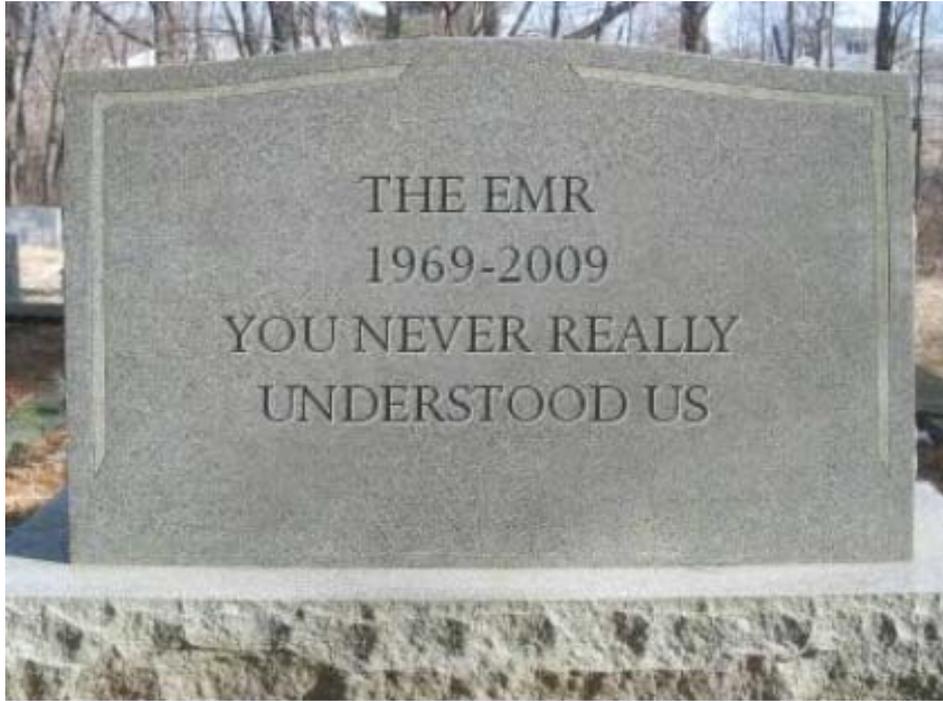- Comparative Effectiveness Analytics

Challenges of the HIT Marketplace

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

Many voices, different motivations
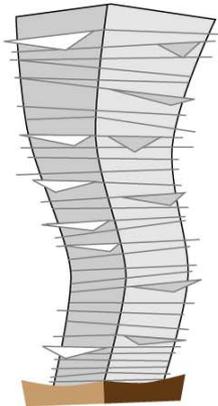
Challenging to keep-up with emerging policies and standards

THE EMR
1969-2009
YOU NEVER REALLY
UNDERSTOOD US

- 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
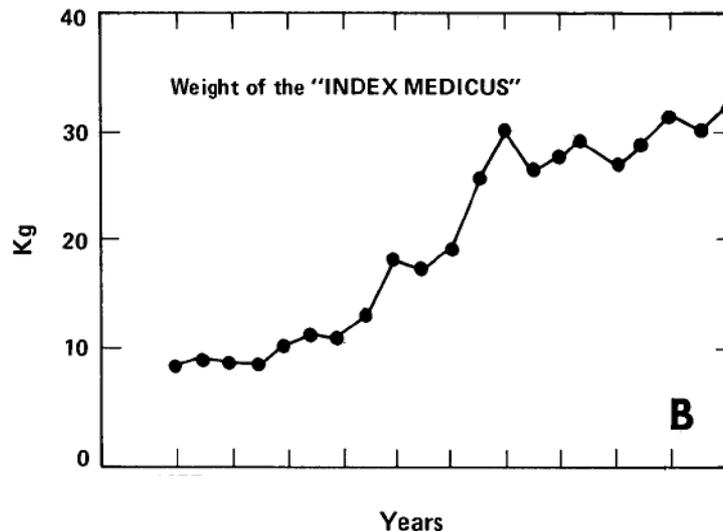- Modularity will be an important part of this market shift

Scoping the Problem
An unending explosion in medical knowledge
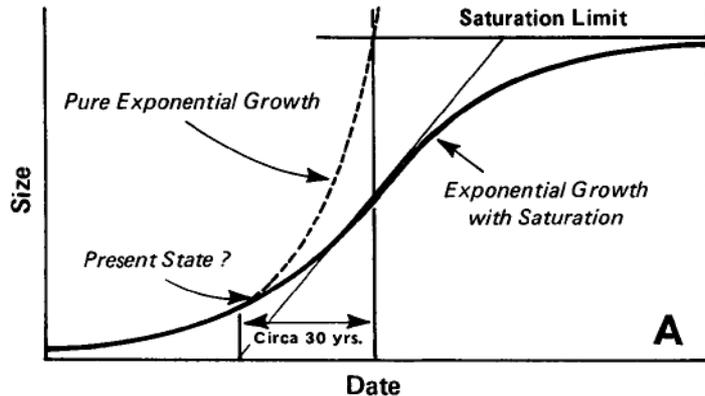
Medical knowledge expanding exponentially

Lack of timely, accessible evidence based information

Molecular diagnostic tests growing 10-20% a year, new test every 3-5days ➔ 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