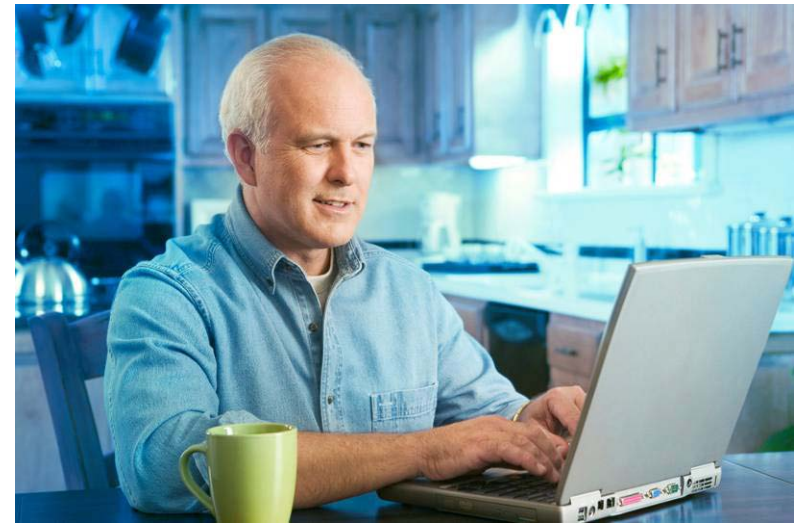
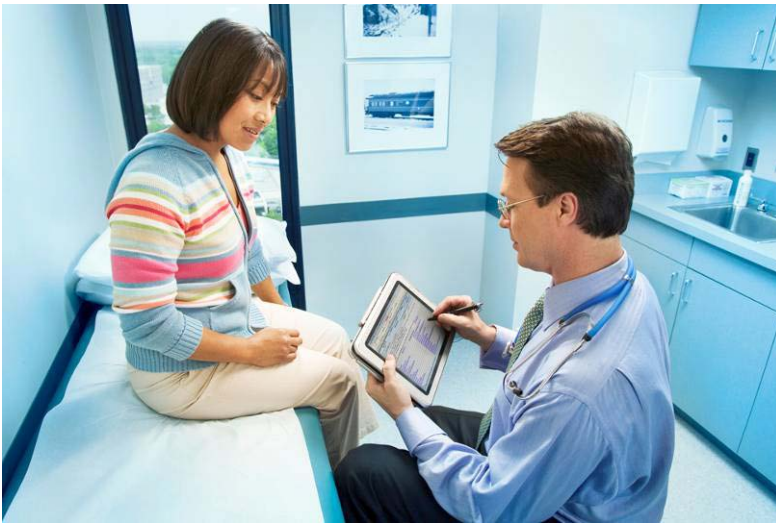


Institute for Health Technology Transformation

May 12, 2010 - Jacksonville, Florida

# Health Information Technology and the Patient Centered Medical Home



David K. Nace MD, McKesson Health Solutions

Co-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

An iterative process

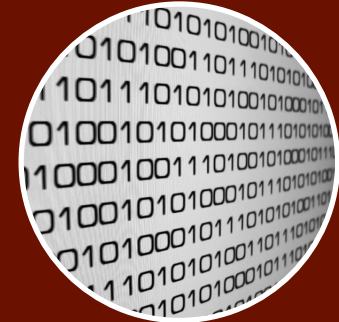


Coverage  
for All



Payment Reform

Align incentives  
Pay for Value  
Strengthen Primary Care



Health  
Information  
Technology

*Tools to Rebuild and Restructure Health Care*

# Why Primary Care?

- ▶ In the US and Britain, each additional primary care physician per 1000 is associated with a decrease in mortality of about 5%<sup>1A</sup>
- ▶ Adults with a primary care physician as their personal physician
  - had 33% lower costs of care<sup>1B</sup>
  - were 19% less likely to die<sup>1B</sup>
- ▶ Primary care physician supply has been consistently associated with improved health outcomes for conditions like cancer, heart disease, stroke, infant mortality, low birth weight, life expectancy, and self-rated care.

- Barbara Starfield, Primary Care Policy Center, John Hopkins Bloomberg School of Public Health

# Our Primary Care System Must Be Transformed to Meet Future Demands From Reform and Chronic Disease

## Current challenges confronting primary care

- Emergency room visits increased by 36% between 1996 and 2006; 47% of ED visits could have occurred in a physician's office<sup>1,2</sup>
- 20% of patients are re-admitted within 30 days of hospitalization, most of which are avoidable
- 50% of patients that are re-admitted do not see a physician after their first hospitalization
- 75% of health care spending is for patients with chronic diseases
- Over two years, the typical Medicare patient sees 2 different primary care doctors and 5 different specialists
- Millions of additional Americans will enter the primary care system with healthcare reform

**Advanced primary care models like medical homes can provide the coordination mechanisms and decision support to improve quality, cost, and satisfaction.**

1. Goldstein J. Emergency room visits hit record high. *The Wall Street Journal Health Blog*. <http://blogs.wsj.com/health/2008/08/06/emergency-room-visits-hit-record-high/>. Accessed 03/12/10.
2. Kowalczyk L. ER Visits, Costs in Mass. climb. *The Boston Globe*. [http://www.boston.com/news/local/massachusetts/articles/2009/04/24/er\\_visits\\_costs\\_in\\_mass\\_climb/](http://www.boston.com/news/local/massachusetts/articles/2009/04/24/er_visits_costs_in_mass_climb/). Accessed 03/12/10.

# What is a Patient-Centered Medical Home?

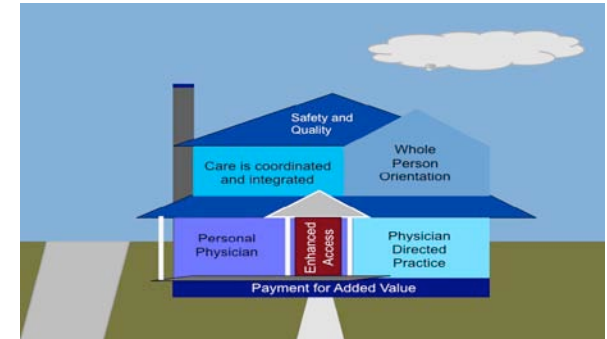
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**Restructured (and financially supported) primary care services that:**

- ▶ Places the primary care physician in the role of quarterback while ***leveraging a team-based approach***
  - ▶ Focuses on the patient and addressing all of their needs, instead of just one problem at a time
  - ▶ Engages the patient in a proactive and patient centric manner
  - ▶ Provides services for patients when and where they need it
  - ▶ Reduce fragmentation and inappropriate use of ER/specialists
  - ▶ ***Embraces quality improvement and health information technology*** with a population-based management orientation
-

# Patient Centered Medical Home Activities

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



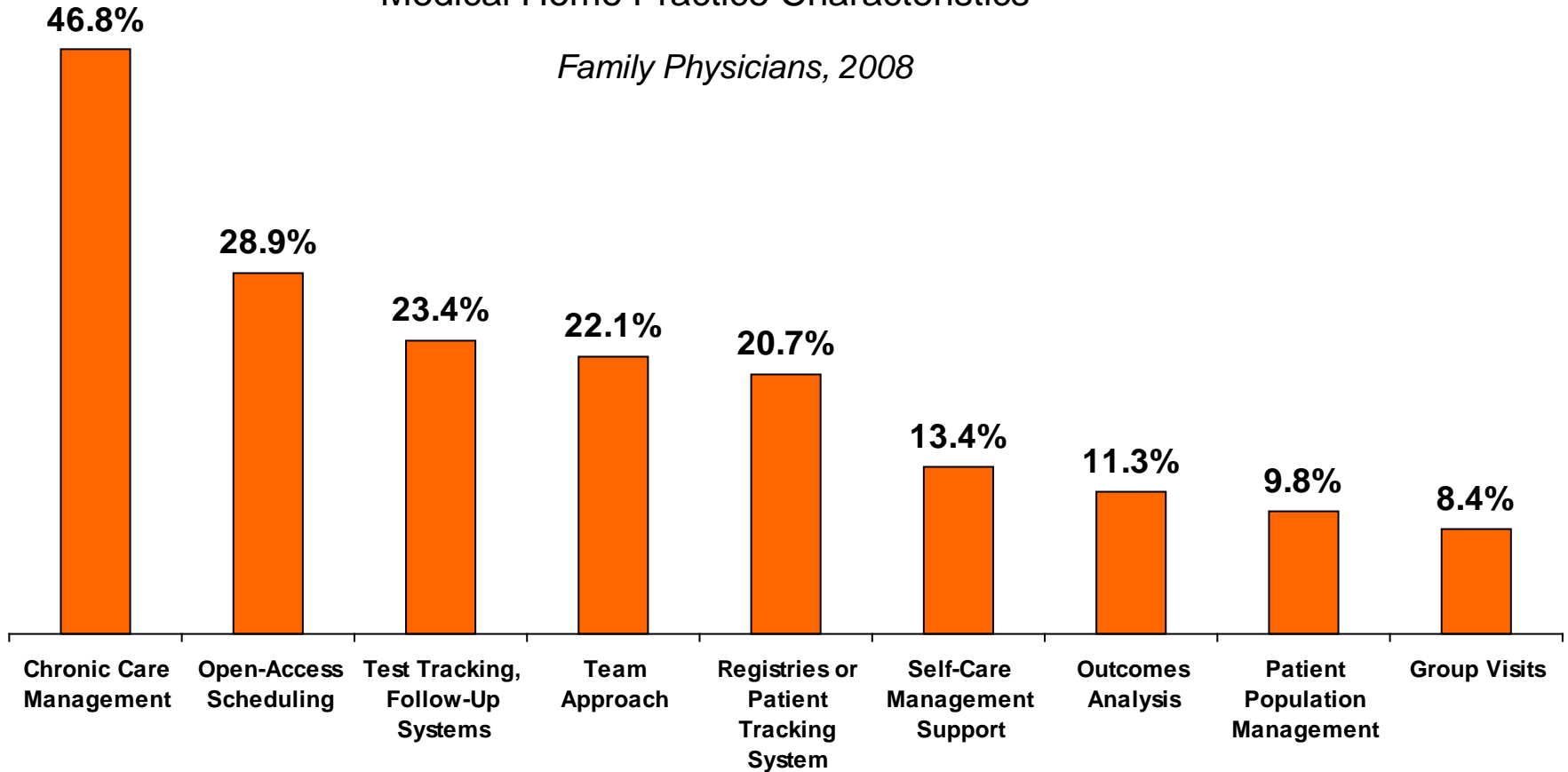
*The PCMH “requires a new “mental model” of how primary care delivers value”*

# 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*



AAFP Practice Profile I Survey, Table 1. Use of Patient-Centered Medical Home Components by Family Physicians, July 2008

# Not Enough Time in the Day

*Physician Alone Cannot Provide Comprehensive Care and Maintain Panel Size*

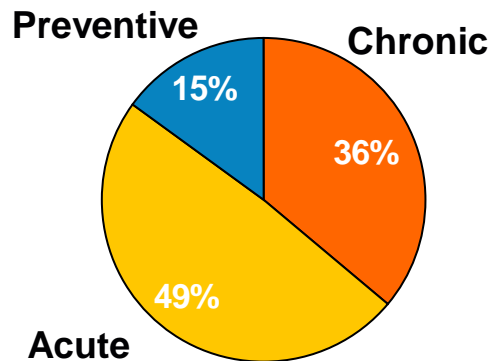
## PCP Estimated Time for Patient Care per Day

*Panel Size of 2,500 Patients*

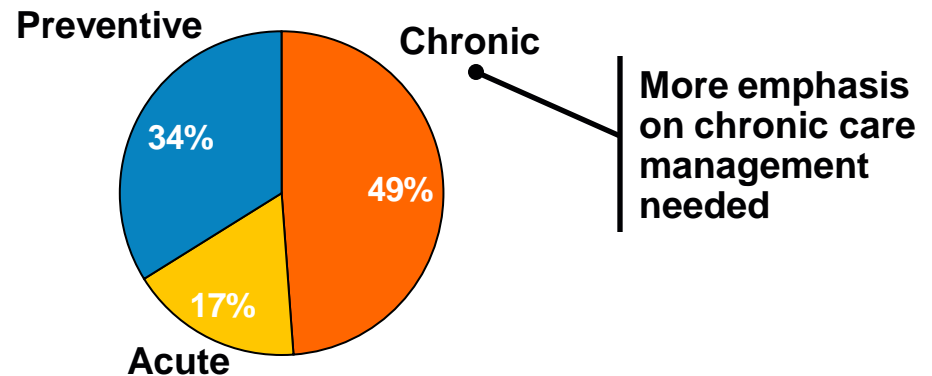
<b>Acute Needs</b>	<b>3.7 hours</b>
<b>Chronic Needs</b>	<b>10.6 hour</b>
<b>Preventive Care</b>	<b>7.4 hours</b>
<b>Total</b>	<b>21.7 hours</b>

## Division of Physician's Visit Time

*Currently*

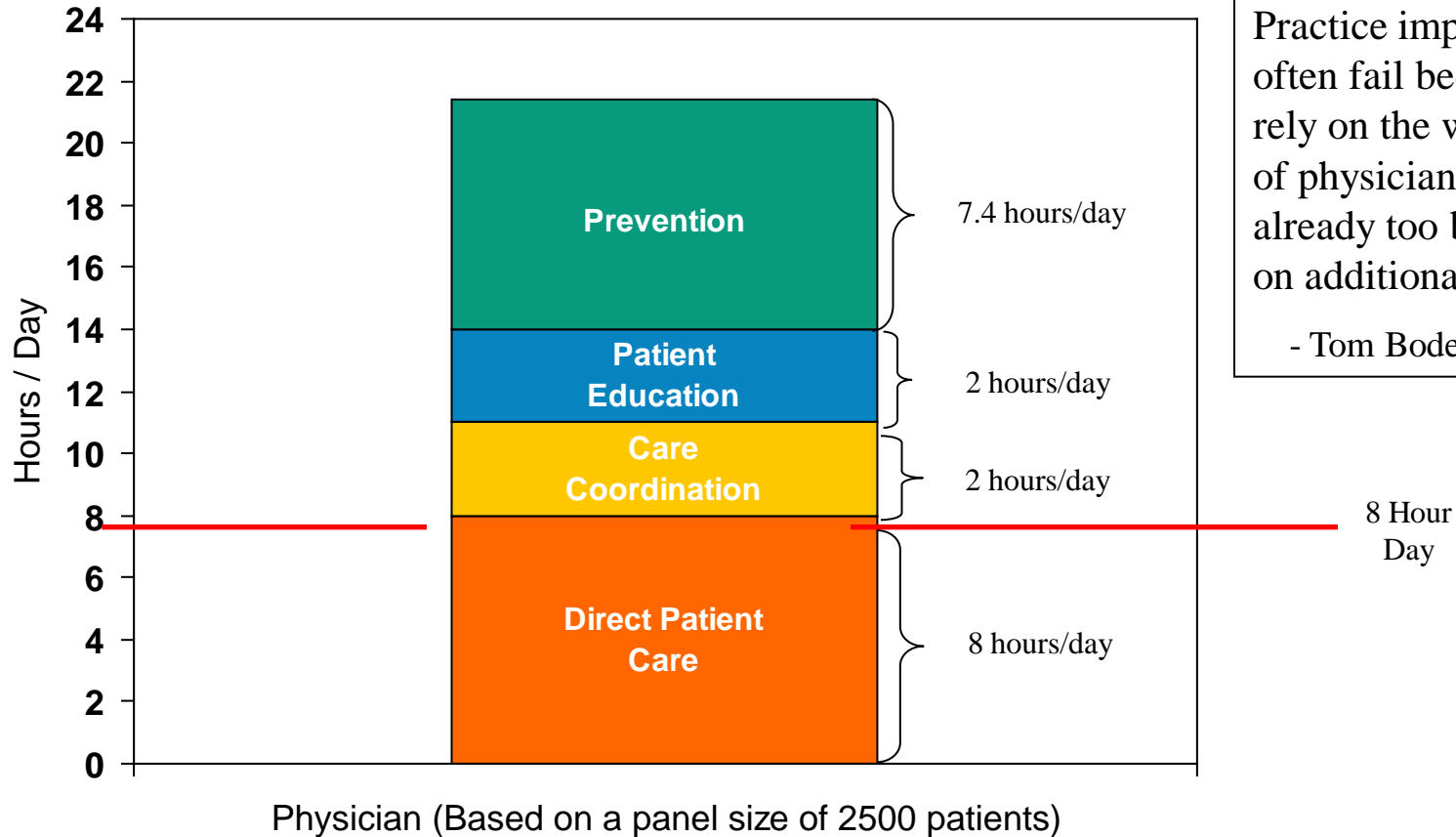


*To Meet Guidelines*



# Taking care of patients

The work required for holistic care (typical primary care panel)

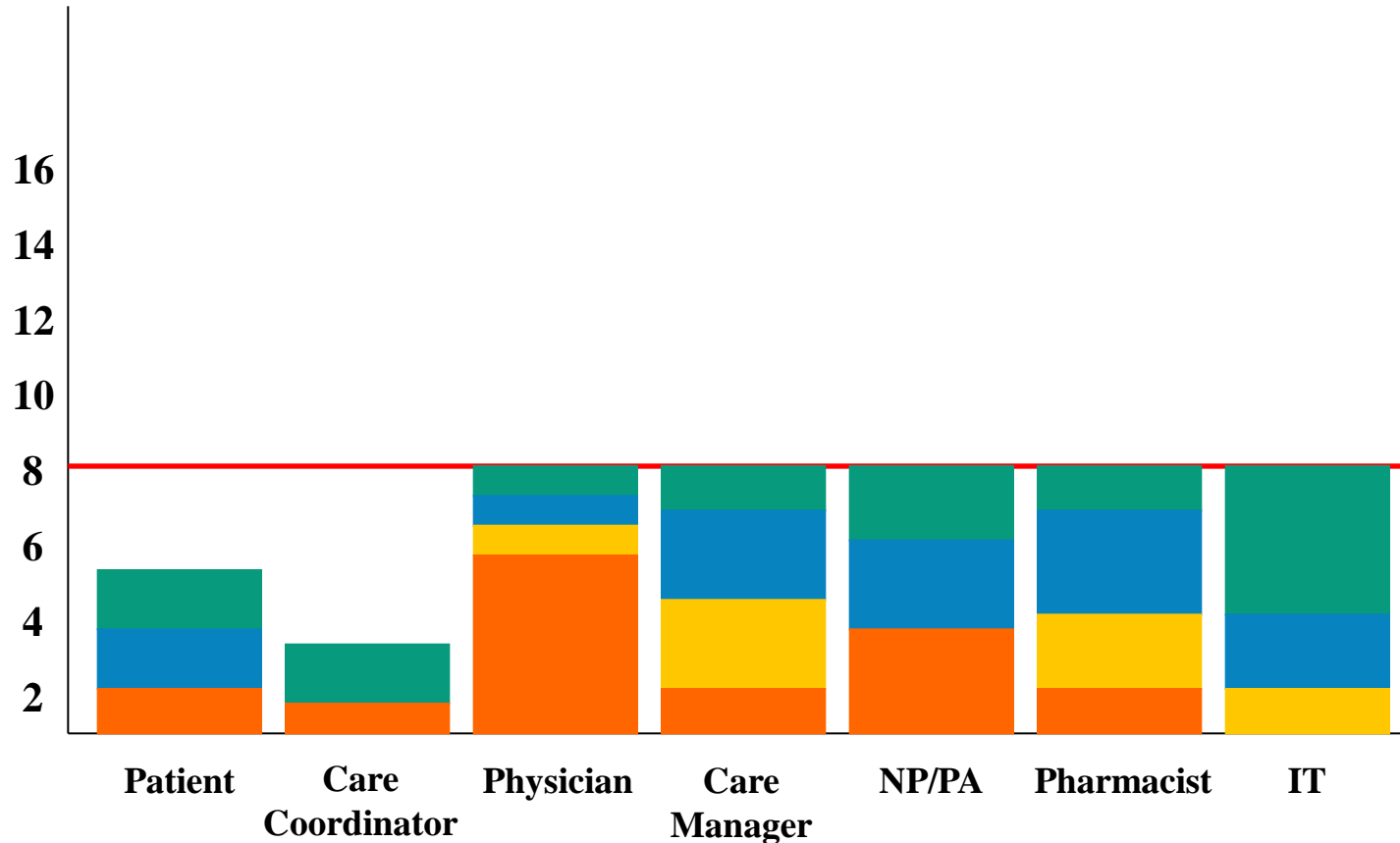


Practice improvements often fail because they rely on the willingness of physicians, who are already too busy, to take on additional work.

- Tom Bodenheimer MD

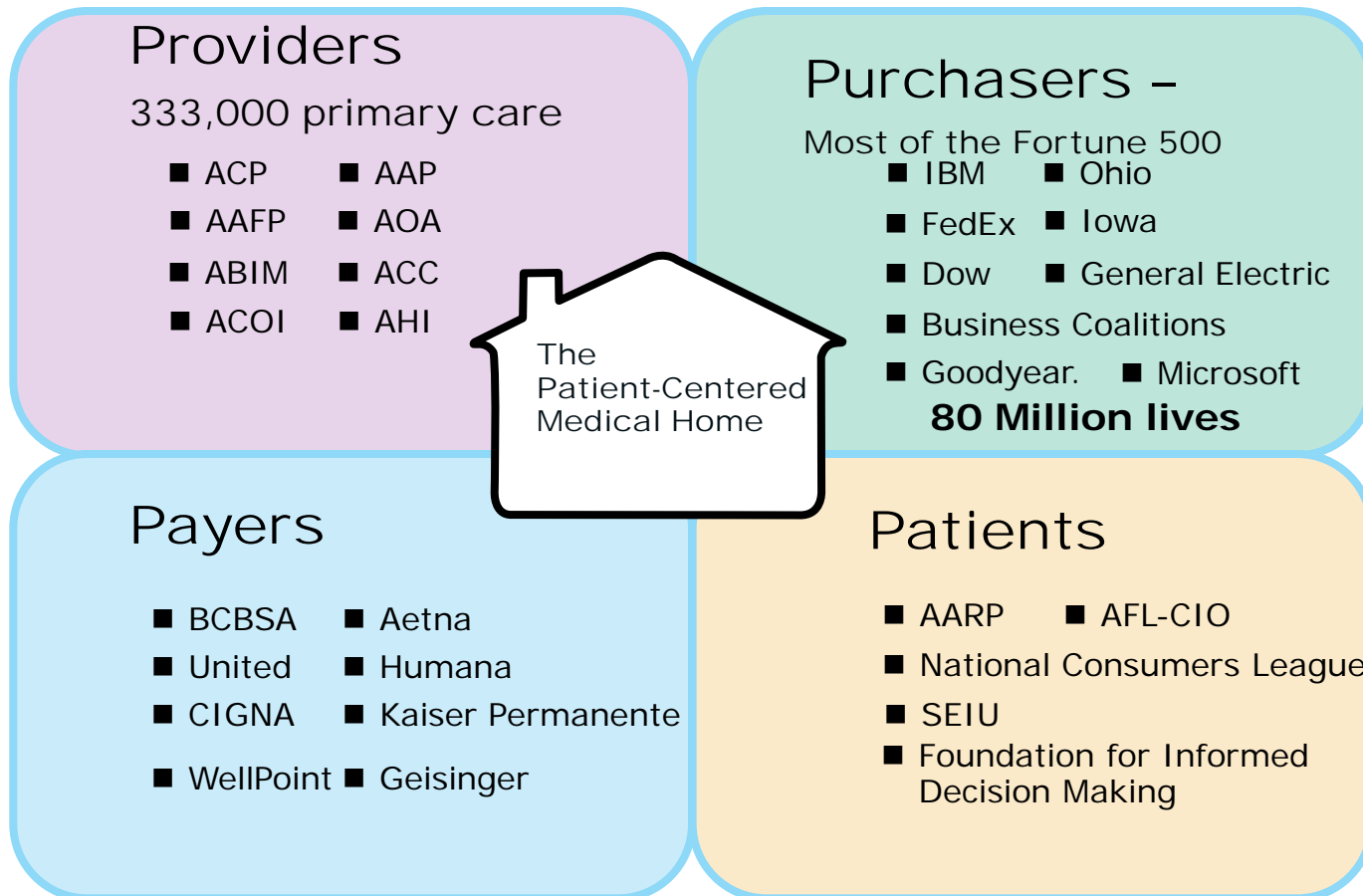
# Patient Centered Medical Home

*Building a team model to enhance quality*



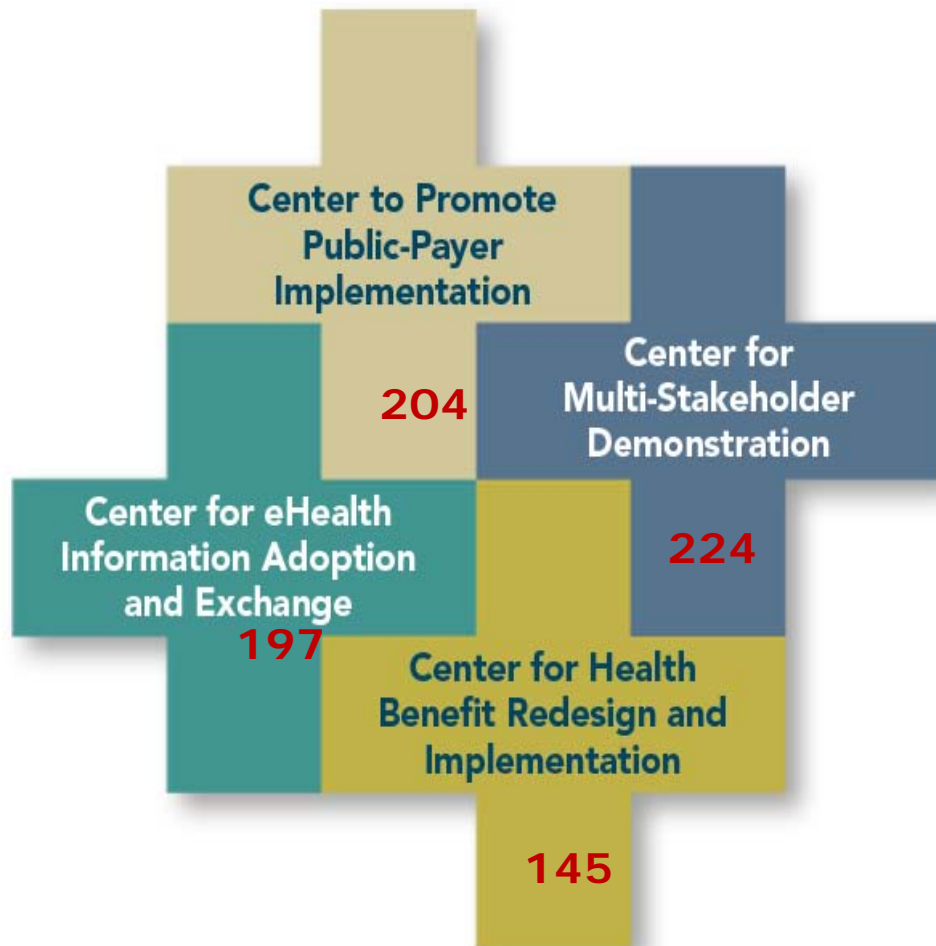
# The Patient-Centered Primary Care Collaborative

> 600 Members with Broad Stakeholder Support & Participation



# Patient Centered Primary Care Collaborative

*Four 'Centers' - Over 880 participating leaders*

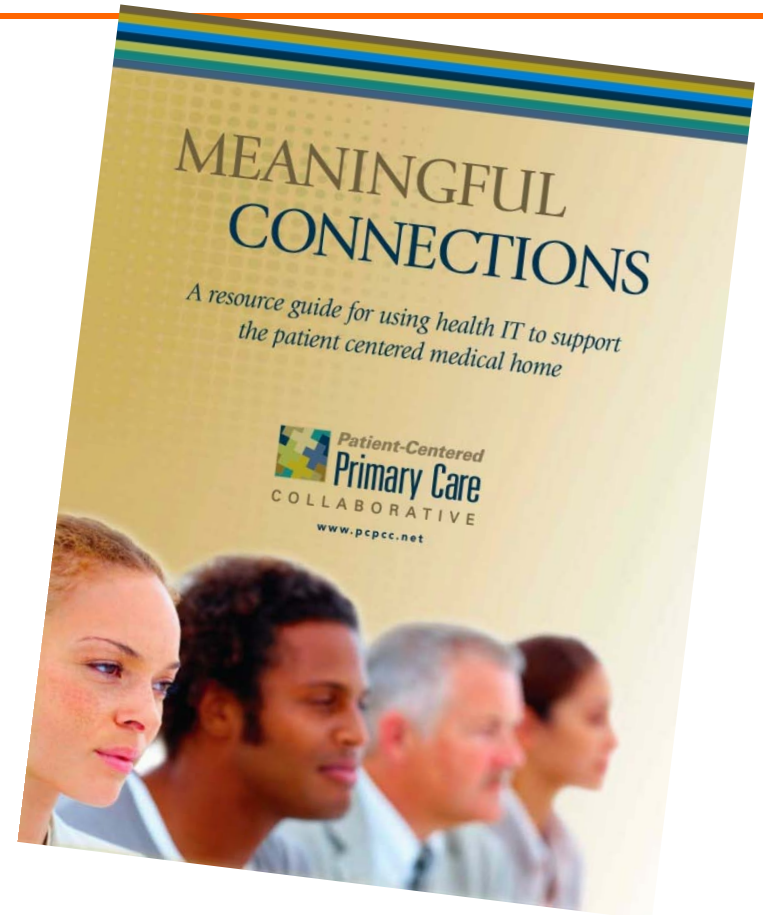


- **Center for Multi-Stakeholder Demonstration**  
Identify community-based pilot sites in order to test and evaluate the concept; offer hands-on technical assistance, share best practices, and identify funding sources to advance adoption.
- **Center to Promote Public Payer Implementation**  
Assist state Medicaid agencies and other public payers as they implement and refine programs to embed the Patient Centered Medical Home model by offering technical assistance; sharing best practices and giving guidance on the development of successful funding models.
- **Center for Health Benefit Redesign** Create standards and buying criteria to serve as a guide and tool for large and small employers/purchasers in order to build market demand for adoption of the Medical Home model.
- **Center for eHealth Information Adoption & Exchange** Evaluate use and application of information technology to support and enable the development and broad adoption of information technology in private practice and among community practitioners.

# 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.

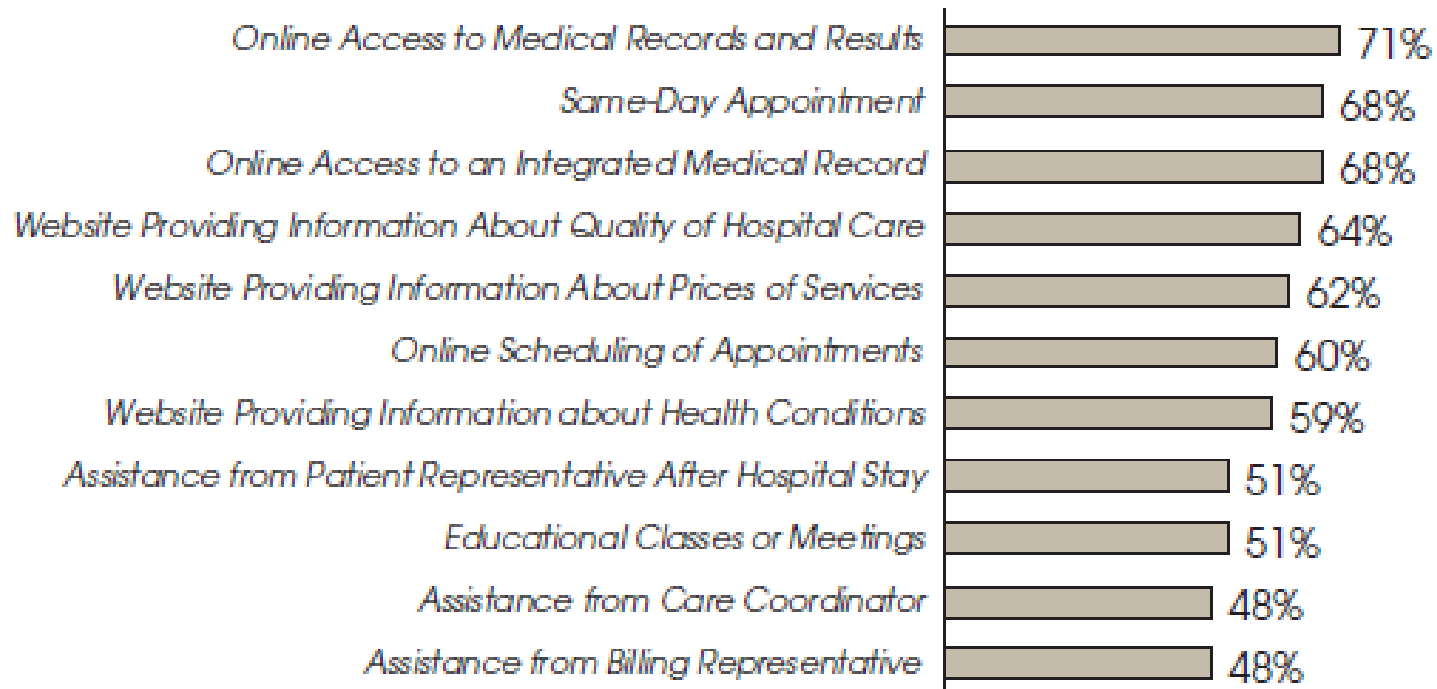
### Enable

- 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.

# Patient Preferences for Health-Related Internet Applications



Source: Deloitte Center for Health Solutions, [www.deloitte.com](http://www.deloitte.com)

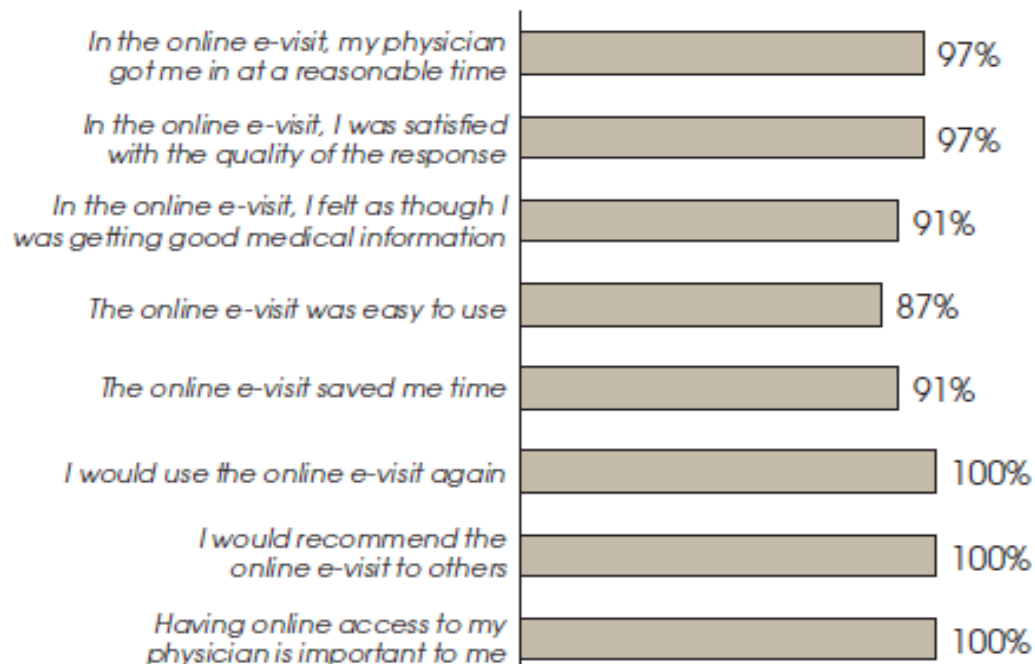
“Meaningful Use” of HIT by consumers is a critical concept in a patient-centric system of care

# 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"



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

# American Recovery and Restructuring Act

## HITECH Act - A “Down payment on Health Reform”

“It simply doesn’t make sense that people in the twenty first century are still filling out forms with pens on paper that have to be filed somewhere.”

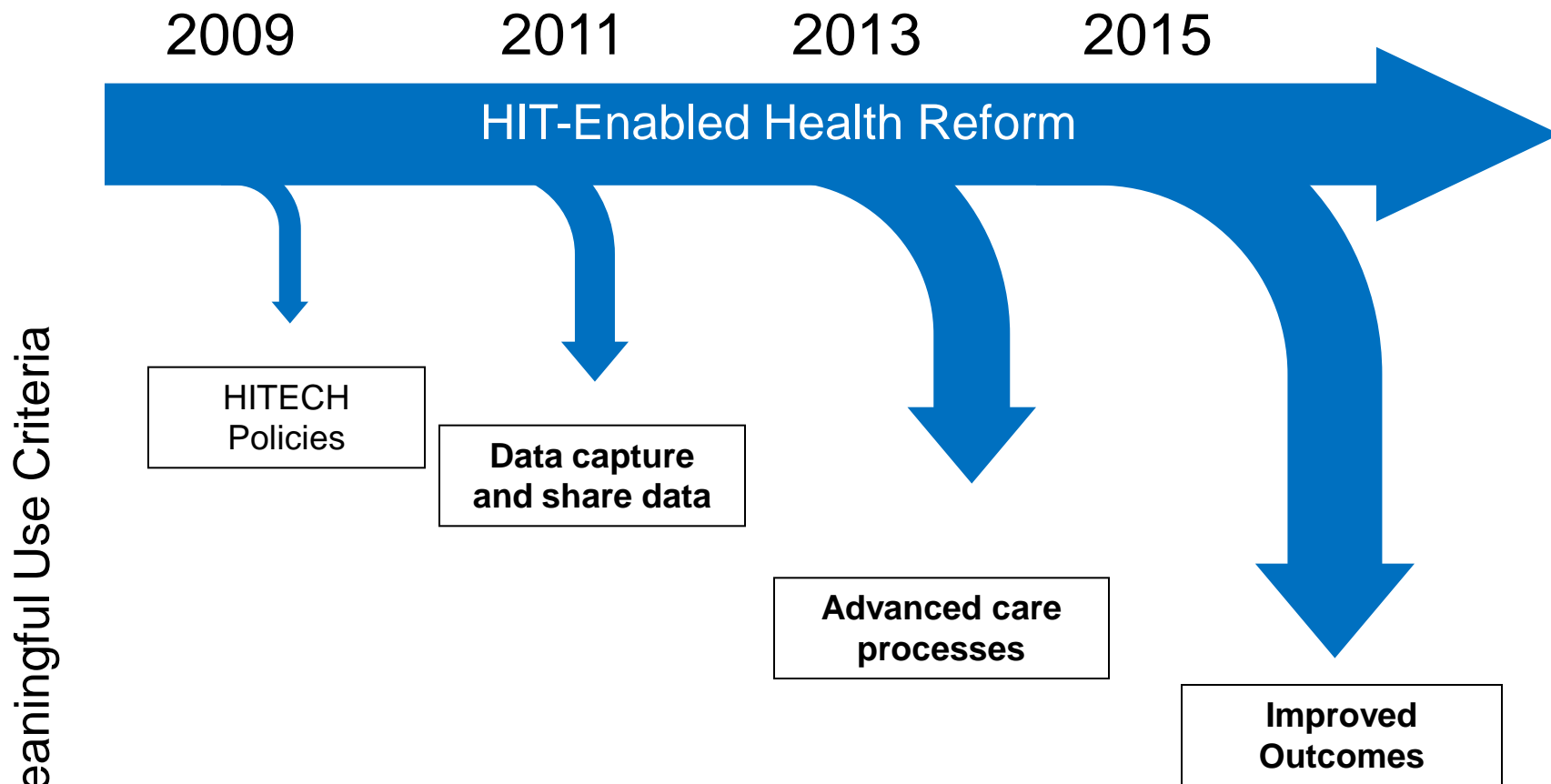
**President Barack Obama**



*~\$19-36+ Billion incentive program. Goal is EHR adoption for physicians and hospitals, and PHRs for most Americans by 2015.*

# HIT-Enabled Health Reform

*“Meaningful Use” - an iterative approach*



*Nation-wide regional extension program to assist **primary care providers** achieving ‘meaningful use’ of HIT*

# Meaningful Use Criteria

## 2011 Functional Requirements (NPRM)

- ▶ Documentation
  - CPOE – (med, labs, image, referrals) 80%
  - Medication Reconciliation 80%
  - Medication, Allergy, & Problem list (coded) 80%
  - Demographics, Smoking Status, & Vital Signs (structured data) 80%
  - Lab Results (numerical and structured data) 80%
- ▶ Performance Improvement
  - Drug / allergy / formulary checks enabled
  - Clinical Decision Support (@ quality/specialty metrics) 5 alerts
  - Generate Patient Lists (registry) 1 report
- ▶ Quality Reporting
  - Attestation of accuracy in 2011
  - PQRI (XML) submission in 2012

# Meaningful Use Criteria

## *2011 Health Information Exchange Requirements (NPRM)*

### Patients

- Electronic copy of health information < 48 hrs 80%
- Clinical summary of ambulatory encounter 80%
- Electronic access to health information <96 hrs 10%
- Preventative / follow-up care reminders 50%

### External Providers

- Exchange key clinical information (HIE) 1 test
- Electronic care record summary on discharge or referral 80%

### Pharmacies

- E-prescribing 75%

### Public and Private Payers

- Check insurance eligibility 80 %
- Submit claims electronically 80%

### Public Health Authorities

- Electronic submission to immunization registries 1 test (or actual)
- Provide electronic public surveillance data 1 test (or actual)

# 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*
-

# Health Information Technology and Exchange

## *The advent of virtual delivery models (SaaS)*

Web  
Applications

Clinical Data  
Distribution

Interoperability  
Services

Network  
Identity  
Management

**Emerging as a low-cost, scalable, and highly networked solution**

**No infrastructure needs – just access to the internet**

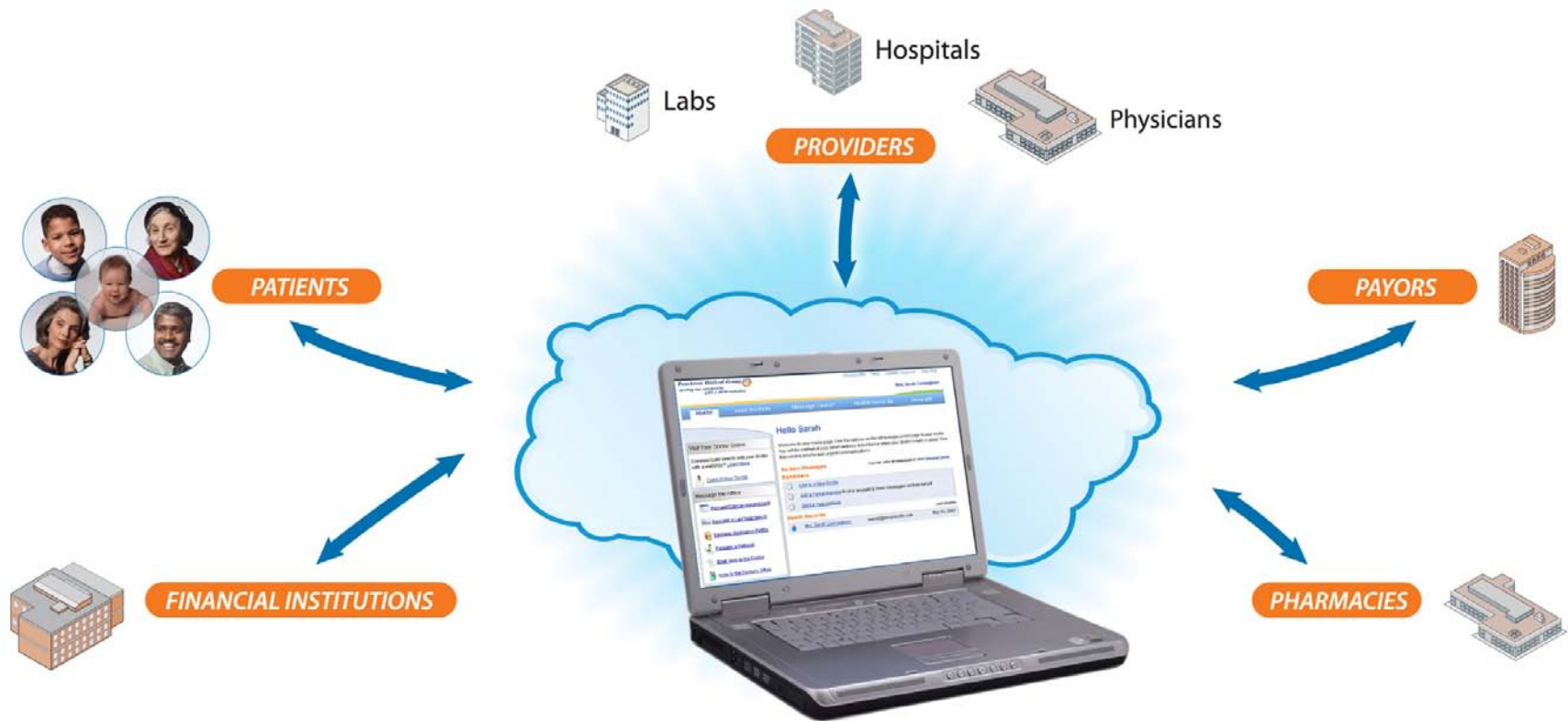
**Rapid deployment and adoption**

**No need for local or practice IT staff**

**Selection of applications, tools, and services as desired**

# Health Information Technology and Exchange

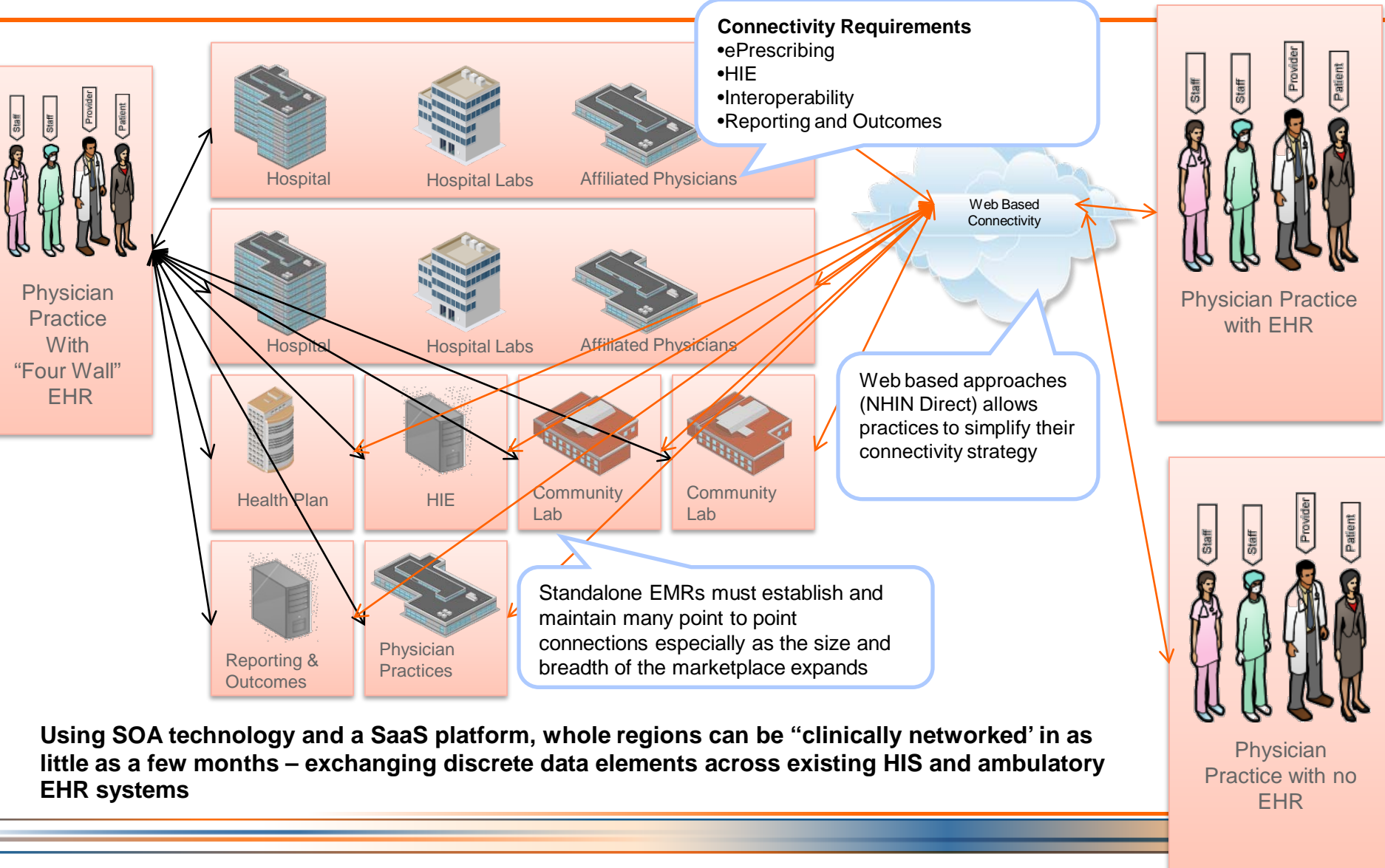
*New frontiers of applications, services, and connectivity*



*“A wide array of health IT tools and communications technologies”  
accessible through the web (virtualization technologies)*

# Enterprise Health Information Exchange

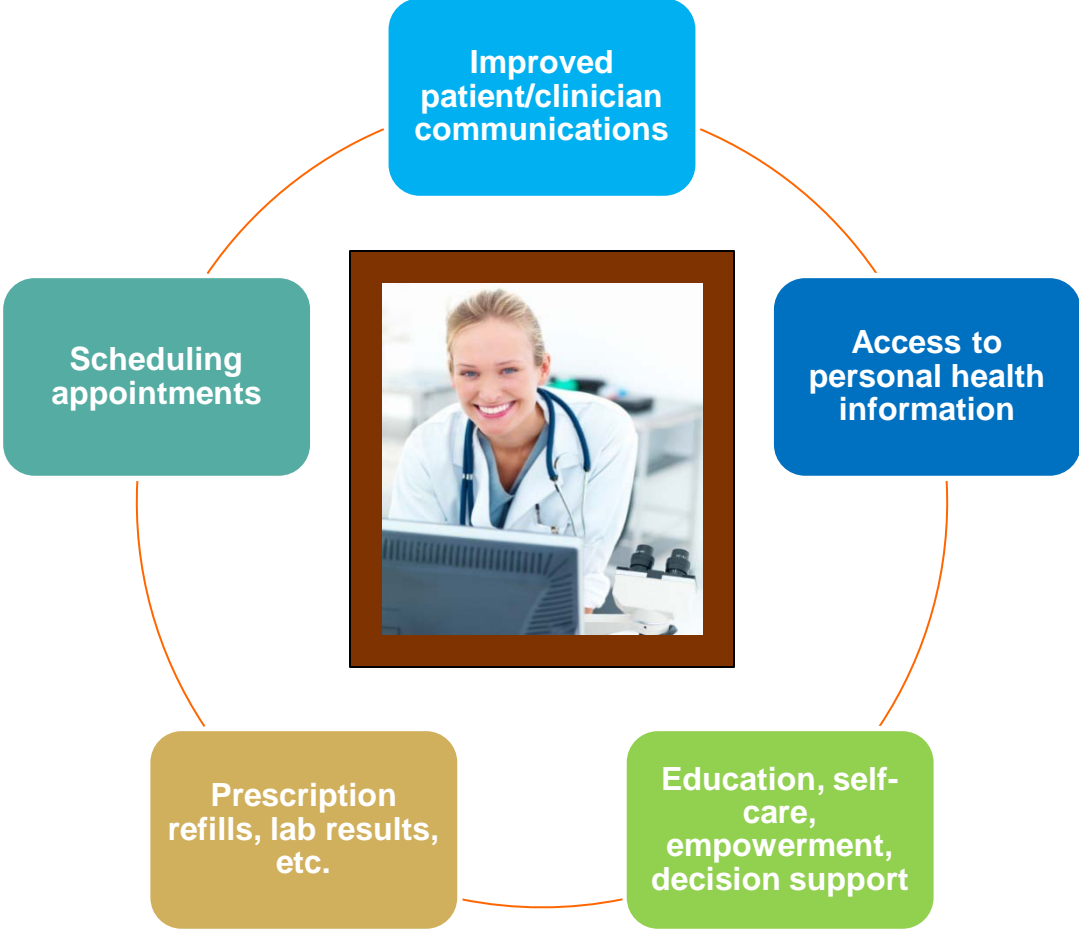
## Facilitating System, Regional, and National Connectivity



**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**

# 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

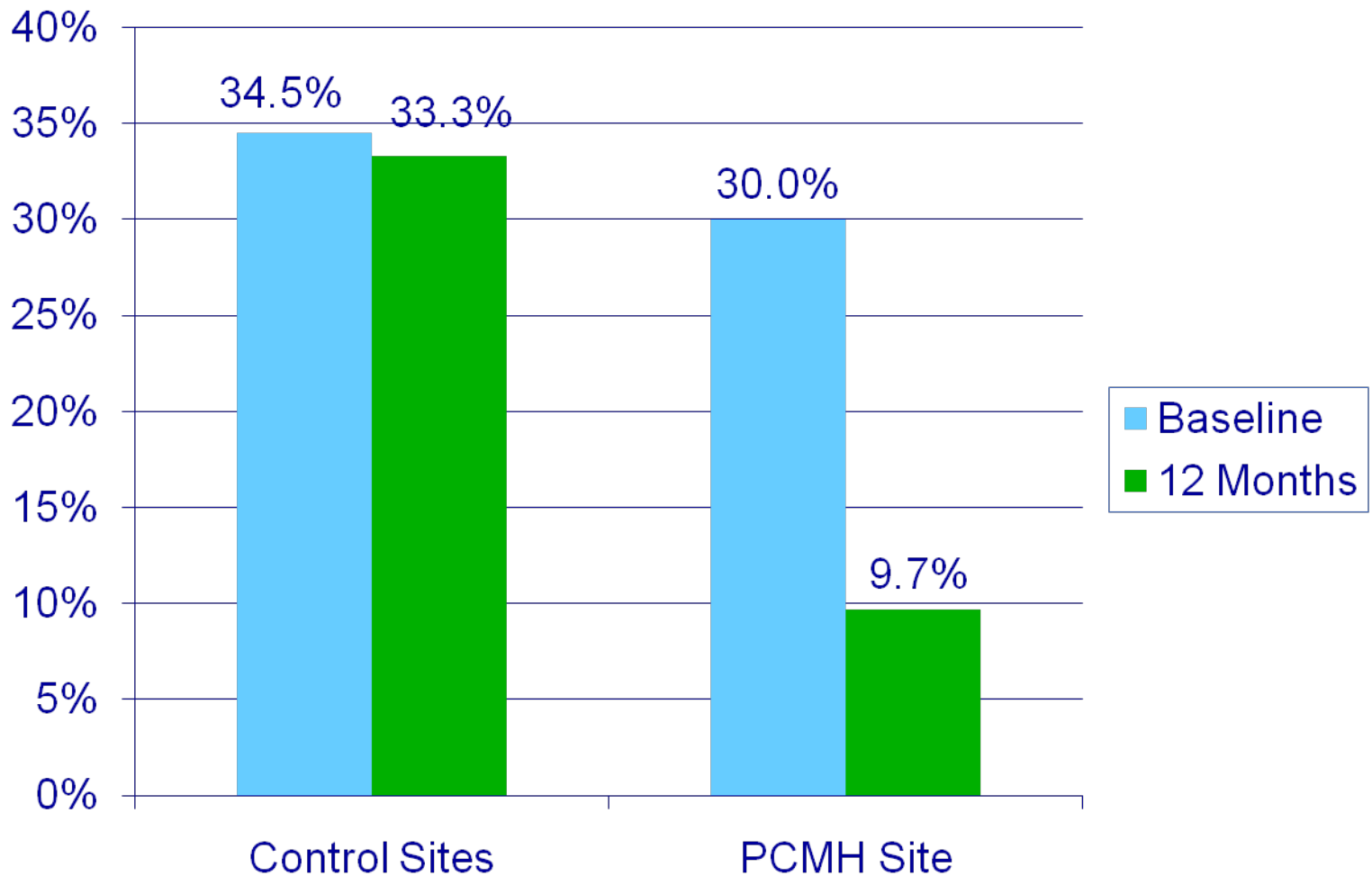
# Case Study

## *Group Health Cooperative of Puget Sound<sup>1</sup>*

- 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!

<sup>1</sup>Reid, Robert J. et al, *Am Journal of Managed Care*, vol. 15, no.5, p.71-87, 2009

# Group Health Puget Sound: Effect on Clinic Staff



# Case Study

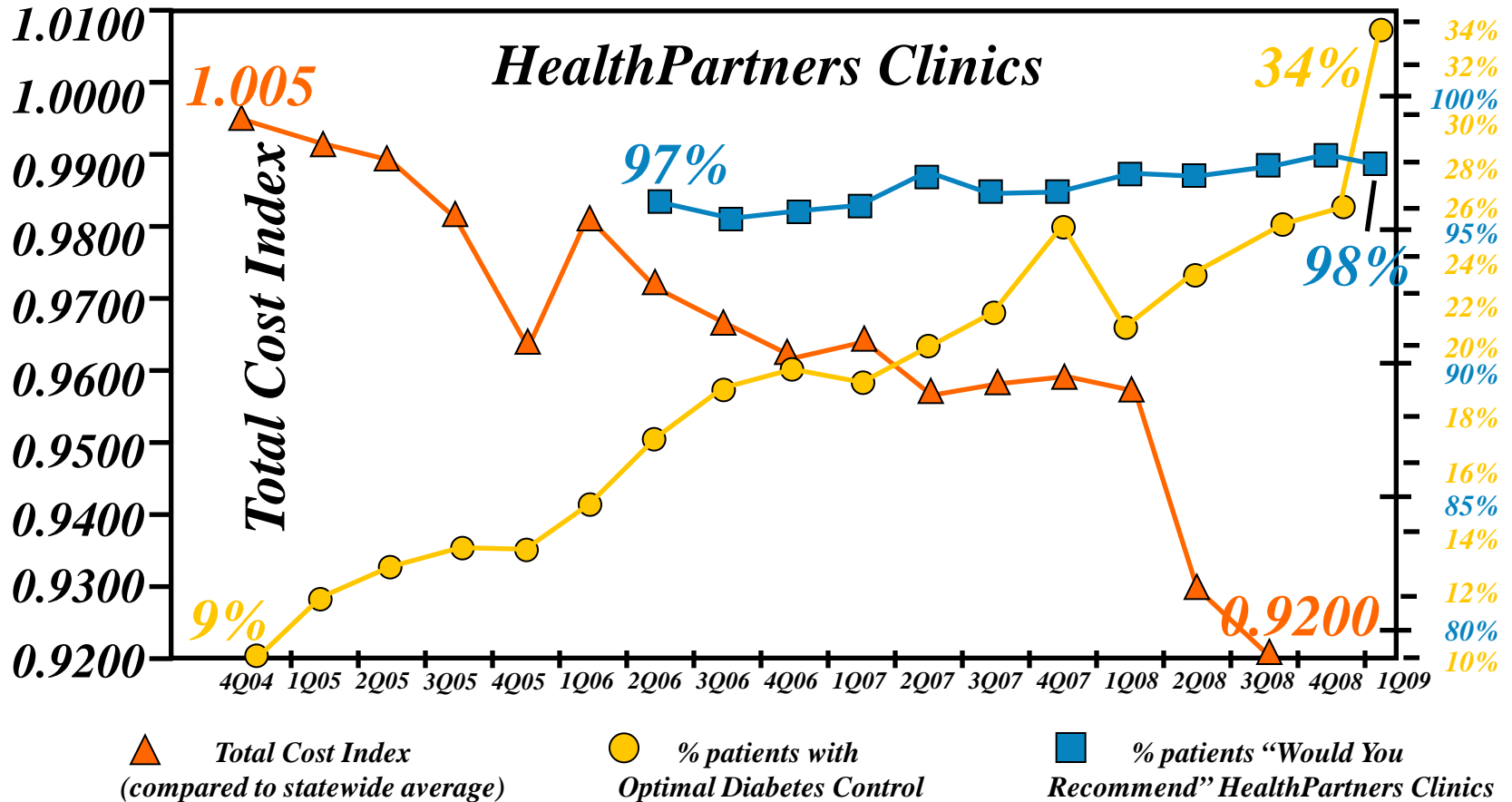
## *Health Partners “BestCare” Model*

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- 700 physician group, consumer-governed health organization in Minnesota
  - Implemented a Patient Centered Medical Home model in 2004 as part of its "BestCare" model of delivery system redesign
    - ▶ More convenient access to primary care through online scheduling, test results, e-mail consults, and post-visit coaching
    - ▶ Proactive chronic disease management through phone, computer, and face-to-face coaching
  - 5-year prospective evaluation
-

# Health Partners

## Triple AIM: Health-Experience-Affordability



# Health Partners

## *Improving Outcomes, Reducing Costs*

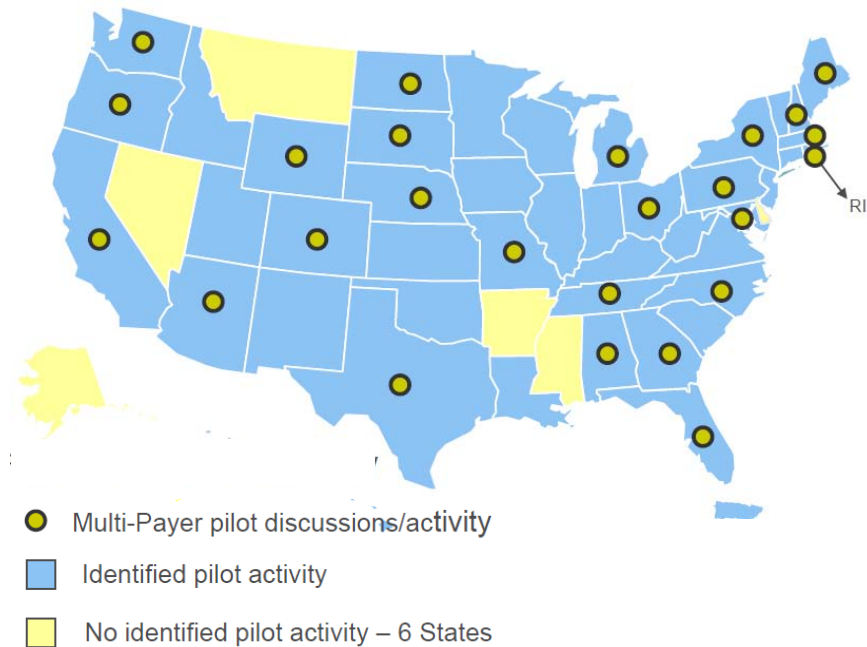
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- Better quality
  - ▶ 129% increase in patients receiving optimal diabetes care, 48% increase in patients receiving optimal heart disease care
- Better access
  - ▶ 350% reduction in appointment waiting time
- Reduced cost
  - ▶ 39% decrease in emergency room visits, 24% decrease in admissions

# Medical Homes have a clear potential to improve quality, costs, and satisfaction

- **Medical homes have yielded promising results ...**
  - ▶ 29% reduction in ED visits at Group Health
  - ▶ 20% reduction in hospitalizations at Geisinger
  - ▶ Achieve 94% of diabetes patients having  $\geq 2$  primary care visits per year for NC Medicaid
  - ▶ Over \$400 million saved over 4 years for NC Medicaid
  - ▶ 3.8% total cost savings in Iowa
  - ▶ 11% expected cost savings in VT
  - ▶ \$640/year saved per patient for the community at Intermountain

- **... and are being widely adopted across the country**



**•45 states are involved in medical home pilot activity**



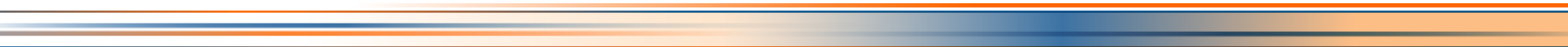
Under the new Law The Secretary of Health and Human Services (HHS) will have the authority to expand pilot programs and put them into practice—without going through Congress.

(See the law, Patient Protection and Affordable Care Act, § 3021 (2009), Center for Medicare and Medicaid Innovation within CMS, p.723).

# Virtual Teams

## Introducing the Medical Neighborhood

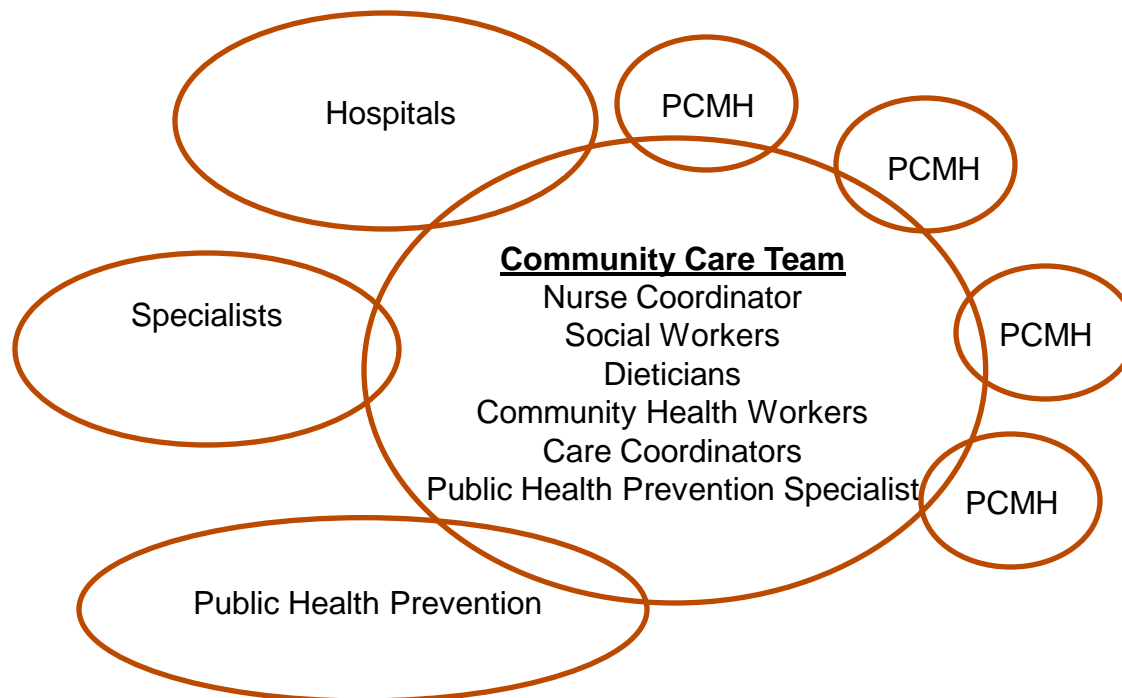
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- PCMH encompasses a multidisciplinary team approach – with each practice deciding the best team composition to meet its goals, and then treating all team members as a unified group of professionals, whether on site or united by an interoperable electronic health record
  - As we move towards risk-adjusted bundled or global payments, we will increasingly need a unified team approach encompassing all professionals in a community who can add value to the PCMH effort
- 
- 

# PCMH in Action

## Vermont “Blueprint” model

### A Coordinated Health System



Health IT Framework

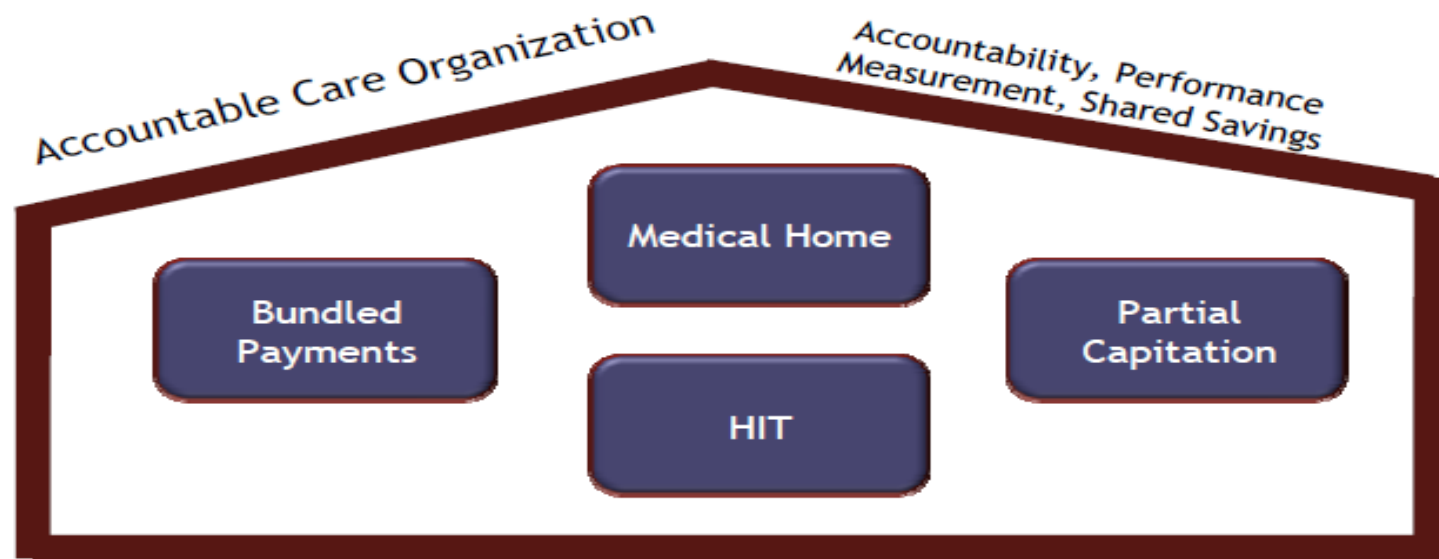
Global Information Framework

Evaluation Framework

Operations

# Accountable Care Organizations

*The overarching structure in which other reforms can thrive*



Source: Brookings & Dartmouth Institute, 2009

## Pilot Activity



# Summary

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A workable primary care model is essential – the patient centered medical home!

Health Information Technology is a critical foundation of healthcare reforms

Consumers will continue to be more savvy, demanding, and responsible for their own care – HIT can provide a “nudge” into consumer activation

New technologies such as virtualization are rapidly facilitating provider and patient engagement and exchange