



## **HIT Infrastructure and Quality: Supporting Providers and Caring for Underserved Populations**

Anne C. Beal, MD, MPH  
President  
Aetna Foundation, Inc.



**Massachusetts Medical Society**  
**Health Care Reform: The Role of IT and Infrastructure**

January 14, 2011

- Health IT and Health Care Quality
- Aetna's Work in Health IT Use and Adoption
- Health Reform, Health IT and Underserved Patient Populations

**EMR-electronic medical record** is a computerized medical record.

**HIE-health information exchange** is the sharing of healthcare information electronically across organizations, for example from a physician's office to a hospital.

**PMS-practice management software** is for office management and the day-to-day operations of a medical practice, for example scheduling and billing.

**PHR-personal health record** is a health record that is initiated and maintained by an individual.

**HIT-Health Information technology** is the umbrella term that includes all of the above and refers to the electronic management of health information and its secure exchange between patients, providers, government and quality entities, and payers.

- Executive Order Created the Position of the National Coordinator in 2004
- The American Recovery and Reinvestment Act (ARRA) / Health Information Technology for Economic and Clinical Health (HITECH) in 2009
  - \$19 Billion in initial funding
  - Statue for ONCHIT
  - CMS EHR Incentives and Penalties
- The Patient Protection and Affordable Care Act (PPACA) in 2010
  - Provisions for outcomes-based payment models requiring new tools to coordinate care
  - Accountable Care Organizations (ACOs)
  - Patient Centered Medical Home (PCMH)
  - CMS Innovation Center

Source: David Blumenthal. Stimulating the Adoption of Health Information Technology. NEJM, 360, no. 15 (2009): 1477-1479

## Commonly Stated Goals for Quality Improvement

5

5

- Improve Clinical Processes and Outcomes
- Improve Patient Experience
- Reduce Costs/Bend the Cost Curve

### Triple Aims

Source: Donald M. Berwick, Thomas W. Nolan and John Whittington The Triple Aim: Care, Health, And Cost. Health Affairs, 27, no. 3 (2008): 759-769

## What Systems Are Needed to Provide High Quality Care?

6

- Systems to Order Tests and Medications
  - Ordering Lab Tests
  - Patient Lab Results
  - Medical Notes
  - Alerts or Prompts About Drug Dose or Interactions
  - Accurate List of All Patient's Medications
  - Prescribing
- Systems for Patient Registries
  - List of Patients by Diagnosis
  - List of Patients by Lab Results
  - List of Patients Overdue for Follow-up or Preventive Care
- Systems to Track Patients, Tests, and Send Reminders for Preventive Care
  - Tracking of Lab Results
  - Patients Receive Notices for Follow Up and Routine Care
  - Provider Receives Alert to Give Patient Lab Results

## Which Medical Record is Easier for Creating Systems to Track Patients?

7

### Paper



### Electronic



## Study of the Impact of HIT on Quality

8

### Enhancing the Capacity of Community Health Centers to Achieve High Performance

Findings from the 2009 Commonwealth Fund  
National Survey of Federally Qualified Health Centers



### • National Survey of Federally Qualified Health Centers

• The sample was drawn from a list provided by the Bureau of Primary Health Care (BPHC) of all FQHC grantees that have at least one site that is a community-based primary care clinic.

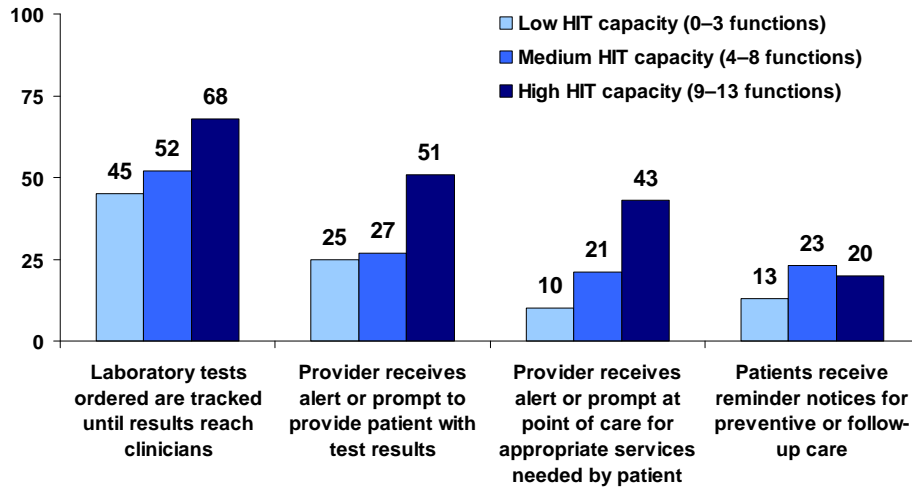
• A total of 1,007 FQHCs were sent the questionnaire and 795 responded, yielding a response rate of 79 percent.

Source: [http://www.commonwealthfund.org/~media/Files/Publications/Fund%20Report/2010/May/1992\\_Doty\\_enhancing\\_capacity\\_community\\_hlt\\_ctr\\_2009\\_FQHC\\_survey\\_v5.pdf](http://www.commonwealthfund.org/~media/Files/Publications/Fund%20Report/2010/May/1992_Doty_enhancing_capacity_community_hlt_ctr_2009_FQHC_survey_v5.pdf)

## How Can HIT Improve Quality? Labs and Reminders

9

Percent of centers reporting the following usually occurs:



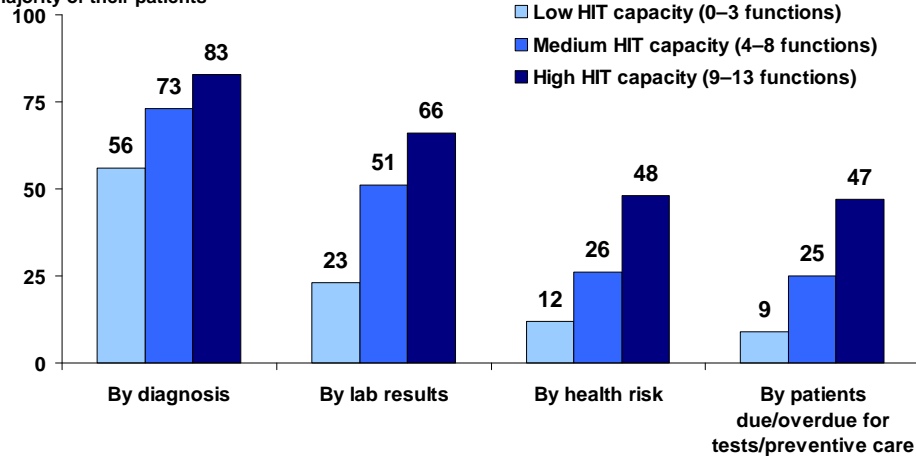
Note: Usually means 75% to 100% of the time.

Source: The Commonwealth Fund National Survey of Federally Qualified Health Centers (2009).

## How Can HIT Improve Quality? Population Management

10

Percent of centers reporting it is easy to generate clinical information about the majority of their patients



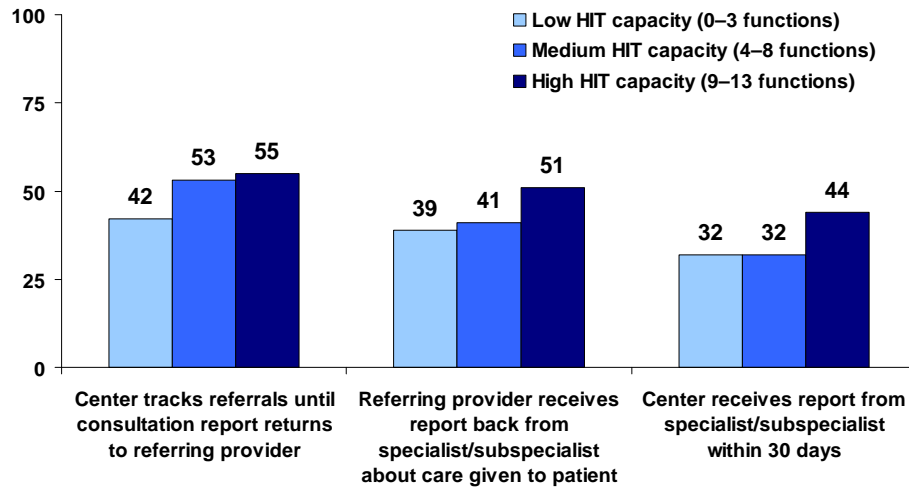
Note: Easy means they can generate information about the majority of patients in less than 24 hours.

Source: The Commonwealth Fund National Survey of Federally Qualified Health Centers (2009).

## How Can HIT Improve Quality? Tracking and Follow Up

11

Percent of centers reporting the following usually occurs:



Note: Usually means 75% to 100% of the time.

Source: The Commonwealth Fund National Survey of Federally Qualified Health Centers (2009).

## Aetna at a Glance

12

### Insurance Products

### Plan Administration Services

### Care Management Services



#### Customers

- Individuals
- Employer groups
- Government plans

- Employer groups
- (69% of Fortune 100)

- Individuals
- Employer groups
- Health Plans
- Hospitals and Physicians



#### Products & Services

- Medical
- Dental
- Pharmacy
- Life
- Disability

- Benefit Plan Administration Consultation
- Plan Sponsor Services
- Wellness

- Disease Management
- Case Management
- Personal Health Record (PHR)
- Health Information Exchange
- Clinical Decision Support
- Accountable Care Solutions



#### Membership

- 6M Medical
- 5M Dental
- 5M Pharmacy

- 13M Medical
- 9M Dental
- 4M Pharmacy

- >10M PHR Members
- >8M Care Considerations
- >700 Hospitals\*
- >125K Physicians\*
- >250K End Users\*
- >150 Unique Clinical System Integrations\*

As of September 30, 2010

\* Post close Medcity acquisition

## Our Business Model Is Evolving

13



## Aetna Has Been Using Data to Improve Care Through ActiveHealth

14

### Electronic Care Considerations

Notices sent to physicians and patients designed to improve coordination of care and health outcomes

### Predictive Models

Finds gaps in care and identifies actionable opportunities for outreach



### Aetna's CareEngine®

Scans 100% of the members, 100% of the time

### Aetna Total Clinical View

Allows a 360° view of member health information

Impact

Over a 12 month period, ActiveHealth Care Considerations led to:

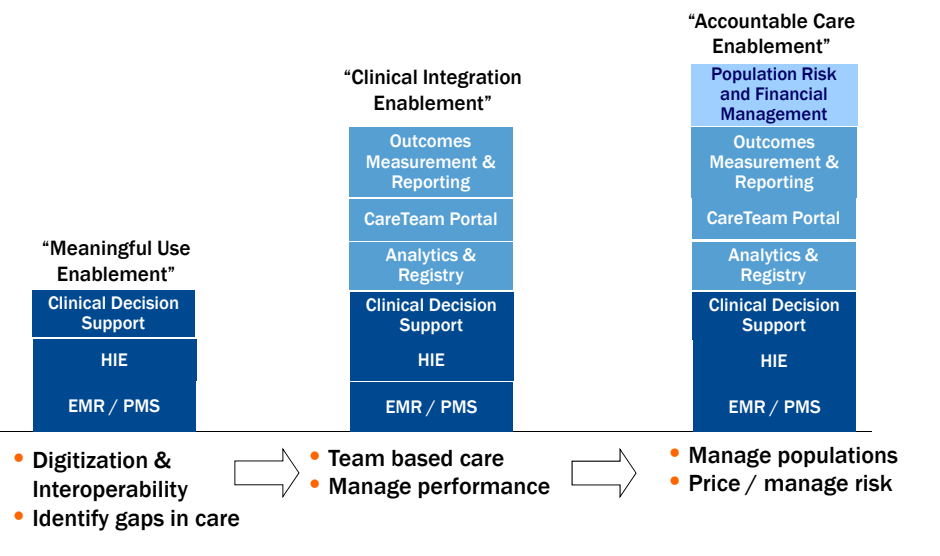
- 8.4% fewer hospitalizations
- \$8.07PPM lower in paid claims
- Identification of 46 per 1000 potentially serious medical errors

Source: Javitt, et al. "Using a Claims Data-based, Sentinel System to Improve Compliance with Clinical Guidelines: Results of a Randomized Prospective Study," AJMC Feb. 2005; 11:93-102

- The EMR is an important tool for patient care.
- But, other capabilities are needed to make the shift to Patient Centered Medical Home (PCMH) and ultimately Accountable Care Organizations (ACO)
  - Quality and efficiency measurement
  - Office system redesign
  - Registries and population management
  - Team care
  - Information integration
  - Care transitions
  - Shared risk/rewards
- Assessing the patient experience with care



15





- Unlock data in EMRs and practice management systems for use in workflow
- Apply evidence based rules to clinical domain to improve decision making
- Share actionable information across physicians, care teams and facilities

Meaningful Use  
EnablementClinical Decision  
SupportHealth Information  
ExchangeEMR / Practice  
Management System

The screenshot displays a clinical dashboard with three main sections: Alerts (4), Clinical updates (4), and Today's Schedule. The Alerts section lists various medical alerts such as 'Warfarin and Sulfinpyrazone: DR - Consider Increasing the Dose' and 'Diabetes - Consider Eye Exam'. The Clinical updates section shows updates for a patient named 'Tiffany Smith', including 'Hospital Discharge for Pneumonia' and '38% decline in hemoglobin'. The Today's Schedule section lists appointments for 'Grand Rounds' and 'Phyllis George'. A callout bubble with the text 'Communicate with members of your care team.' points to the Alerts section.

- Make information more accessible improving workflow and resource allocation
- Track compliance with quality measures and inform actions

Clinical Integration  
EnablementOutcomes  
Measurement &  
Reporting

CareTeam Portal

Analytics &amp; Registry

Clinical Decision  
SupportHealth Information  
ExchangeEMR / Practice  
Management System

The screenshot shows a patient profile for 'Tiffany Smith (ID: M234555)'. The page is organized into several sections: Patient Information (including DOB, Birth Date, Race, Gender, Address, and Phone), Insurance (listing Anthem and UnitedHealthcare), and a list of Current Problems (including Diabetes Type 2, Hypertension, and Obesity). A callout bubble with the text 'Detailed patient information is organized for ease of use including key demographics, the careteam, a clinical summary, data tracker and alerts.' points to the Patient Information section.

- Enable proactive population management through real-time predictive modeling
- Track performance over time to inform decision making

## Accountable Care Enablement

Population, Risk &  
Financial  
Management

Outcomes  
Measurement &  
Reporting

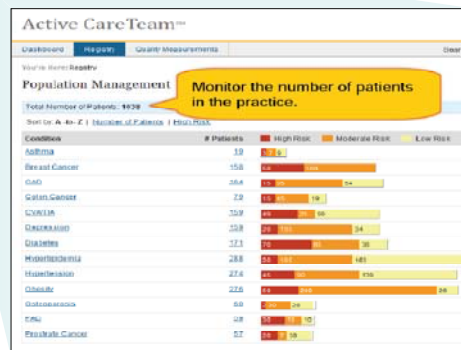
CareTeam Portal

Analytics & Registry

Clinical Decision  
Support

Health Information  
Exchange

EMR / Practice  
Management System



## Model

## Description

A

Enhanced  
Clinical  
Capabilities  
*All Payer*

- Enable sharing of clinical, financial & administrative data via HIE connectivity
- Apply >2K clinical rules and 27 NQF-endorsed quality measures to deliver actionable information
- Stratify entire patient population by risk
- Assist with workflow redesign, practice optimization & business alignment to achieve clinical integration & maximize care team productivity

B

Population-  
Specific  
Collaboration  
(e.g., Medicare)  
*All Payer or Aetna-only*

- Utilize case management staff and programs (e.g., end of life) to assist transition between hospital and physician practices
- Optimize revenue through appropriate Medicare risk severity coding
- Access actionable clinical data, analytics, & reporting on patient population through provided technology

C

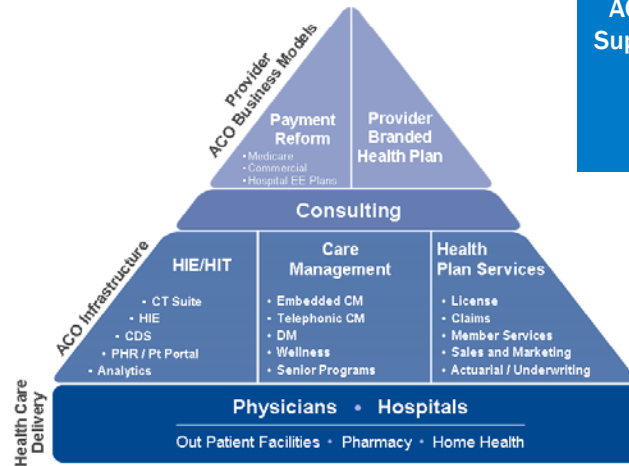
Private Label  
Health Plan

- Use of Aetna insurance license and expertise (e.g., actuarial) to enable private label/co-branded health plan offering and manage risk
- Leverage Aetna scale/operations – claims processing, customer service, call center, & care management (e.g., staff, programs, technology)

## Aetna's Accountable Care Solutions

21

21



ACO Strategies to  
Support Triple Aims:  
Quality  
Cost  
Pt Experience

22

22

## Health Reform, Health IT and Underserved Patient Populations

## Section 4302 PPACA: Data Use Standards

23

23

- Affordable Care Act Section 4302 begins:
- The Secretary shall ensure that, by not later than 2 years after the date of enactment of this title, any federally conducted or supported health care or public health program, activity or survey collects and reports, to the extent practicable data on race, ethnicity, sex, primary language, and disability status
- Must be for self-reported measures
- Must comply with federal Office of Management and Budget (OMB) standards

## Section 4302 PPACA: Analysis and Reporting

24

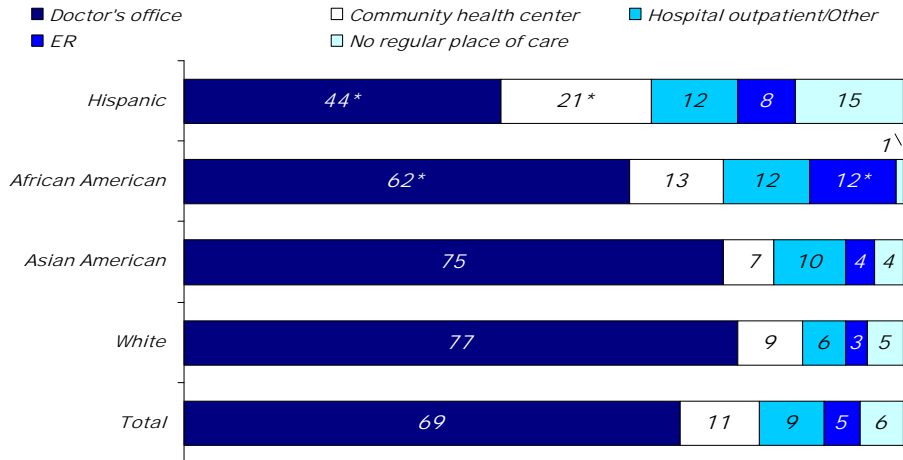
24

- Requires that any federal reporting requirements related to health care quality be reported (to the extent practicable) by race, ethnicity, sex, primary language, and disability status.
- Calls for the incorporation of demographic data collection standards into national health IT efforts

## Large Proportions of Minority Patients Use<sup>5</sup> Private Doctors for Their Regular Place of Care

25

Percent of adults 18–64



\* Compared with whites, differences remain statistically significant after adjusting for insurance or income.  
Source: Commonwealth Fund 2006 Health Care Quality Survey.

## Summary

26

- Health IT and Health Care Quality
- Aetna's Work in Health IT Use and Adoption
- Health Reform, Health IT and Underserved Patient Populations