



Populations/Quality Patient-Centered Medical Home Hearing

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Overview

- Building a national HIT infrastructure
- Clinical data and standards for the Medical Home

Building a national HIT infrastructure

Key Health IT Components

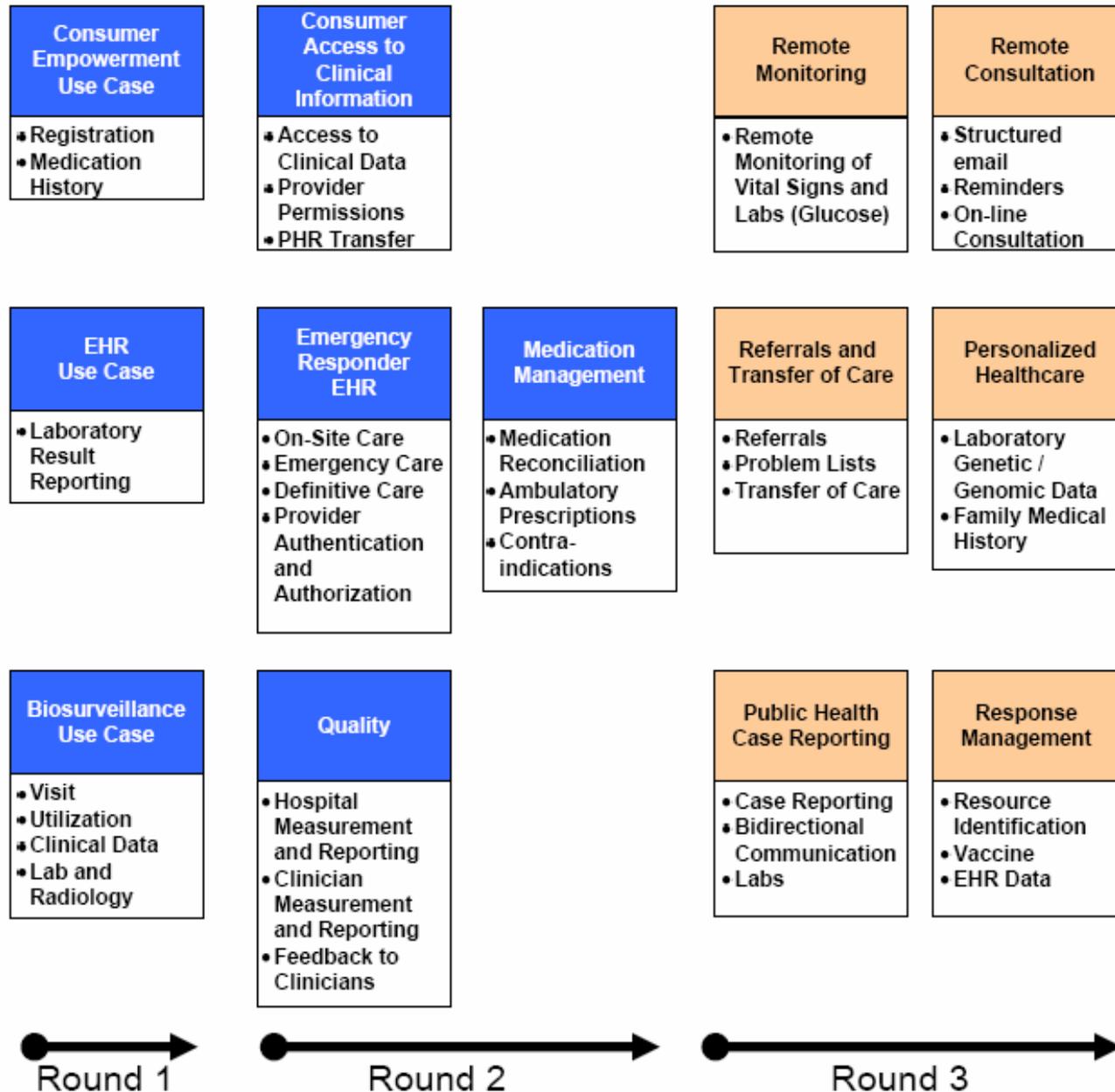
A Robust, Interoperable, Health IT Environment that brings together:

- Electronic Health Records (EHR)
- Personal Health Records (PHR)
- Public Health Information



- Standards (Data, Technical and Security)
- Interoperable Health Information Exchange Network
(*Nationwide Health Information Network - NHIN*)

AHIC Priorities and Use Case Roadmap



AHIC Priorities Into Use Cases

Chronic Care Workgroup Priority Areas

The broad focus of the Chronic Care Workgroup focuses on a specific area of the health care system that is critical to the overall health of the population and that has the potential to be improved through the use of information technology.

Bio-surveillance Priority Areas

At its broadest level, the Quality Workgroup is focused on leveraging the information technology to enable the development of useful quality measures, standardize the data capture and ease the reporting of complex measures, improve clinical performance by improving access to information through clinical decision support, and better align performance measures and limitations of HIT. Although the Workgroup has just begun its work, tremendous opportunities exist to align the development of electronic health information with the full range of the nation's goal to make quality information transparent to providers and the public.

The Quality Workgroup has identified key preliminary priority areas that are near term in driving in parallel advances in quality measurement and the interoperable health information technology to support these quality measures include the following:

- **Automatic data capture and reporting to support of a core Quality Alliance (QOA) impact quality measures** – involves defining document flows, storage and export guidelines for data capture and transfer the data elements required to determine denominator of a core set of hospital quality measures.
- **Automatic data capture and reporting to support of a core quality measures** – involves, at a minimum, defining document support guidelines for electronic health records to capture and transfer elements required to determine the numerator and denominator of physician quality measures.
- **Provide feedback to providers in real or near real time** – data capture that supports the development of the denominator and translating those patient identification algorithms into clinical functionality to help providers know precisely what they need to ensure quality care.

AHIC workgroup priorities and issues

CONSUMER PERSPECTIVE	
Consumer Empowerment	Chronic Care
<ul style="list-style-type: none"> • Meaningful Use • Lab results as needed by patient • List of conditions & allergies • Health problems • Medication allergies • Allergies • Administrative features <ul style="list-style-type: none"> • Appointment scheduling • Demographic profile • Editing account profile • Insurance eligibility & claims • Financial reconciliation & management • Privacy & access control • Reminders (examples) <ul style="list-style-type: none"> • Annual check-up • Cancer screening – mammograms • Cancer screening – colonoscopy • Immunizations • Mid-Longer Term <ul style="list-style-type: none"> • Online consultation • Structured email • Summaries of healthcare encounters • Dates of services • Diagnosis codes • Procedure codes • Educational information • Evidence based health information 	<ul style="list-style-type: none"> • Meaningful Use • Secure messaging • Online consultation • Vital signs • Weight • Glucose monitoring • Spirometry • Mid-Longer Term <ul style="list-style-type: none"> • Anticoagulation • Blood Pressure • Heart rate and rhythm • Pulse oximetry • Fall/risk monitoring • Monitoring of medications • Other <ul style="list-style-type: none"> • Vital signs (general) • Labs and pharmacy • Lesson assessment • Remote monitoring for chronic conditions • Workgroup Issues • HIT use in specific populations • Limited interoperability

Priorities and areas clustered for coordination and synergy

Capability Options	
Remote Monitoring (Providers involved in chronic care management would benefit from automated remote monitor patient physiological indicators recorded on home medical devices, which are then transmitted & provided for inclusion in the patient's electronic health record. Examples of indicators could include weight, blood pressure, heart rate and rhythm, pulse oximetry, other vital signs, as well as others from home medical devices such as glucose readings.)	Workgroup Issues CC 2.0 Vital Signs CC 2.1 Weight CC 2.2 Blood Pressure CC 2.3 Heart rate and rhythm CC 2.4 Pulse oximetry CC 3.1 Labs/glucometer
Remote Consultation (Based on the information provided through remote monitoring and other sources, consumers can consult with their healthcare providers remotely. This could occur through secure email as well as time online consultations. Patients could also benefit from reminders initiated by clinicians that be delivered via email or other means to remind patients of events and activities that are important to maintain their level of health.)	Workgroup Issues CC 4.1 Structured email CC 1.1 Online consultation AHIC/CE 2.0 Reminders CC 4.x Medico-legal liability risks associated with remote care/State licensure constraints CE 4.x PHR use integrated with workflow CE 4.x Quality of pre-populated data
Consumer Access to Clinical Information (Consumers will benefit from the ability to access important healthcare data stored within their health record to assist them in making decisions regarding care and healthy lifestyles. Accessible information could include registration information, medications history, lab results, current and health conditions, allergies, summaries of healthcare encounters and diagnoses. Consumers will be able to incorporate this information from their EHRs into Personal Health Records and share the information with designated individuals as needed. The PHR should describe medical terminology in layman's terms for the consumer. PHRs should be portable between vendors, as consumers can	Workgroup Issues CC 4.x Medico-legal liability risks associated with remote care/State licensure constraints CE 4.x PHR use integrated with workflow CE 4.x Quality of pre-populated data

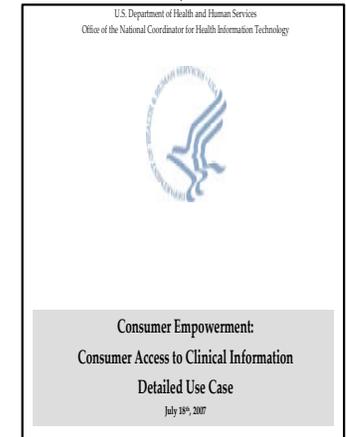
Use case options for AHIC prioritization

Public Feedback



Prototype Use Case

Public Feedback



Detailed Use Case

“Use cases (*anvendningsfall*), stated simply, allow description of sequences of events that, taken together, lead to a system doing something useful.”

Kurt Bittner, Ian Spence (2002). Use Case Modeling. Addison Wesley Professional, 2-3. ISBN 0-201-70913-9.



Standards into Products – Summary of the Cyclical Process



Health-related Priorities Established

Describe Health-related Scenarios

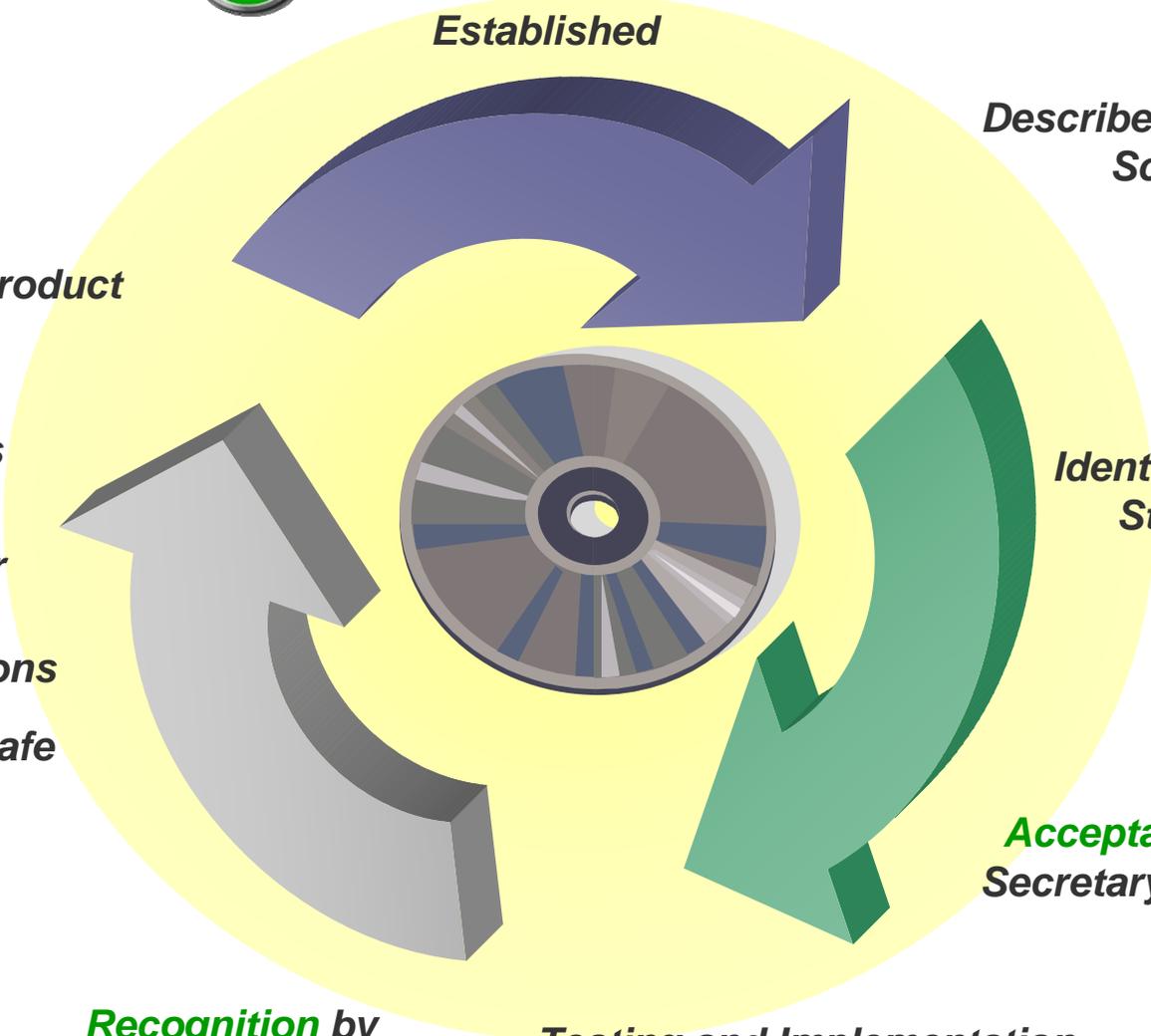
Identify Health IT Standards

Acceptance by Secretary of HHS

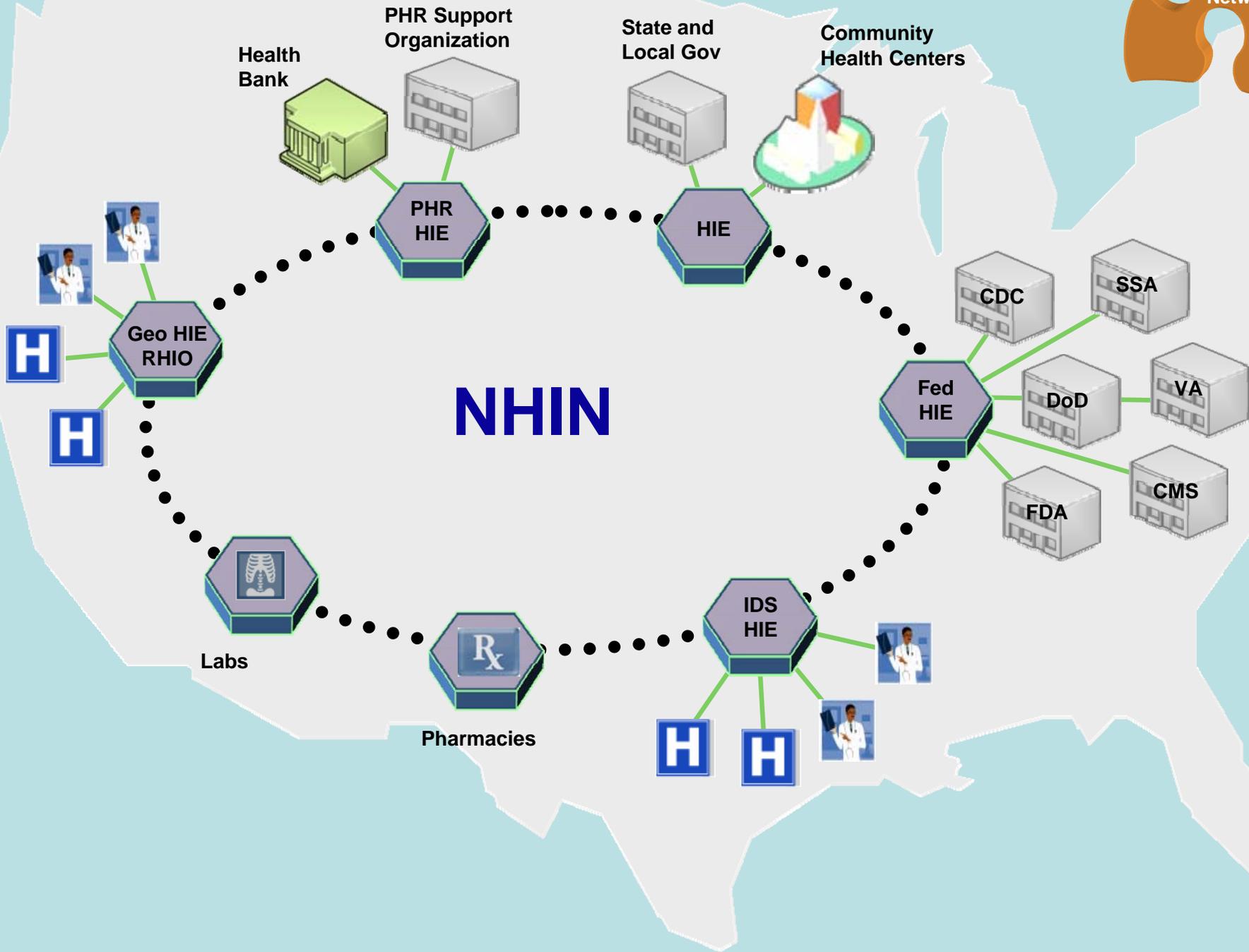
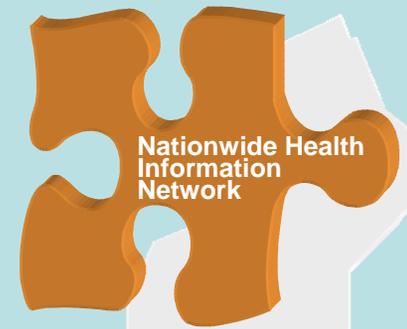
Testing and Implementation (1 year gap)

Recognition by Secretary of HHS

- **Used in Health IT Product Certification**
- **Required in**
 - **Federal Systems and Healthcare Contracts (Executive Order 13410)**
 - **“Stark” exceptions and Anti- Kickback safe harbor**



The Nationwide Health Information Network



Privacy, Confidentiality, Security

Privacy

(L. *privatus*; belonging to oneself, not to the state):
a right

Confidentiality

(L. *confidere*; to trust): **a trust**

Security

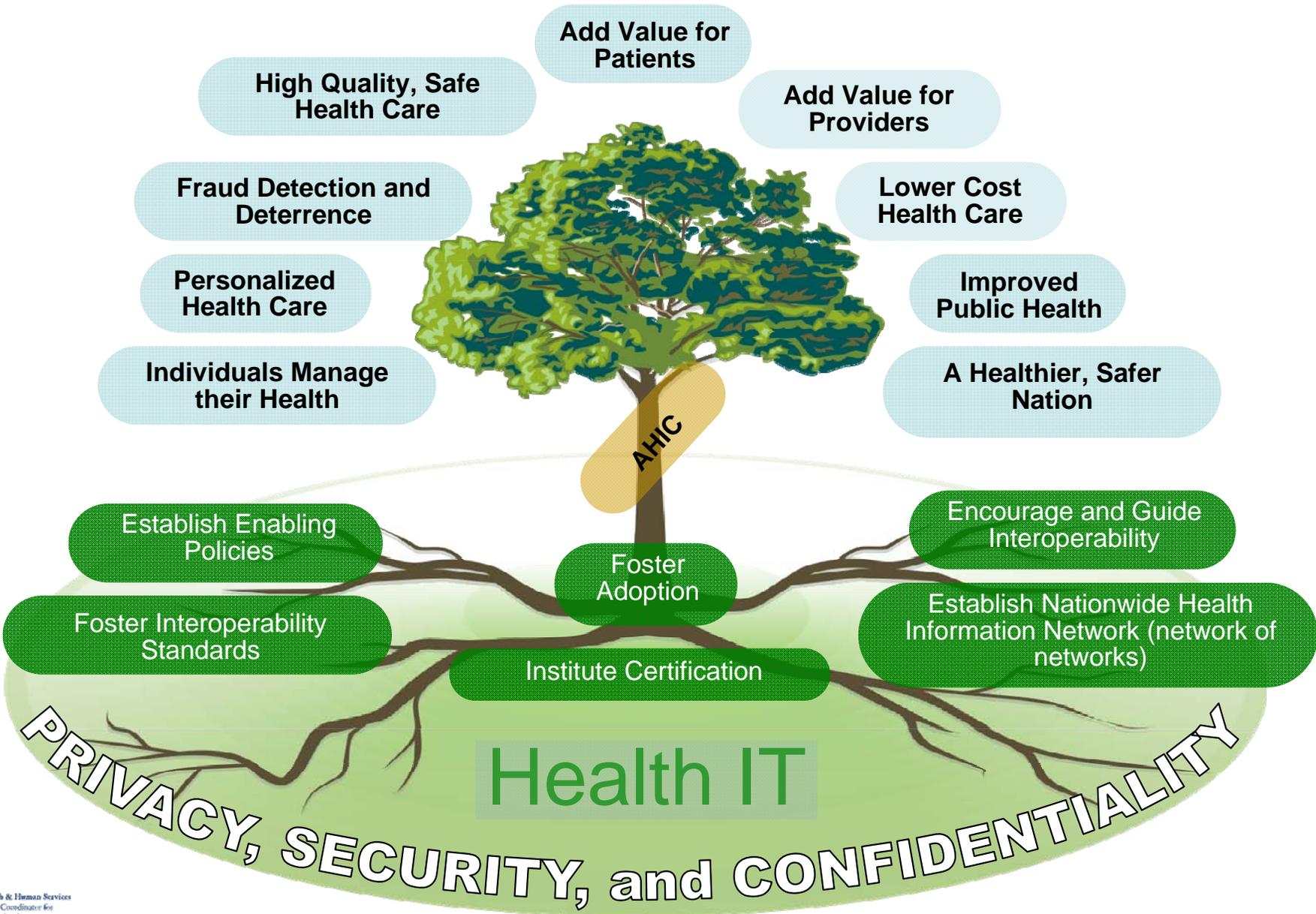
(L. *securus*; free from care): **a state of being**

The AHIC Successes

- **Standards to allow interoperability** will be “recognized” by Secretary Leavitt over the next several months
 - Laboratory data access by providers
 - Medication lists for patients
 - Electronic clipboard for patient registration
 - Manage community-level health events
- **92 Ambulatory EHRs** have been **certified** (2006 & 2007)
 - Have begun Enterprise (Inpatient) EHR certification this year
- **Nationwide Health Information Network advancing**
 - “Trial implementation” contracts announced October 2007
 - Move from prototypes to trial use with data exchange among communities and with other health-related entities

**More progress in the past 3 years
than in the TWO decades**

Health IT Support for Transforming Health Care

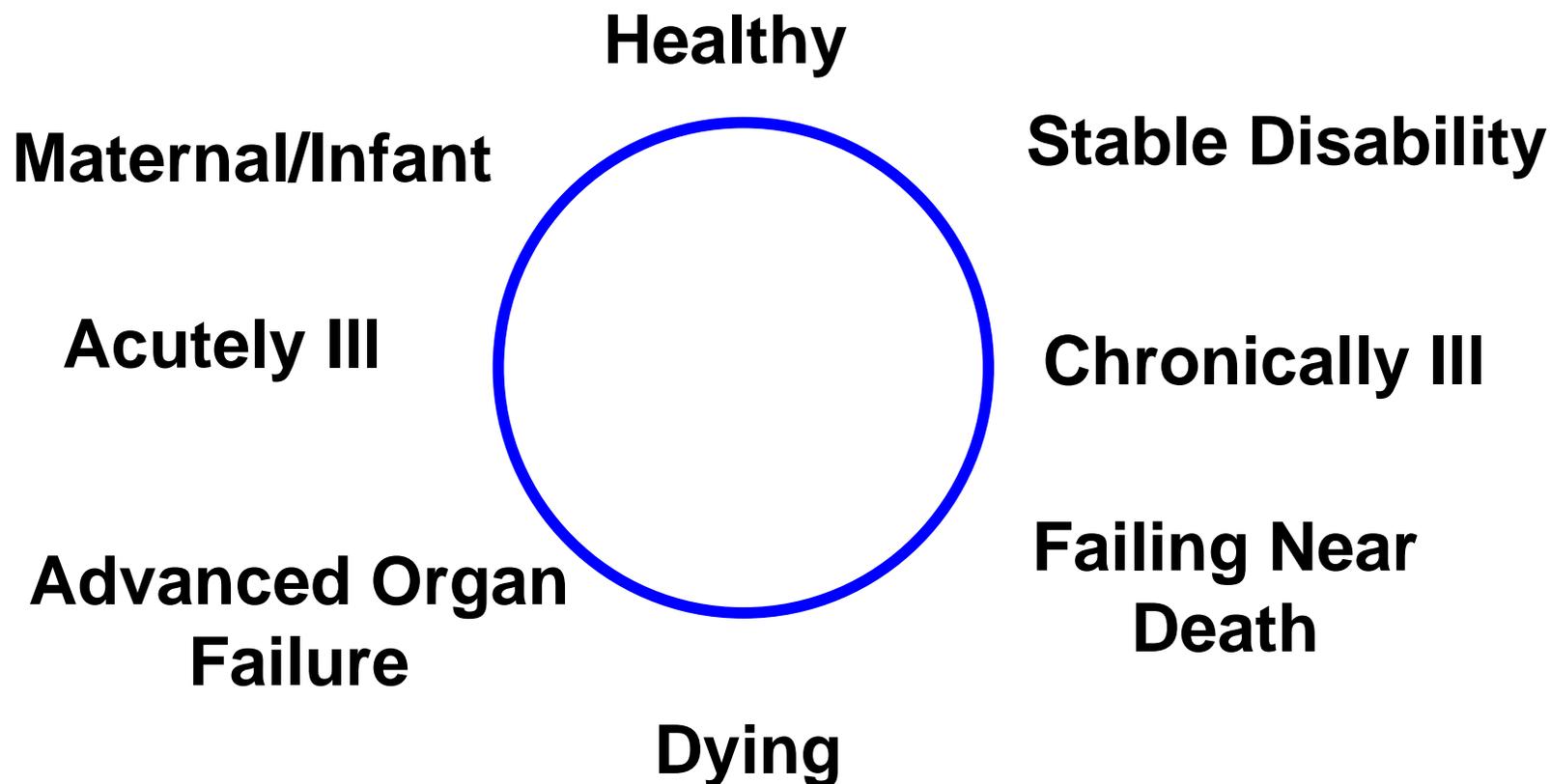


Clinical Data and Standards for the Medical Home

Volume 85, Number 2, 2007

Using Population Segmentation to Provide Better Health Care for All: The “Bridges to Health” Model

Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services



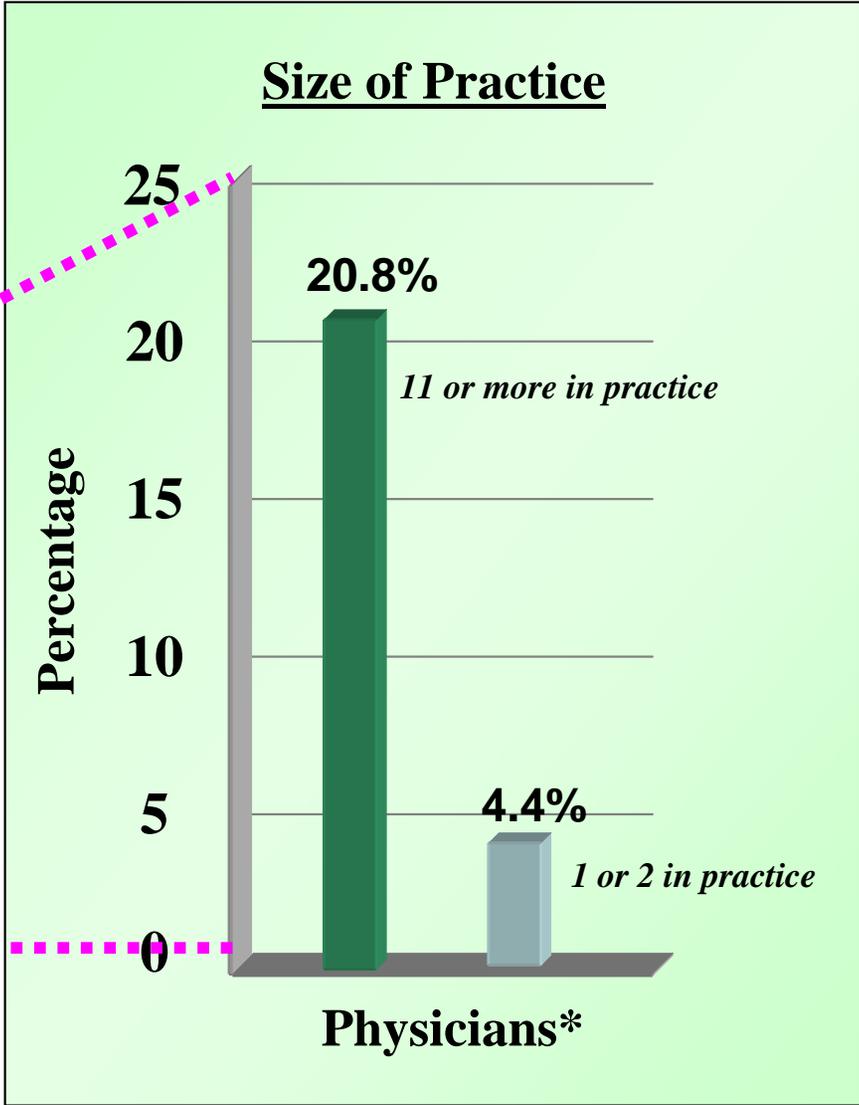
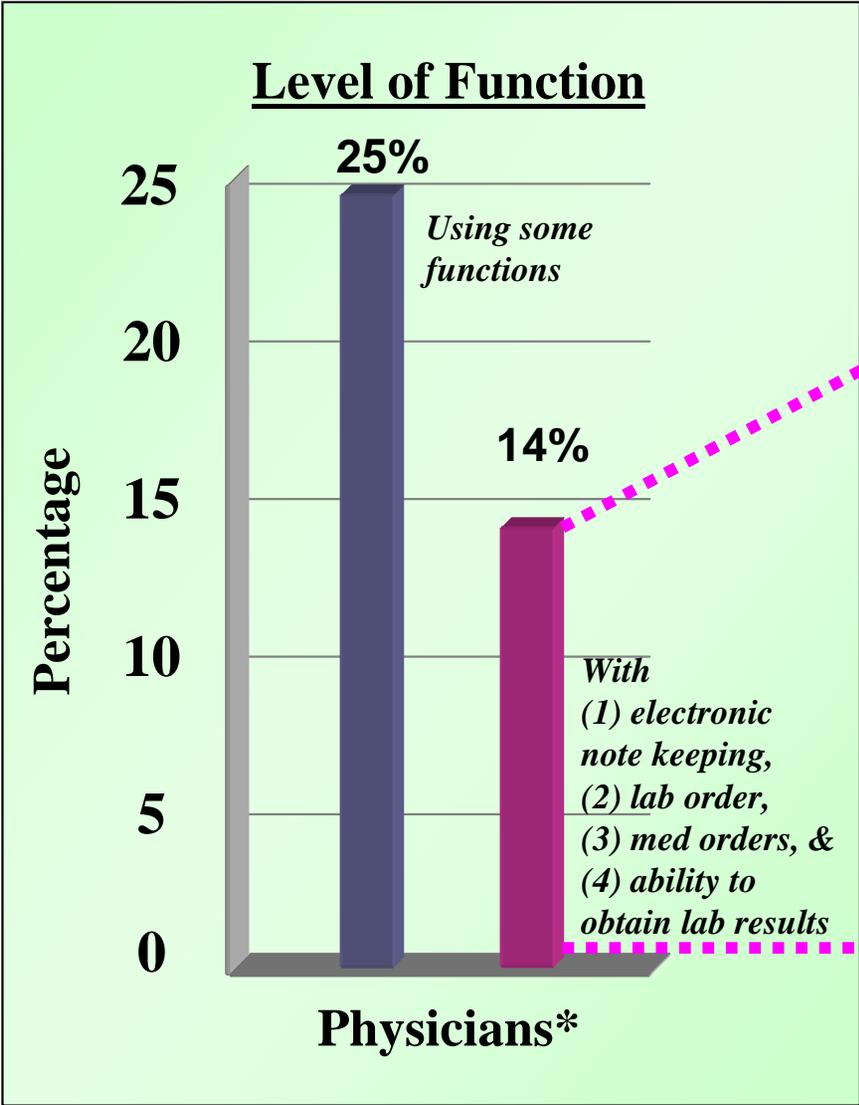
Sir Cyril Chantler

Medicine used to be simple,
ineffective and relatively
safe.

Now it is complex, effective
and potentially dangerous.

The role and education of doctors in the delivery of healthcare.
Hollister Lecture delivered at the Institute of Health Services Research, Northwestern
University, Illinois, USA. October 1998. *Lancet* 1999;353:1178–81.

Current State EHR Adoption: US Physicians (2007)



*3 times more prevalent in metropolitan areas

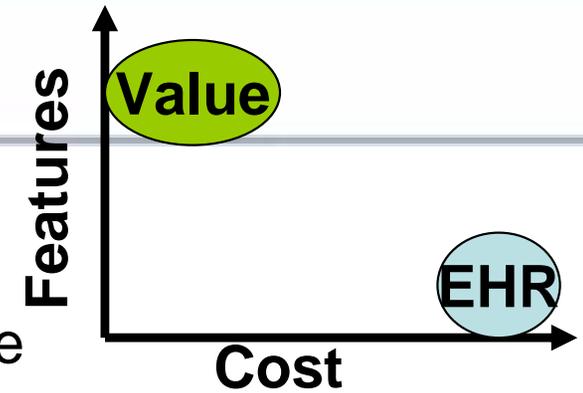
EHR Value Proposition

Cost

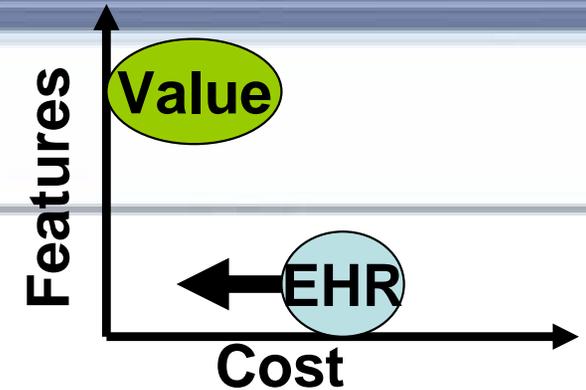
- Physician office average cost: \$20,000/user of software, installation, loss of productivity – hardware additional
- Hospital median costs: \$17,500/bed (\$12,000 ongoing annual operations)
- Misalignment of incentives

Features

- Usability
- Necessary workflow changes
- Concerns about obsolescence and reinvestment
- Lack of interoperability
- Privacy, Confidentiality, Security, and New Legal Exposures



Cost



- ✓ Stark & Anti-kickback for Donations by Hospitals to Small Providers
- ✓ Decreased Malpractice Premiums Being Explored
- ✓ **HRSA grants to promote adoption and effective use of HIT in the safety net community**
- ✓ Medicare Demonstration Announced – to Involve up to 1,200 Physician Practices to Receive **Bonus Payments** for Reporting & Quality Improvements From EHR Use

The medical home in action.

Mrs. White, a 55 year old woman you have known for years, books an appointment to see you this afternoon.

CONSUMER
EMPOWERMENT

- She electronically submits from home her **reasons for encounter** - new symptoms of fatigue and nausea and discussion about screening tests.
- When she arrives, your EHR face sheet displays her **active health problems** (overweight, dyslipidemia) and medications (lovastatin), and **prompts** you that she is in need of a mammogram.
- As you clarify her symptoms and enter them into her record, you run a **decision support** routine that uses your PBRN's **longitudinal epidemiologic database** to calculate a list of likely diagnoses and their relative odds ratios for primary care patients in her demographic group.
- You discuss these possibilities with Mrs White, decide to assess the most likely diagnoses with laboratory tests, and confirm that she has new-onset Type 2 diabetes.

EHR Use Case

- Entering her diagnosis into her record automatically enrolls her in your **practice diabetes registry**, sends an **email notification** to her with the website for **on-line patient education** and asks her to schedule a visit with your practice nurse, who does diabetic training sessions.
- She self-monitors glucoses and **posts results** to the practice through the **secure patient portal**, where they are forwarded to your nurse who reviews the pattern of results.
- After a brief honeymoon period, her glucoses rise and you send her an **email message** to begin metformin, and send to her local pharmacy an **electronic prescription** for metformin.

Remote Monitoring

Remote Monitoring
Consumer Access

- At her follow-up face-to-face encounter with you 3 months later, your EHR **prompts** you to carry out initial diabetic care measures and **reminds** you that her last recorded LDL-C is above target range. You spend much of this encounter discussing how she is adapting to her diagnosis and helping her set **treatment goals and preferences**, which are entered into the record.
- After the visit, she continues to monitor and forward her home glucose readings for review and adjustment of medications, and forwards all questions to the practice through the **patient portal**.
- As a new member of the diabetes disease registry, her data are included in the **patient summary report** on diabetes disease management compiled every 6 months for review within the practice and forwarded yearly to her insurance company to calculate pay-for-performance bonus payments.

For More Information:

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