

Overview of the American Recovery and Reinvestment Act of 2009

Implications for Health Care Research Centers and National Architecture for HIE

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*“To lower health care cost, cut medical errors, and improve care, **we’ll computerize the nation’s health records in five years**, saving billions of dollars in health care costs and countless lives.”*

American Recovery and Reinvestment Act (ARRA)

TITLE XIII—HEALTH INFORMATION TECHNOLOGY

SEC. 13001. SHORT TITLE; TABLE OF CONTENTS OF TITLE.

(a) **SHORT TITLE.**—This title (and title IV of division B) may be cited as the “Health Information Technology for Economic and Clinical Health Act” or the “HITECH Act”.

TITLE IV—MEDICARE AND MEDICAID HEALTH INFORMATION TECH- NOLOGY; MISCELLANEOUS MEDICARE PROVISIONS



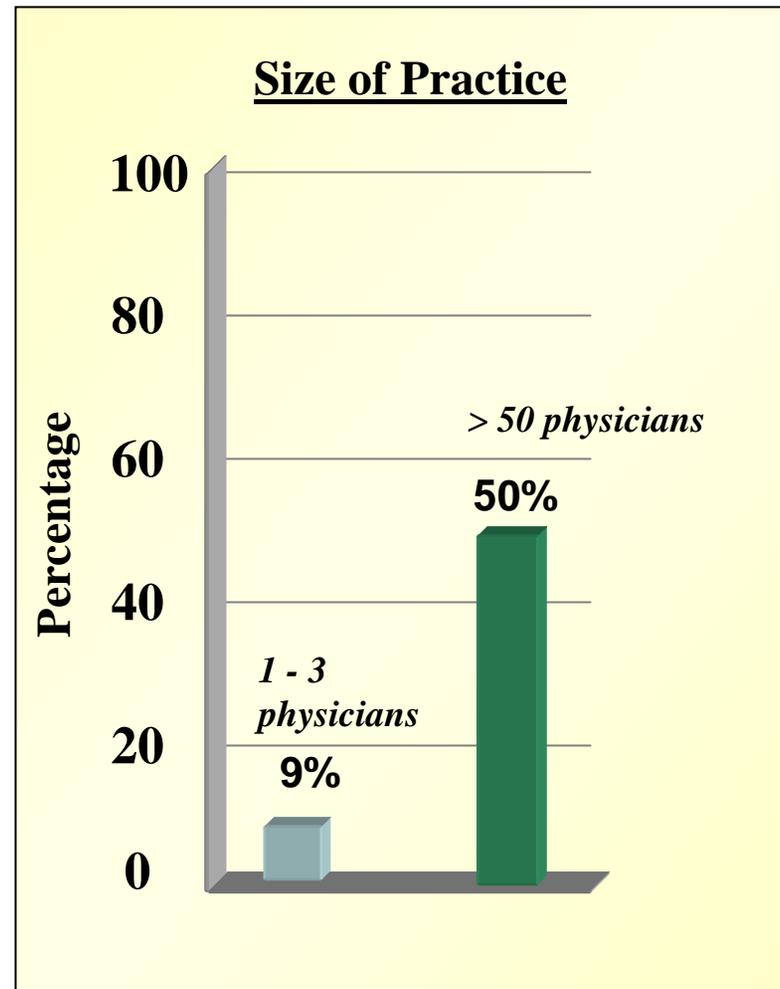
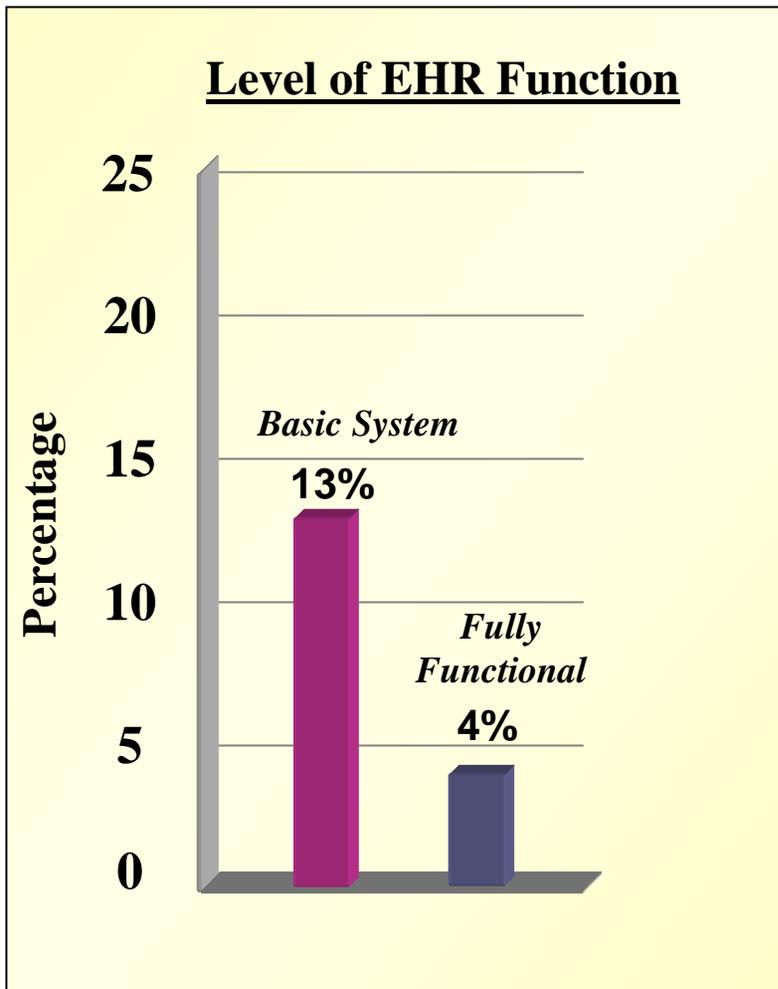
Envisioning a “Tipping Point” -- Health IT as an Enabler

Technology Adoption

Transformational
Change in Health Care
Delivery & Population
Health



EHR Adoption: Where are we now in Office Practices?



DesRoches CM et al., N Engl J Med 2008;359:50-60.

Adoption in Hospitals

- By panel definition:
 - 1.5% have comprehensive system
 - 10.9% have basic system
 - Installed across major clinical units

Jha et al. NEJM 2009

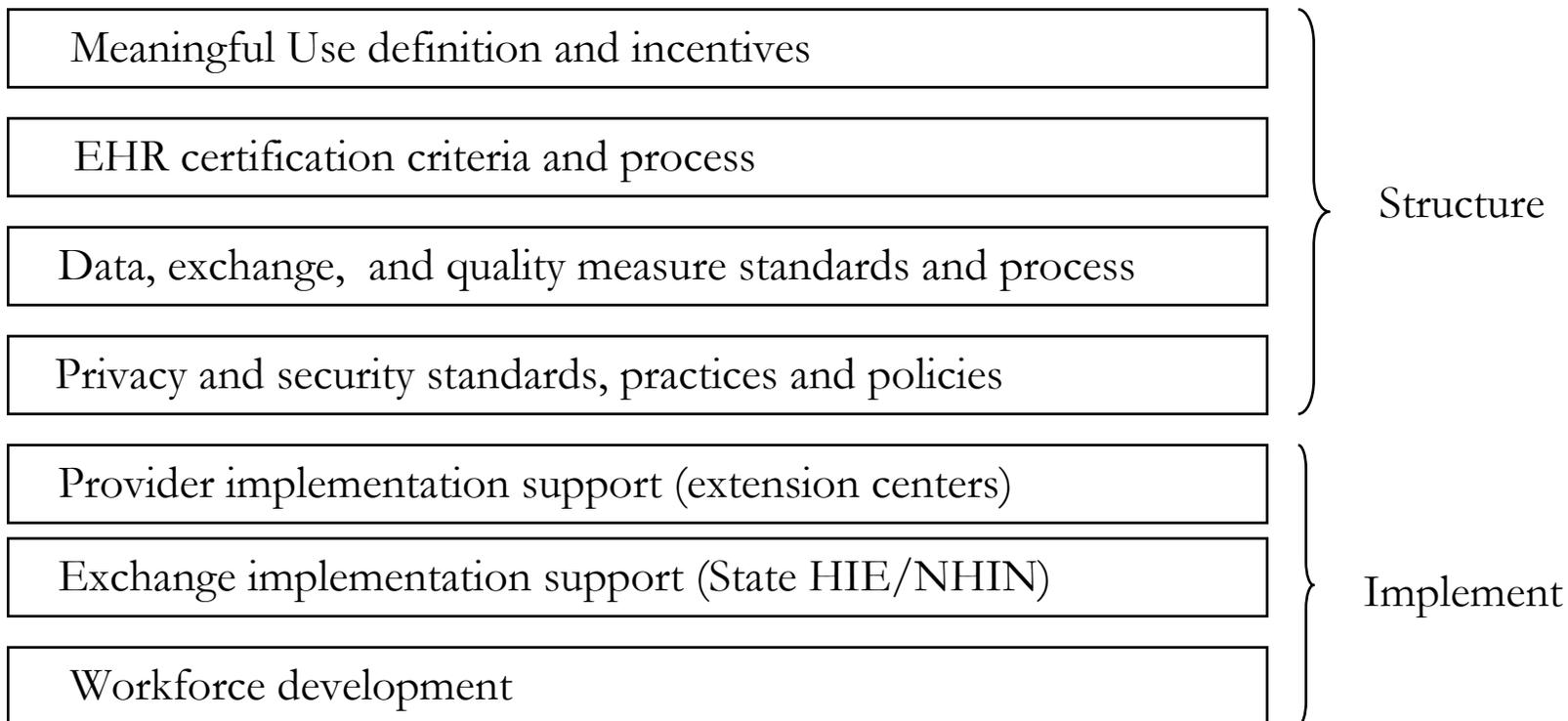
Table 2. Selected Electronic Functionalities and Their Level of Implementation in U.S. Hospitals.

Electronic Functionality	Fully Implemented in All Units	Fully Implemented in at Least One Unit	Implementation Begun or Resources Identified*	No Implementation, with No Specific Plans
Clinical documentation				
Medication lists	45	17	18	20
Nursing assessments	36	21	18	24
Physicians' notes	12	15	29	44
Problem lists	27	17	23	34
Test and imaging results				
Diagnostic-test images (e.g., electrocardiographic tracing)	37	11	19	32
Diagnostic-test results (e.g., echocardiographic report)	52	10	15	23
Laboratory reports	77	7	7	9
Radiologic images	69	10	10	10
Radiologic reports	78	7	7	8
Computerized provider-order entry				
Laboratory tests	20	12	25	42
Medications	17	11	27	45
Decision support				
Clinical guidelines (e.g., beta-blockers after myocardial infarction)	17	10	25	47
Clinical reminders (e.g., pneumococcal vaccine)	23	11	24	42
Drug-allergy alerts	46	15	16	22
Drug-drug interaction alerts	45	16	17	22
Drug-laboratory interaction alerts (e.g., digoxin and low level of serum potassium)	34	14	21	31
Drug-dose support (e.g., renal dose guidance)	31	15	21	33

* These hospitals reported that they were either beginning to implement the specified functionality in at least one unit or had identified the resources required for implementation in the next year.

An Overview of the National Strategy

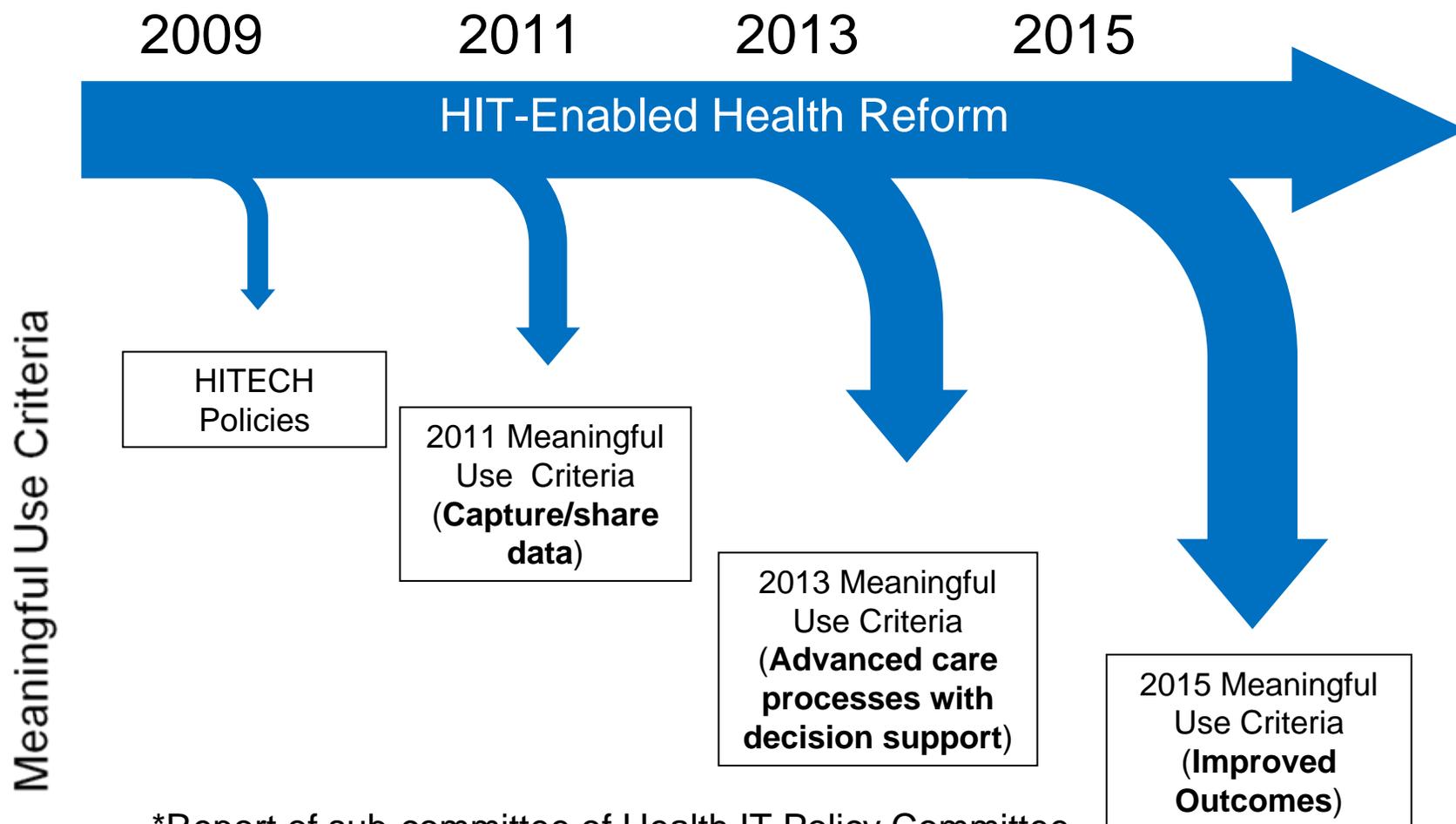
Adoption → **Meaningful Use** → **Outcomes**



Federal Advisory Committees

- Policy Committee
 - Meaningful use
 - Certification and adoption
 - Health information exchange
- Standards Committee
 - Quality measurement
 - Clinical operations
 - Privacy and security

Meaningful Use is Being Defined and Will Follow an “Ascension Path” Over Time*



*Report of sub-committee of Health IT Policy Committee

Phasing of MU Criteria

- Enable health reform
- Focus on health outcomes, not software
- Feasibility
 - Balance urgency of health reform with calendar time needed to implement HIT
 - Starting from low adoption rate
 - Sensitive to under-resourced practices (e.g, small practices, community health centers, rural settings)
 - But also, HIT essential to achieving health reform in all settings
- Recovery Act provisions
 - Timelines fixed (2015, 2011-12)
 - Funding rules defined (front-loaded incentives)

Example of Policy Committee Recommendations for the Definition of Meaningful Use

Health Outcomes Policy Priority	Care Goals	2011 ¹ Objectives <i>Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions</i>		2011 ¹ Measures
		Eligible Providers	Hospitals	
<p>Improve quality, safety, efficiency, and reduce health disparities</p>	<ul style="list-style-type: none"> • Provide access to comprehensive patient health data for patient's health care team • Use evidence-based order sets and CPOE • Apply clinical decision support at the point of care 	<ul style="list-style-type: none"> • Use CPOE for all orders² • Implement drug-drug, drug-allergy, drug-formulary checks • Maintain an up-to-date problem list of current and active diagnoses based on ICD-9 or SNOMED • Generate and transmit permissible prescriptions 	<ul style="list-style-type: none"> • 10% of all orders (any type) directly entered by authorizing provider (e.g., MD, DO, RN, PA, NP) through CPOE² • Implement drug-drug, drug-allergy, drug-formulary checks • Maintain an up-to-date problem list of current and active diagnoses based on ICD-9 or SNOMED 	<ul style="list-style-type: none"> • Report quality measures to CMS including: <ul style="list-style-type: none"> ○ % diabetics with A1c under control [EP] ○ % hypertensive patients with BP under control [EP] ○ % of patients with LDL under control [EP] ○ % of smokers offered smoking cessation counseling [EP, IP]

Meaningful Use Incentives by Adoption Year

Meaningful User	2009	2010	2011	2012	2013	2014	2015	2016	Total Incentive
2011			\$ 18,000	\$ 12,000	\$ 8,000	\$ 4,000	\$ 2,000		\$ 44,000
2012				\$ 18,000	\$ 12,000	\$ 8,000	\$ 4,000	\$ 2,000	\$ 44,000
2013					\$ 15,000	\$ 12,000	\$ 8,000	\$ 4,000	\$ 39,000
2014						\$ 12,000	\$ 8,000	\$ 4,000	\$ 24,000
2015 +									\$ Penalties

Health Outcomes Policy Priority	Care Goals	2011 Objectives		2011 Measure		2013 Objectives		2013 Measures	
		Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions				Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions			
		Eligible Providers	Hospitals			Eligible Providers	Hospitals		

Health Outcomes Policy Priority	Care Goals	Adoption Year 1 Objectives		Adoption Year Measures		Adoption Year 2 Objectives		Adoption Year 2 Measures	
		Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions				Goal is to electronically capture in coded format and to report health information and to use that information to track key clinical conditions			
		Eligible Providers	Hospitals			Eligible Providers	Hospitals		

Certification Recommendations

1. Focus Certification on Meaningful Use
2. Leverage Certification process to improve progress on Security, Privacy, and Interoperability
3. Improve objectivity and transparency of the certification process
4. Expand Certification to include a range of software sources: Open source, self-developed, etc.
5. Develop a Short-Term Certification Transition plan

Summary of Content Exchange Recommendations

- Primary content exchange standards:
 - Structured electronic documents: HL7 v.3 CDA, e.g., relevant CDA profile for consultation notes, or CCD for summary records
 - Clinical messaging: HL7 v.2.5.1, e.g., encounter, or lab results
 - Immunization queries and vaccination updates (only): HL7 v.2.3.1
 - Prescriptions: NCPDP Script v.10.x (ambulatory) and HL7 v.2.5.1 (inpatient)
 - Eligibility, benefits, and referrals: ASC X12 v.4010A1, NCPDP Script v.5.1 and CAQH CORE Phase I and Phase II
 - Quality measure reporting: CMS PQRI Registry XML Specification

Summary of Vocabulary Recommendations

- Primary vocabulary standards:
 - Clinical problems and procedures: SNOMED CT
 - Drugs and Medication Allergies: RxNorm
 - Ingredient allergies: UNII
 - Laboratory tests: LOINC
 - Units of measure: UCUM
 - Administrative terminology: ASC X12 and NCPDP Script

Grant Programs in HITECH

- HHS Secretary Shall Establish Programs of:
 - Implementation assistance (Extension Program)
 - Grants to states to promote health IT (emphasizing health information exchange)
 - Education: building health IT workforce
- HHS Secretary May Establish Programs of:
 - Grants to states and tribes for loan programs
 - Education of health professionals
- Program of Enterprise Integration Centers shall be established through the National Institute of Standards and Technology.

Health Information Technology Extension Centers Provide Critical Assistance

- Regional Centers will offer technical assistance, guidance and information on best practices to support and accelerate health care providers' efforts to become meaningful users of electronic health records
- Priority service recipients:
 - Public or not for profit hospitals or critical access hospitals
 - Federally qualified health centers
 - Entities in rural and other areas that serve uninsured, underinsured, and medically underserved individuals
 - Individual and small group primary care practices

Health Information Technology Extension Centers Provide Critical Assistance

- Each center to serve an identified region; an estimated 70 centers nationally
- Per statute, regional centers shall be affiliated non-profit organization or group thereof
- Preference to proposals identifying viable source of cost-sharing funds, and those demonstrating multi-stakeholder involvement
- Two-year funding awards anticipated in early 2010
- A Health Information Technology Research Center (HITRC) will be established to gather information on best practices and assist collaboration between extension centers

State Health Information Exchange Programs

- Assist states and state designated entities in developing and advancing mechanisms for information sharing across the health care system
- Programs are anticipated to:
 - Develop and implement HIE privacy and security requirements
 - Develop interoperability directories and technical services
 - Coordinate with Medicaid and state public health programs
 - Remove HIE barriers
 - Ensure effective HIE governance and accountability
 - Convene health care stakeholders to develop trust in and support for HIE efforts

Key Privacy Provisions

- Expanding the HIPAA privacy and security rules to cover new e-health entities such as health information exchanges
- Adding a breach notification requirement for covered entities, business associates and personal health record vendors
- Along with other strengthening of enforcement provisions ARRA provides state attorneys general with the power to enforce HIPAA
- HIPAA still continues to set a privacy floor for states

Be on the Lookout For

- CMS NPRM on meaningful use (12/09)
- ONC IFR on standards and certification criteria (12/09)
- ONC NPRM on the certification process (12/09)

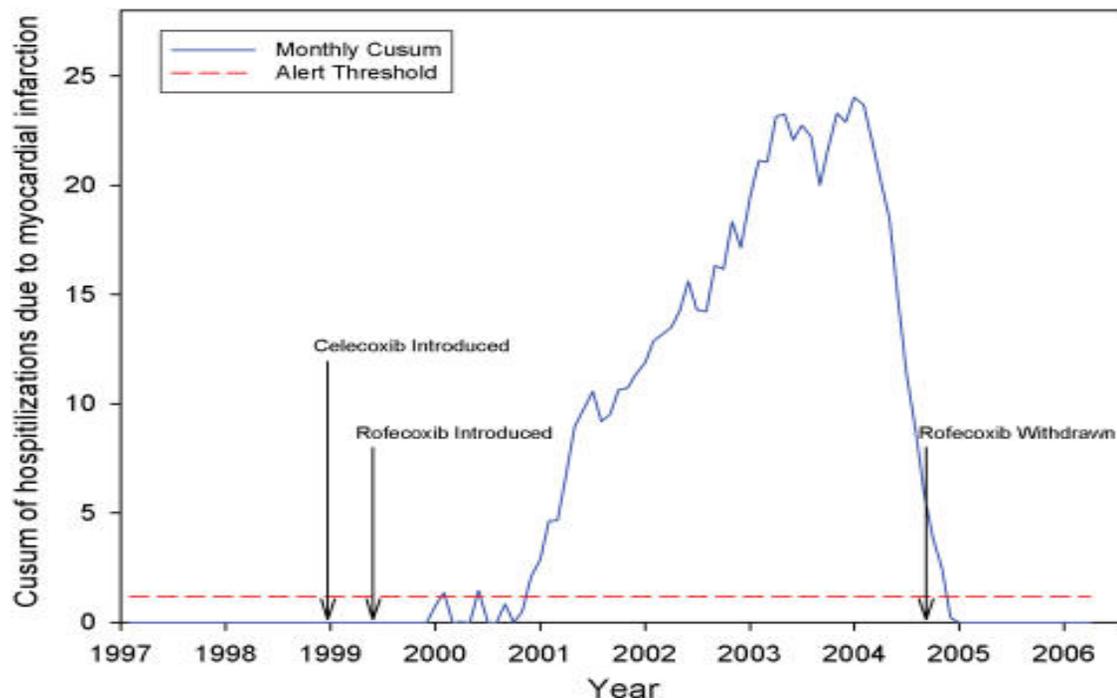


Figure 1

Cumulative sum (CUSUM) chart of monthly incidence of hospitalizations due to myocardial infarction from January 1, 1997 to March 30, 2006.

What is the National Health Information Network?

- Governance
- Data, exchange and security standards
- Contractual agreements
- Small set of software-based services, e.g., authentication
- Demonstrations of advanced capabilities, e.g., consent tracking

Conclusions

- Interoperable electronic health records are a critical contributor to our collective efforts to improve the quality, safety and efficiency of care
- HITECH represents an extraordinary infusion of resources into this effort
- We will undergo a major transformation of the healthcare information technology landscape
- The states play a very important role in achieving this ambitious agenda

For more information

- healthit.hhs.gov is the “the place”
- Feel free to contact me at john.glaser@hhs.gov