



Nursing Informatics

Nursing Informatics: An Essential Role in Achieving Meaningful Use

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Professor & Dean

All speakers have completed commercial bias disclosure forms and do not have any conflicts of interest.

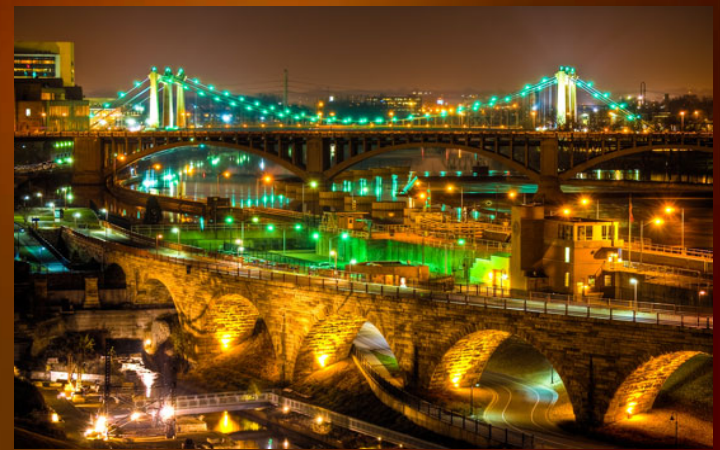
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Objectives

At the conclusion of this presentation participants should be able to:

1. Discuss the national healthcare initiatives underway and the role of nursing informatics in supporting the acceleration of HIT utilization.
2. Describe the impact of nursing on successful achievement of meaningful use criteria.
3. Articulate ways nurses can get involved in national health information technology initiatives and ensure the work of nursing is fully integrated into these efforts.



UNIVERSITY OF MINNESOTA

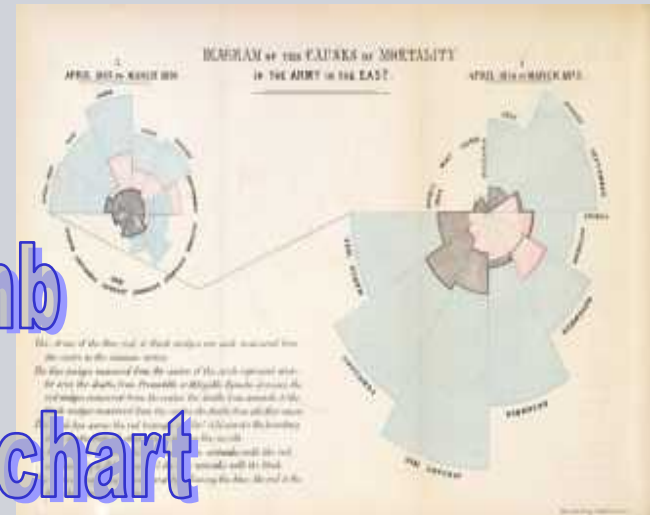
School of Nursing

Nursing Informatics Empowering Meaningful Use: People, Processes, Policy



coxcomb

polar area chart



revolutionized the idea that social phenomena
could be objectively measured and subjected to mathematical
analysis

innovator in the collection, tabulation, interpretation,
and graphical display of descriptive statistics





The **American Recovery and Reinvestment Act of 2009** ([Pub. L. 111-5](#))

Expectation:

- Improve health care quality;
- Prevent medical errors;
- Reduce health care costs;
- Increase administrative efficiencies;
- Decrease paperwork; and
- Expand access to affordable care

Five initiatives to serve the needs of a diverse array of stakeholders to foster health IT adoption

- **State Level Health Initiatives**

ensure that states and regional efforts can achieve health information exchange (HIE) that are aligned with the national agenda

- **Nationwide Health Information Network (NHIN)**

represents a collection of standards, protocols, legal agreements, specifications, and services to enable secure HIEs

- **Federal Health Architecture**

establishes an e-government line of business initiatives to increase efficiency and effectiveness in all government operations

- **Adoption**

supports two national health IT adoption surveys: one for the physician office and the other for hospitals

- **Clinical Decision Support & the CDS Collaboratory**

provide clinical, staff, patients and other individuals with knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care

Are you involved?

- State Level Health Initiatives
- Nationwide Health Information Network (NHIN)
- Federal Health Architecture
- Adoption
- Clinical Decision Support & the CDS Collaboratory

SHARP

health information exchange (HIE)

University-Based Training

IT Regional Extension Centers (RECs)

BEACON



2 Federal Advisory Committees

Health IT Policy Committee

Makes recommendations to the National Coordinator for Health IT on a policy framework for the development and adoption of a nationwide health information infrastructure, including standards for the exchange of patient medical information

Health IT Standards Committee

Focuses on the standards to implement the policies recommended by the Health IT Policy Committee

HIT Policy Committee

Meaningful Use

Privacy & Security Policy

Certification/Adoption

Information Exchange

Nationwide Health Information Network (NHIN)

Strategic Plan

HIT Policy Committee

Meaningful Use

Privacy & Security Policy

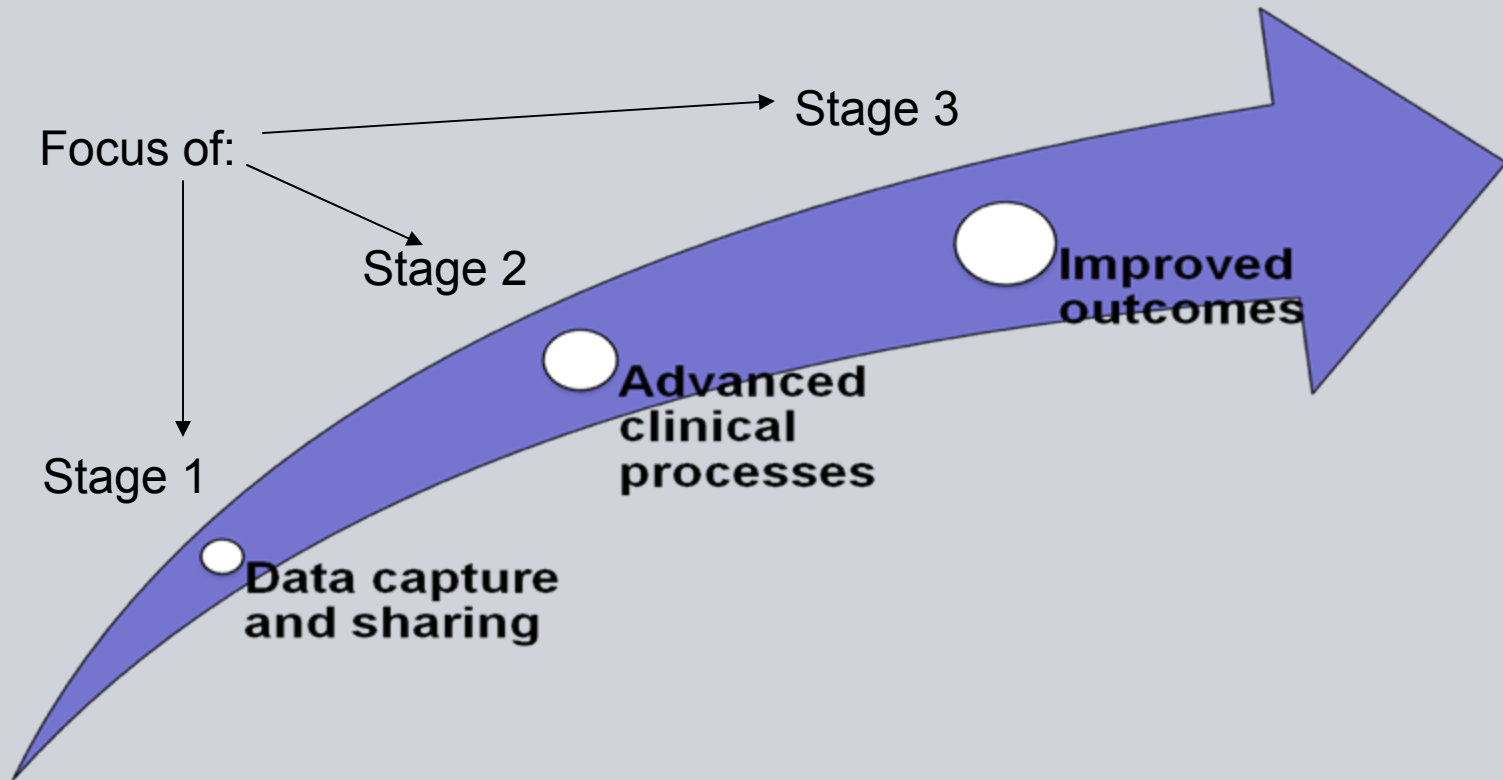
Certification/Adoption

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Nationwide Health Information Network (NHIN)

Strategic Plan

Moving Forward: Reminder of Staging of “Meaningful Use”



Themes Emerging from Consumer Hearing & Blog

(April 22 2010)

- **Time for incremental change is over; move beyond status quo**
- **Demand universal and immediate patient access to data**
 - **Incorporate patient-generated data into EHR**
- **Engage with the public about MU**
 - **Consider re-orienting MU criteria to what's meaningful to patients**
- **Encourage innovation**
 - **Consider a bold initiative (e.g. 50% of care rendered at home) for patient engagement**
- **Create sense of community among patients & with health team**
 - **Achieve 4 Es: engage, educate, empower, and enable**
 - **Meet needs of diverse population**
- **Focus more on patient outcomes measures**
 - **vs. traditional process measures**

Timetable for MU Stage 2

- Sep 22: Meaningful Use Work Group meeting to develop draft recommendations for Stage 2, including input/feedback from:
 - CMS final rule
 - Meaningful Use work group public hearings
 - Gretzky group report
 - Public input
- Oct 20: Presentation to HIT Policy Committee
- Nov/Dec: RFI for additional public input
- 1-2Q11: Monitor Stage 1 submissions
- 2Q11: Draft recommendations to HIT Policy Committee
- late 2Q11: Final recommendations to ONC

HIT Policy Committee

Meaningful Use

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Privacy & Security Workgroup Update

May 19, 2010 – June 25, 2010

To make short-term and long-term recommendations to the Committee on privacy and security policies and practices that will:

help build public trust in health information technology and electronic HIE
enable their appropriate use to improve healthcare quality and efficiency.

Privacy and security for electronic health information exchange

- Joy Pritts, ONC's new chief privacy officer
- HITPC and HITSC Workgroups on privacy combined into a single privacy and security Tiger Team (6.25.10)
- Tiger Team will also include representation from NCVHS
- Respond quickly and authoritatively to the needs of ONC and the many new organizations created under HITECH that are awaiting guidance on short-term privacy and security questions
 - regional extension centers
 - state agencies leading health information exchange
 - training programs established by ONC
 - Beacon communities
 - health information exchange organizations, etc.

HIT Policy Committee

Meaningful Use

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HIT Policy Committee

EHR certification

Source:

HIT Policy Committee

August 14, 2009

July 13, 2010

Purpose of Certification

HHS Certification means that a system is able to achieve the minimum government requirements for security, privacy, and interoperability, and that the system is able to produce the Meaningful Use results that the government expects.

HHS Certification is not intended to be viewed as a “seal of approval” or an indication of the benefits of one system over another.

Recommendations

1. Leverage Certification process to improve progress on Security, Privacy, and Interoperability
2. Focus Certification on Meaningful Use
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

Short-term Certification Process (07-13-2010)

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The State of Health Information Exchange Today

- **Health reform goals will not be met without broader and deeper information exchange across the entire health delivery system**
- **The current state of health information exchange today is spotty and piecemeal**
 - **vast majority occurs in a narrow set of transaction silos, such as labs and medication prescriptions**
 - **even silos penetration is very low (e.g. 4% of eligible prescriptions and 12% of office-based prescribers)**
 - **direct exchange of data between EHRs and exchange through organized state/regional health information exchange entities occurs, penetration is extremely low, highly variable across implementations**
 - **electronic reporting for public and population health measurement and improvement is almost non-existent today**

HIE Trust Framework: Recommendation

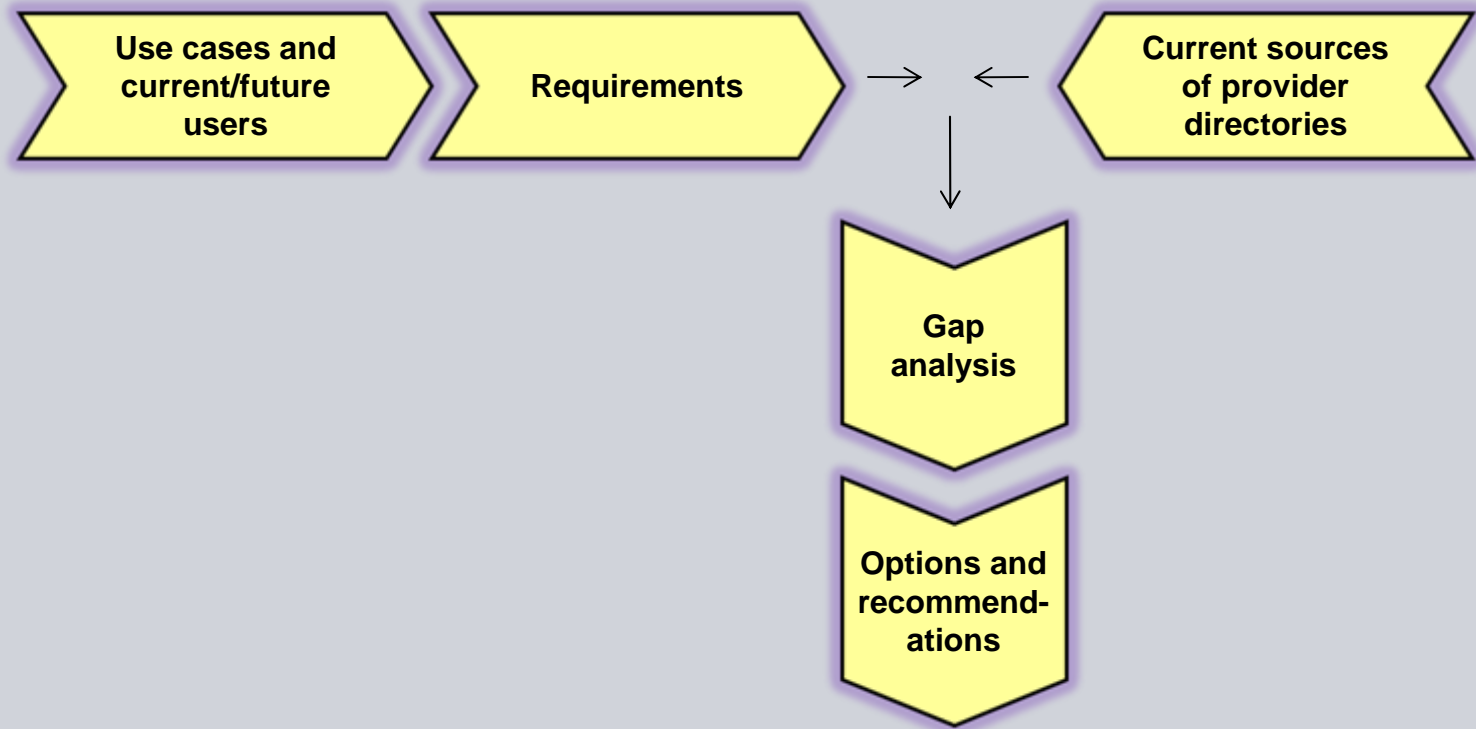
- Adopt an overarching trust framework at the national level to enable health information exchange that includes these essential elements:
 - Agreed Upon Business, Policy and Legal Requirements / Expectations
 - Transparent Oversight
 - Accountability and Enforcement
 - Identity and Authentication
 - Minimum Technical Requirements

Reconstituted Workgroup July 26 2010

What problem are we trying to solve?

- State HIE Cooperative Agreements and MU Stage 1 focus on “directed exchange” types of transactions, specifically lab results delivery and patient care summary exchange
- While there are multiple ways that these functions will be performed in the market (for example, through EHR-based hubs or state-level HIE activities) all of these approaches will need to have a way to handle provider identity and addressing
 - While directed exchange transactions are the most immediate need, there are many other potential users such as public health, health plans, etc that also spend considerable effort on provider identity
- The lack of a universal approach to provider directories will be a barrier to progress in “directed exchange” and a missed opportunity to combine multiple streams of funding to yield a lower cost, higher quality service for all
- What, if anything, can federal and state governments do to catalyze and guide the creation of market-enabling provider directory approaches to serve the immediate needs of “directed exchange” transactions and also serve as a platform for broader needs in the future?

High-level approach

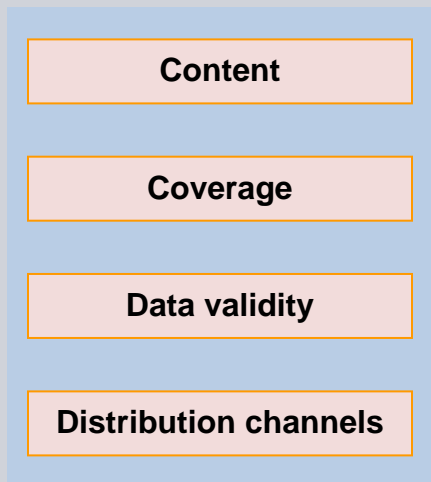


Use cases: Biggest immediate need is to enable Care Summary Exchange

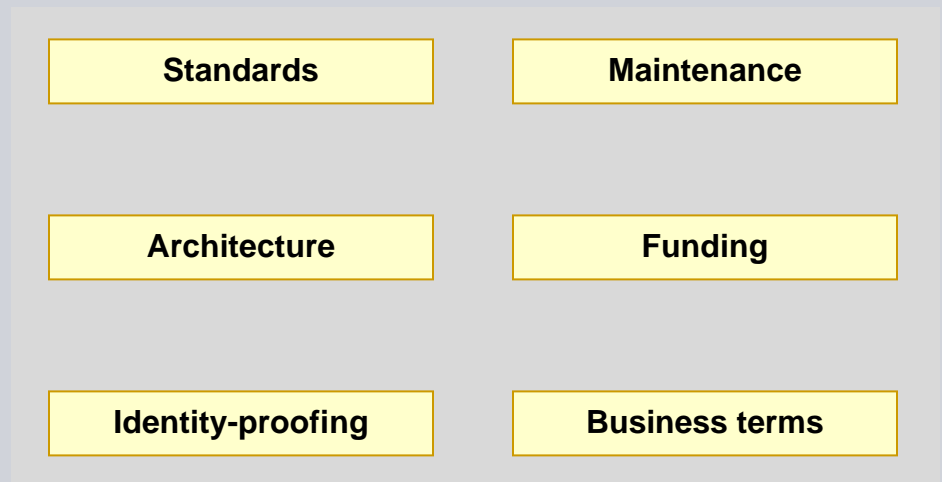
Use	Transaction	Function	Market need
Care summary exchange	<ul style="list-style-type: none"> ▪ PCP to/from Specialist ▪ Ambulatory to/from Hospital 	<ul style="list-style-type: none"> ▪ Enable message routing 	Need solutions for Stage 1 Meaningful Use
Lab results delivery	<ul style="list-style-type: none"> ▪ Hospital lab to/from ambulatory ▪ Commercial lab to/from ambulatory 	<ul style="list-style-type: none"> ▪ Enable message routing 	Existing solutions work today. Potential opportunity to provide lower cost & higher quality alternative to existing proprietary approach.
eRX	<ul style="list-style-type: none"> ▪ Ambulatory to pharmacy 	<ul style="list-style-type: none"> ▪ Enable message routing 	
Public health reporting	<ul style="list-style-type: none"> ▪ Physician to public health 	<ul style="list-style-type: none"> ▪ Improve provider identity validation ▪ Provider authentication? 	
Public health alerts	<ul style="list-style-type: none"> ▪ Public health to providers 	<ul style="list-style-type: none"> ▪ Enable message routing 	Need solutions for Stage 2 Meaningful Use
Claims & eligibility checking	<ul style="list-style-type: none"> ▪ Health plan from providers 	<ul style="list-style-type: none"> ▪ Improve provider profile creation 	Existing solutions work today. Potential opportunity to provide lower cost & higher quality alternative to existing proprietary approach.
Credentialing	<ul style="list-style-type: none"> ▪ Health plan from providers ▪ Hospitals from physicians ▪ State governments from physicians 	<ul style="list-style-type: none"> ▪ Improve provider profile creation ▪ Improve provider enrollment process 	
CMS	<ul style="list-style-type: none"> ▪ NLR 	<ul style="list-style-type: none"> ▪ Improve provider identity validation 	Need unknown at present

User requirements translate to system requirements

User requirements



Business & technology requirements



A viable approach for any given user & use case must provide the right information in the right way at the right time *according to the user's business need*

Current/Potential Users and Sources – are there others?

Current and potential users

- HIE vendors
- EHR vendors
- NHIN Direct users
- HIOs
- State governments
 - Public health
 - Medicaid
 - Licensing
- Federal government
 - CMS NPI & claims
 - NLR
- CDC
- Commercial identity software/service vendors
- Provider enterprise systems
- Commercial health plans
- Public health
- Transaction-specific vendors (e.g., Surescripts, LabCorps, etc)
- Credentialing
- SSA

Current sources

- HIE vendors
- EHR vendors
- HIOs
- State governments
 - Public health
 - Medicaid
 - Licensing
- Federal government
 - CMS NPI
 - NLR
- Commercial directory content vendors
- Commercial identity software/service vendors
- Provider enterprise systems
- Commercial health plans
- Public health
- Transaction-specific vendors (e.g., Surescripts, LabCorps, etc)
- Membership organizations and medical societies
- SSA

HIT Policy Committee

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Strategic Plan

Background and Purpose of Rule Making

- HITECH directed the National Coordinator to “establish a governance mechanism for the nationwide health information network.”
- Rulemaking would establish foundational policies and structures which would:
 - Engender trust
 - Assure effectiveness
 - Meet or exceed consumer expectations
 - facilitate use of the nationwide health information network
- Recognize that some governance is in place
 - HIPAA Privacy and Security Rules
 - identify where complementary governance mechanisms are necessary for evolving nationwide health information network.

Scope of Rulemaking for Nationwide Health Information Network (NHIN) Governance Requirements

- **Agreed Upon Business, Policy and Legal Requirements**
 - All participants will abide by an agreed upon a set of rules, including (but not necessarily limited to) compliance with applicable law and act in a way that protects the privacy and security of the information and is in accordance with consumer/patient expectations.
- **Transparent Oversight**
 - Oversight of the exchange activities to assure compliance. Oversight should be as transparent as possible.
- **Enforcement and Accountability**
 - Each participant must accept responsibility for its exchange activities and answer for adverse consequences.
- **Identity Assurance**
 - All participants need to be confident they are exchanging information with whom they intend and that this is verified as part of the information exchange activities.
- **Technical Requirements**
 - All participants agree to comply with some minimum technical requirements necessary for the exchange to occur reliably and securely.

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Vision

A system that is designed to generate and apply the best evidence for the collaborative health care choices of each patient and provider; to drive the process of new discovery as a natural outgrowth of patient care; and to ensure innovation, quality, safety, and value in health care. (Charter of the Institute of Medicine Roundtable on Value & Science-Driven Health Care)

Health Information Technology Strategic Framework For A Learning Health System



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Quality Measures (September 2010)

Current State

- Stage 1 Meaningful Use contains 44 PRQI measures and 15 RHQDAPU Clinical Measures that have been retooled with electronic specifications.
- Currently, measure development does not take advantage of robust clinical health information from EHRs.
- A need to develop measures that are parsimonious, HIT sensitive, enable longitudinal measurement, across various settings of care, improve population health and reduce burden of care.

Charge to QM Workgroup

- To provide recommendations on clinical quality measures for Stage 2 and Stage 3, with a focus on meaningful use of certified EHR technology.

The measures are meant to be appropriate and applicable to a broad range of providers. Each measure should use data that can be feasibly collected within the EHR.

Objectives of QM Workgroup

- Identify priority domains and gaps for electronic Quality Measure development for Stage 2 Meaningful Use.
- Identify key priority measure concepts within each domain.
- Address methodological issues such as incorporation of patient data, “delta measures” through the use of Tiger Teams.
- Provide guidance on Request for Information (RFI) for measure developers to identify potential Stage 2 eQMs based on preliminary recommendations from the QM Workgroup.

Measure Attributes

- HIT sensitive
- parsimonious
- enables longitudinal measurement
- enables measurement across settings of care
- improve population health and reduce burden of illness

Preliminary Measure Domains

- Patient and Family Engagement
- Population Health/Public Health
- Safety
- Care Coordination
- Overuse/Underuse/Appropriate Care
- Disparities
- Patient-Focused Episodes of Care

Methodologic Issues

- Move towards interoperability
- Incorporate patient-reported information
- Incorporate risk adjustment
- “Delta” measures

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Quality Measures (September 2010)

Governance (September 2010)

HITECH Calls for Governance Mechanism

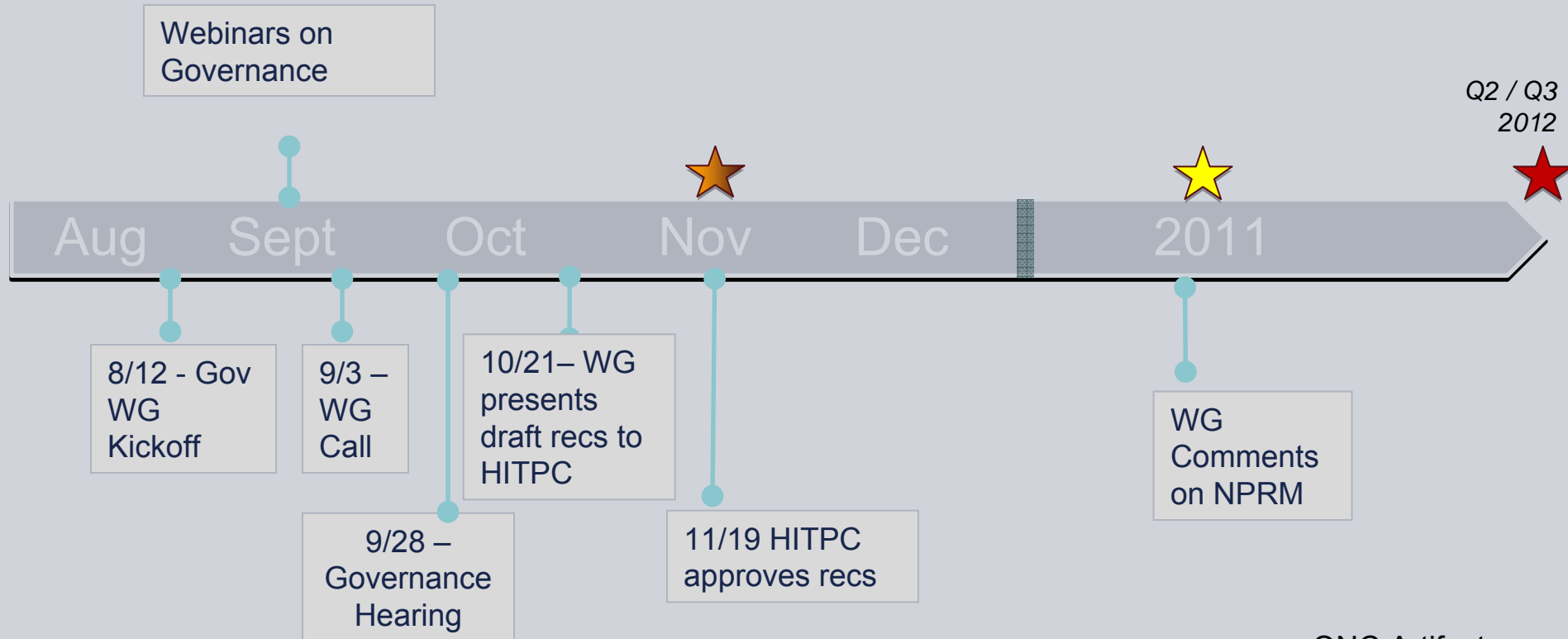
- HITECH directed the National Coordinator to “establish a governance mechanism for the nationwide health information network*.”
- Proposed rulemaking would identify governance mechanism(s) that:
 - Engender trust;
 - Assure effectiveness;
 - Meet or exceed consumer expectations; and
 - Promote and facilitate use of the nationwide health information network.


* The name Nationwide Health Information Network will be changed in Fall 2010.

Governance Workgroup Purpose

- CHARGE: To draft a set of recommendations on the scope and process of governance for the nationwide health information network, including measures to ensure accountability and oversight.
- Related purposes:
 - To provide recommendations to engender trust in the nationwide health information network (“Network”) and to promote and enable broader participation;
 - To inform development of a notice of proposed rulemaking (NPRM); and
 - To provide comment on the NPRM when it is issued.

Governance Workgroup Timeline



 Gov WG Recommendations (11/19/10)

 NPRM Comment Period (Q2/Q3 2011))

ONC Artifacts:

- WG scope and framing materials
 - Hearing / panel outline

Workgroup Artifacts:

- Hearing agenda / questions
- Governance recommendations

Governance Hearing Outline

- Panel 1: Governance models in other domains (e.g., ecommerce, banking, etc.)
- Panels 2 and 3: Implementers of health information exchange regarding governance experiences, issues and needs related to three domains:
 - Trust
 - Interoperability
 - Accountability, enforcement and oversight
- Panels 4 and 5: Entities today that are performing governance functions (e.g., OCR, FTC, state entities, Exchange Coordinating Committee, etc.)
- Public Comment

*Perioperative
Nursing
Data Set*



WHO Family of Classifications



ONC Gets Vocabulary Recommendations

HDM Breaking News, April 29, 2010

- The HIT Standards Committee, an advisory body to the Office of the National Coordinator for Health Information Technology, has sent two recommendations to ONC covering the relationship of medical vocabularies to meaningful use of electronic health records.
 - The first recommendation **calls for a single federal office or agency to be responsible for ensuring the creation, maintenance, dissemination and accessibility of all vocabulary value sets and subsets related to meaningful use.** The entity would coordinate with standards development organizations, federal agencies and other relevant stakeholders.
 - The second recommendation **calls for establishing an "authoritative infrastructure" for development, maintenance and dissemination of standard value sets and subsets related to meaningful use.** The goal is one-stop shopping for meaningful use vocabularies.

Alliance for Nursing Informatics (ANI)



invitation

Structured strategy for input, consultation, information sharing

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Who we are to society and health care and our patients, families, and communities is “more than anything a function of what we know, how we use what we know, and how fast we can know something new...”

adapted from Blur, 1998

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Upcoming Siemens Webcast Topics

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Upcoming Nursing Education Webcasts

How Advances in Genomics Will Change Nursing Practice

Patricia J. Friend PhD, APRN, AOCN
Assistant Professor, Niehoff School of Nursing, Loyola University Chicago
November 1, 2010, 2:00 p.m. – 3:00 pm, ET

Complexity Leadership: Guiding Healthcare through the Storm of Reform

Tim Porter O'Grady, DM, EdD, ScD(h) GCNS-BC, NEA-BC, FAAN
Senior Partner, Tim Porter-O'Grady Associates, and Associate Professor and Leadership Scholar
January 10, 2011, 2:00 p.m. – 3:00 pm, ET

Register at www.usa.siemens.com/clinicalgateway

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for attending this session.