The Community

American **H**ealth
Information **C**ommunity

June 13, 2006
8:30 a.m. - 12:30 p.m. [Eastern]

Presentations

U.S. Department of Health and Human Services
Hubert H. Humphrey Building
200 Independence Avenue, SW
Room 800
Washington, DC 20201

American Health Information Community

Workgroup Roadmap Discussion
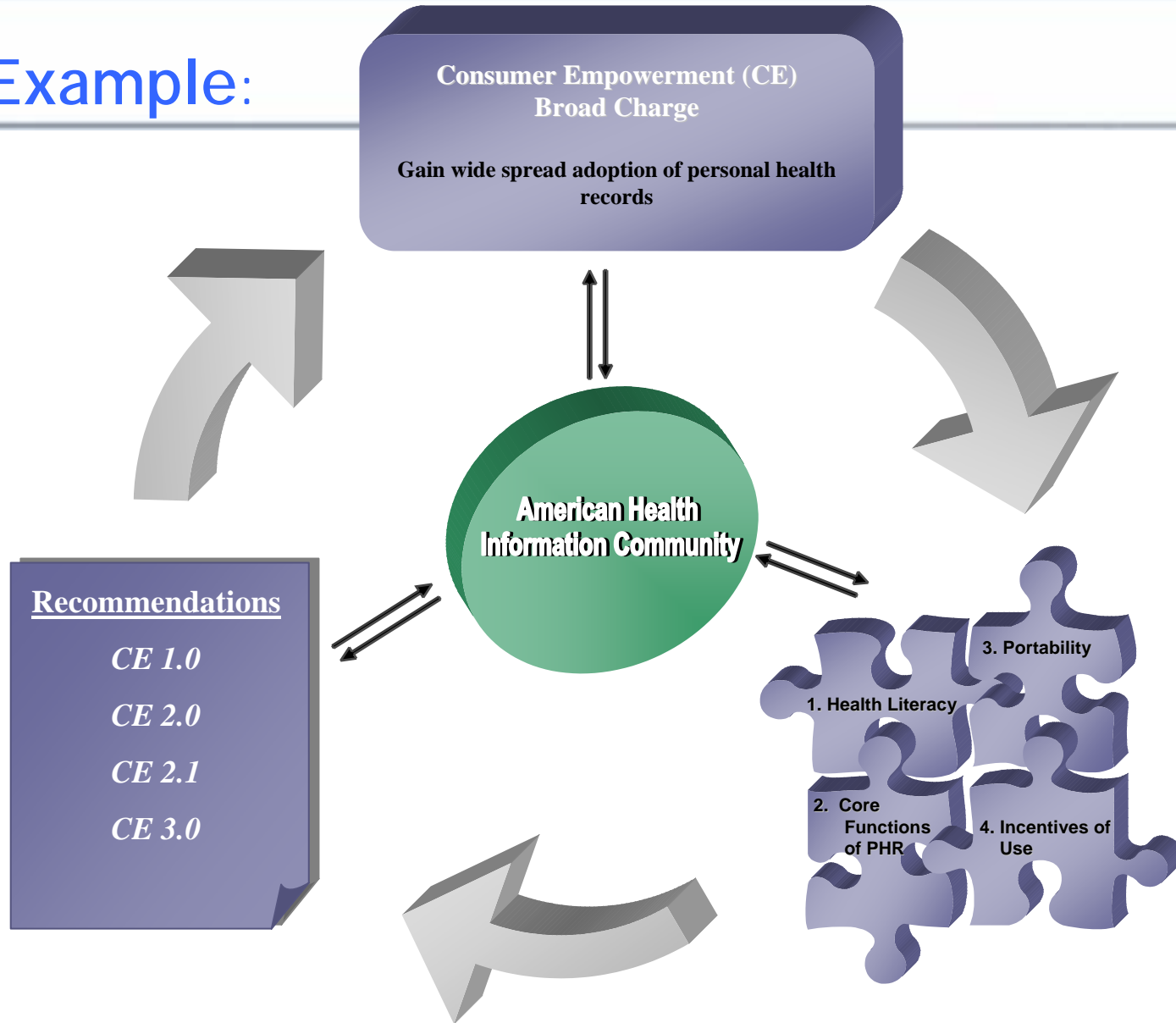
Progress To Date

- Established Workgroups

- Named co-chairs and members

- Held over 20 workgroup public meetings

- Developed first set of recommendations to achieve the specific charges

- Presented recommendations to the Community

  - ❑ EHR - 7 accepted recommendations
  - ❑ CC - 8 accepted recommendations
  - ❑ CE - 3 accepted recommendations
  - ❑ BSV - 8 accepted recommendations

Looking Forward: How do we move from the specific charges to the broad charges?

Three Step Process:

1. Collect information in order to identify the critical components comprising the broad charge.

2. Prioritize the critical components of the broad charge to create a roadmap and a work plan to drive specific recommendations.

3. Identify specific recommendations flowing from each critical component.

Example:

**Consumer Empowerment (CE)
Broad Charge**

Gain wide spread adoption of personal health records

**American Health
Information Community**

Recommendations

CE 1.0

CE 2.0

CE 2.1

CE 3.0

1. Health Literacy

2. Core Functions of PHR

3. Portability

4. Incentives of Use

Timetable:

June: Develop a work plan that lays out the critical components of the broad charge and a process to address them

July: Testimony, background research, analysis of barriers and enablers for the first set of critical components

August: Consider stakeholder concerns and roles and draft recommendations for first set of critical components

Sept: Testimony, background research, analysis of barriers and enabler for second set of critical components

Oct: Consider stakeholder concerns and roles and draft recommendations on second set of critical components

Nov: Prepare letters of recommendations from work groups

Dec: Present first set of broad charge recommendations to the Community

2007   Repeat the process for the next set of critical components for each broad charge

Standards Harmonization Update

John D. Halamka, MD
Chairman, Health Information Technology Standards Panel and Harvard Medical School

Bill Braithwaite, MD PhD
Vice-Chair, HITSP and eHealth Foundation

John W. Loonsk, MD
Office of the National Coordinator for Health Information Technology

Agenda

- Standards Harmonization Context
  - John Loonsk

- Health Information Technology Standards Panel (HITSP) process
  - John Halamka

- HITSP Future Milestones
  - Bill Braithwaite

Standards Issues

Most standards issues fall into four general categories:

- Gaps
- Overlap
- Adoption
- Specificity

Standards Issues

Adoption Issues:

- Local terms, traditions and infrastructure

- Professional services integration model

- "Coded" data vs. "Free Text" content

Coded Data

Display Name	Code
"Suture Removal"	30549001
"procedure site"	363704007
"left forearm"	6480008

Code system name – SNOMED CT

Free Text

This 42 year old woman with a history of persistent right lower quadrant pain with radiation to her back, hypertension, and migraine headaches was found on CT scan of the abdomen to have a retroperitoneal lesion. Serum catecholamines showed serum norepinephrine greater than 4,000 pg/ml (greater than 2,000pg/ml diagnostic of pheochromocytoma). 24 hour urine vanillyl mandelic acid was elevated at 36.1 mg (normal 2.0-7.0 mg/24 hours). Exploratory laparotomy showed a mass situated at the aortic bifurcation and a mass on the lesser curvature of the stomach. Resection of the retroperitoneal mass, two sacral/neural foramina lymph nodes, and wedge resection of the lesser curvature stomach to remove the small gastric mass was performed.

Standards Issues

Specificity:

- "Named standards"
  - Necessary, but not sufficient
  - Can be high level and subject to interpretation
- Implementation level guidance
  - Can foster greater interoperability

"Named" Standards

- LOINC
- SNOMED
- NCPDP
- etc.

Implementation Level Guidance

R & P Messaging Code System OID	R & P Messaging Code System Name	R & P Messaging Value Set Name	R & P Messaging Value Set OID	Usage
2.16.840.1.113883.6.235	PH_Occupation_SOC_2000	PHVS_Occupation_SOC_2000	2.16.840.1.114222.4.11.832	Observation response
2.16.840.1.113883.6.236	PH_VaccineManufacturer_CDC	PHVS_VaccineManufacturer_CDC	2.16.840.1.114222.4.11.826	May be used as an observation response or sent with Substance Administration
2.16.840.1.113883.6.231	PH_Zipcode_USPS	PHVS_Zipcode_USPS	2.16.840.1.114222.4.11.833	Address fields
2.16.840.1.114222.4.5.200	PH_Allergen_CDC	PHVS_Allergen_CDC	2.16.840.1.114222.4.11.834	Allergy information could be passed in Substance Administration or Referral message
2.16.840.1.114222.4.5.201	PH_Breed_CDC	PHVS_Breed_CDC_CRA	2.16.840.1.114222.4.11.835	Used for non-human subject of message
2.16.840.1.113883.6.238	PH_RaceAndEthnicity_CDC	PHVS_RaceCategory_CDC	2.16.840.1.114222.4.11.836	Patient Identification segment
2.16.840.1.113883.6.238	PH_RaceAndEthnicity_CDC	PHVS_EthnicityGroup_CDC	2.16.840.1.114222.4.11.837	Patient Identification segment
2.16.840.1.114222.4.5.202	PH_UnitsOfMeasure_CDC	PHVS_UnitsOfMeasure_CDC	2.16.840.1.114222.4.11.838	Used to qualify numeric results, age, weight, height, and

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Healthcare Information Technology Standards Panel

- The HITSP is a group organized to harmonize the standards used to exchange health data in the United States

    - The Panel brings together experts from across the health care IT community – from consumers to doctors, nurses, and hospitals; from those who develop healthcare IT products to those who use them; and from the government agencies who monitor the U.S. health care system to those organizations who are actually writing the standards

    - The Panel's activities are open and transparent and led by the American National Standards Institute (ANSI), a not-for-profit organization that has been coordinating the U.S. voluntary standardization system since 1918

    - Cooperative partnerships have been and are being developed between and among certain standards developers
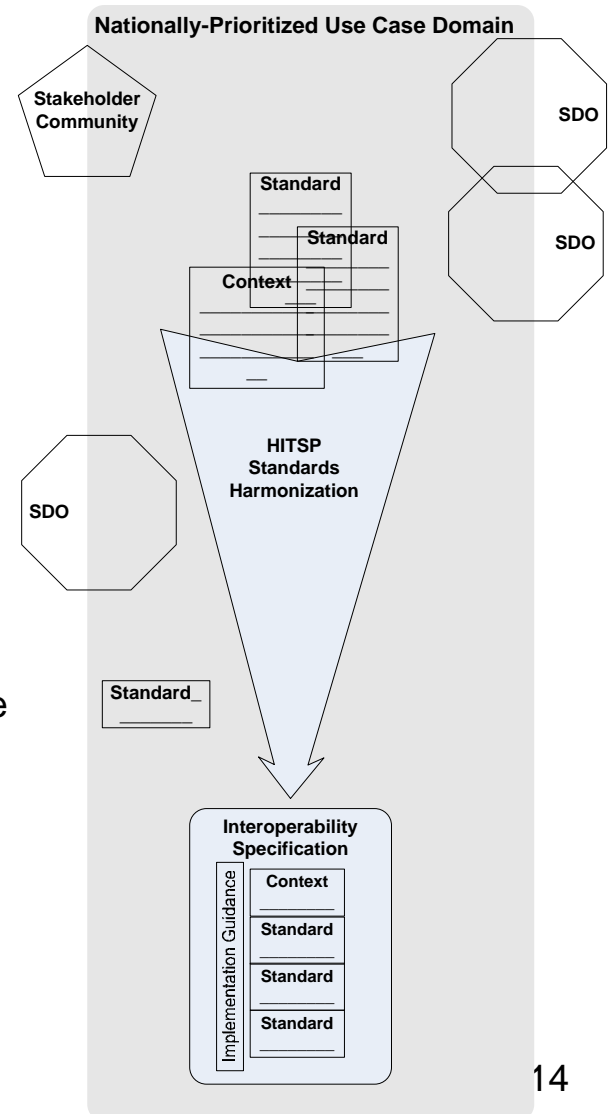
Membership and Board Representation

- A total of 155 organizations participate in HITSP representing a broad spectrum of interests
  - 17 Standards Development Organizations
  - 114 non-SDOs such as clinicians, providers, safety net providers, vendors, purchasers, payers, public health professionals, and researchers
  - 15 government organizations
  - 9 consumer organizations

- The HITSP Board of Directors also represents multiple stakeholder groups
  - 8 representatives from SDOs
  - 9 representatives from non-SDOs
  - 4 representatives from government appointed by ONCHIT
  - 2 representative from consumer organizations
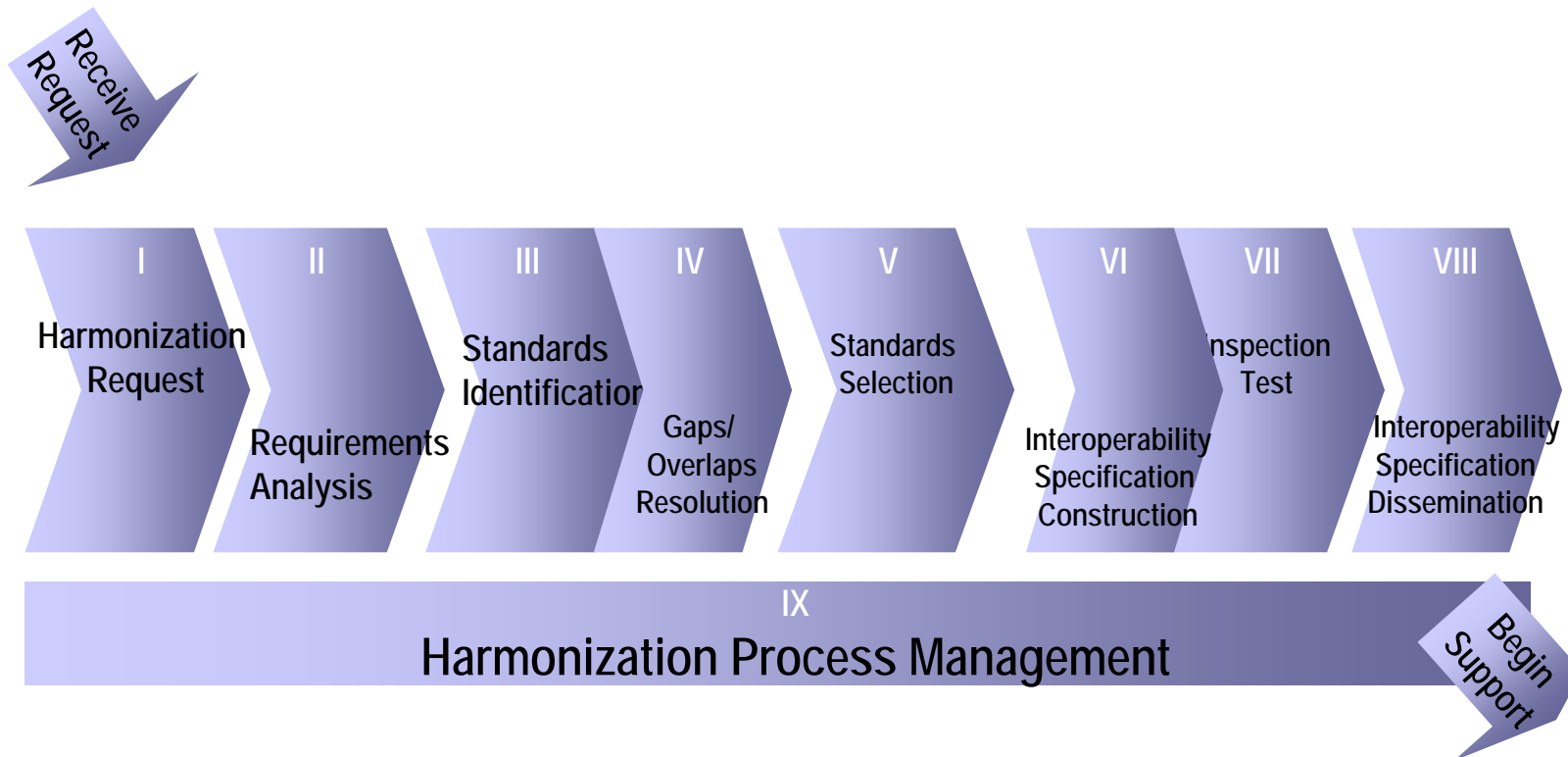
Harmonization 101
A few terms to describe the process

- **Harmonization** - the selection of standards most ready for use as an interlocking set to implement in support of specific events and actions

- **Context** – the coupling of an action or event and a specific request for an interoperability specification

- **Gap** -- missing or incomplete standards that are required for fulfillment of the events in the given Use Case

- **Overlap** - Overlaps refer to instances where some or all of the requirements are met by multiple standards.

- **Standards Development Organization** - The term "standards development organization" refers to an organization that produces standards that meet the test of HITSP Standards Readiness Criteria

Nationally-Prioritized Use Case Domain

Stakeholder Community

SDO

SDO

Standard

Standard

Context

HITSP Standards Harmonization

SDO

Standard_ _____

Interoperability Specification

Implementation Guidance

Context

Standard

Standard

Standard

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Harmonization Process
Steps taken by industry within the context HITSP

Receive Request

I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**
Harmonization Request		Standards Identification		Standards Selection		Inspection Test	
	Requirements Analysis		Gaps/ Overlaps Resolution		Interoperability Specification Construction		Interoperability Specification Dissemination

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Harmonization Process Management

Begin Support

HITSP Panel Process

- AHIC Working Groups, NHIN contractors or other customers prepare a Harmonization Request

- HITSP Technical Committees analyze requirements, identify candidate standards, and highlight standard gaps and overlaps
  – Gaps are forwarded to SDOs for their guidance as to emerging candidate standards or new standards requirements
  – Overlaps are resolved through SDO interactions

- HITSP selects the final set of standards
  – The standards recommended by the Technical Committees are discussed and ratified by the HITSP panel

HITSP Panel Process

- Technical Committees work with SDOs and other groups to produce implementation level guidance
  - "Interoperability specifications"

- It may be that certain aspects of implementation guidance, especially when multiple SDOs are involved, will be created by other groups for HITSP

- HITSP work products are delivered to AHIC for their endorsement

- CCHIT will include functional criteria for interoperability based on HITSP implementation guides in its certification work

HITSP Progress to Date

- Breakthrough area Use Cases received as requests by HITSP Technical Committees in January 2006
  - Biosurveillance: ER visits
  - Electronic Health Records: Laboratory Results
  - Consumer Empowerment: Electronic Clipboard and Medication History
  - Chronic Care: Secure Messaging between Consumers and Providers

- Requirements analysis to understand interoperability requirements for specific scenarios completed April 2006

- Candidate standards named and gaps and overlaps identified May 2006

- Criteria used to analyze overlaps and duplications designed May 2006

September HITSP Deliverables

- In September HITSP will deliver specific implementation level guidance – "Interoperability Specifications" for four AHIC breakthrough areas

- Interoperability specifications will . . .
  - Identify standards and specific implementation context for those standards
  - Describe specific value sets for unambiguous data exchange and system to system interaction
  - Provide the necessary instructions to implement the specific standards in commercial and self-developed systems

Future Milestones

- Also in 2006, HITSP will . . .

    - Select standards for each breakthrough Use Case by June 30, 2006, using the HITSP approved criteria

    - Pilot the remainder of the process by constructing interoperability specifications, testing and disseminating them for industry use

    - Promote public awareness of HIT standards harmonization activities and provide an open, balanced and transparent review mechanism

    - Develop a business model that will sustain the HITSP for as long as standards harmonization and coordination is necessary

Q & A

# American Health Information Community

Privacy and Security and Health Information Technology

Privacy and Security and Health IT

Goal: A nationwide interoperable health information technology infrastructure must ensure that patients' individually identifiable health information is secure and protected.

Protecting Health Information Through Technology

Community Privacy & Security Workgroup

CCHIT

NHIN

HITSP

HISPC

HIPAA

Informed Privacy

and

Security Policies

ONC
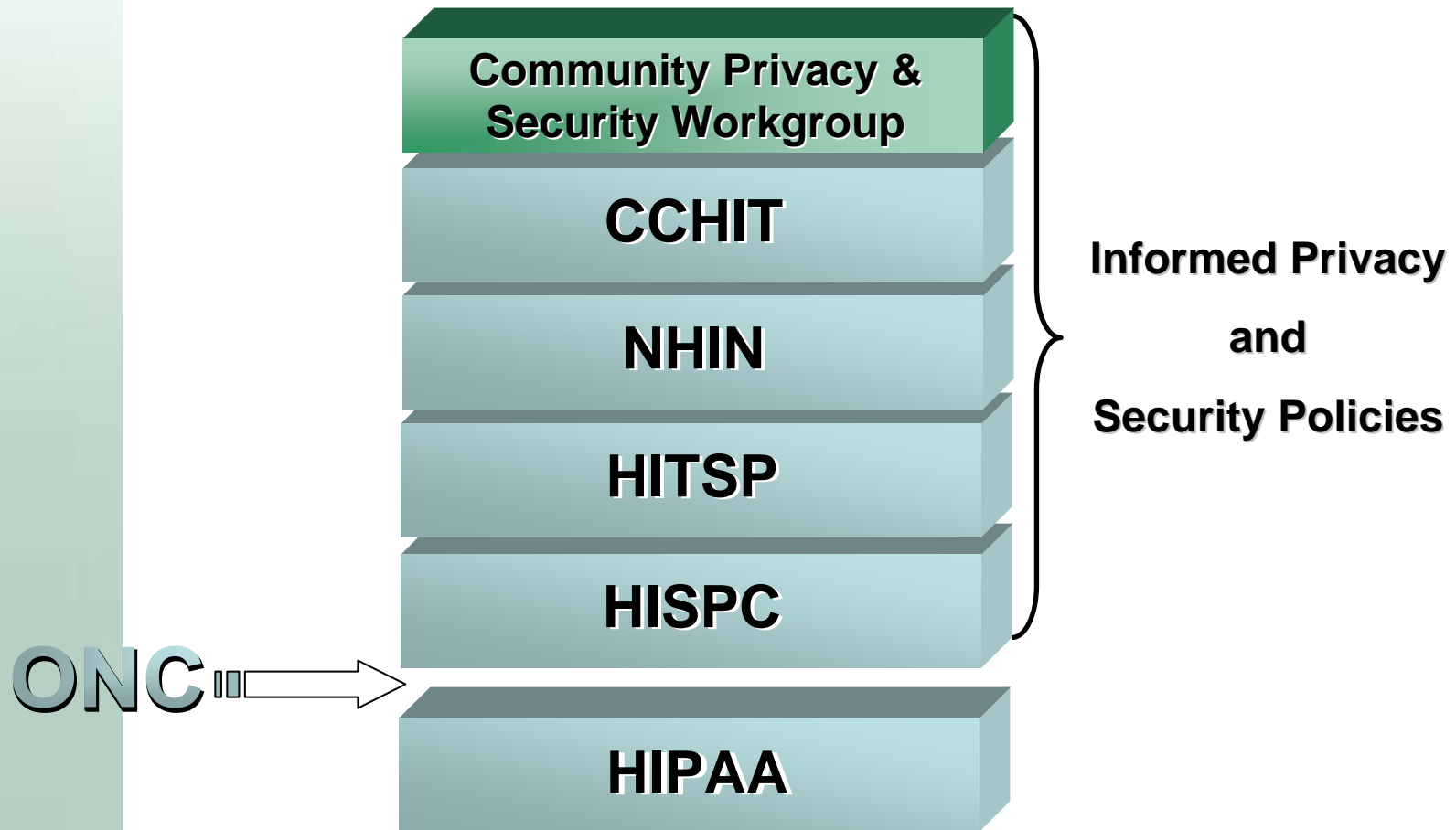
Privacy & Security Solutions for Interoperable Health Information Exchange

AHIC Briefing

June 13, 2006

By Linda Dimitropoulos

RTI International

HISPC Initiative

- The HISPC initiative under the Privacy and Security Solutions contract was formed to support collaboration within and among states to foster participation of stakeholders in identifying barriers and developing solutions to HIE.

- The purpose of the collaboration is to maximize knowledge exchange, and identify common solutions

- Work under the state subcontracts is designed to produce consensus-based solutions and implementation plans

- Stakeholders at the state and community levels, including patients and consumers, must be involved in developing solutions to achieve acceptance

Progress Since January Briefing

- Jan 06—RTI released the RFP for subcontracts through the NGA to the Governors of all 54 states and US Territories

- Feb 06—RTI and NGA held 2 bidder's conferences to discuss submissions

- Mar/Apr 06—RTI and NGA reviewed proposals submitted March 1, 2006

- Apr 06—Signed subcontract with the HIT National Resource Center to provide public web pages, private workspaces and develop the assessment tool for collecting and aggregating business practices

Progress Since January Briefing (cont'd)

- May 06--Prime contract was increased by 5.73 million to fund 33 states and 1 US territory

  - Subcontracting entities all designated by their respective governors

  - Steering Committee-Public-Private partnership of state and organizational leaders

  - Working groups comprised of broad range of stakeholders from across each state including patient advocate and consumers

- May 06--HHS issued the press release that 22 states had already executed subcontracts and 12 were still pending

Upcoming Activities

- May 06 — Kickoff meetings have already begun and states are developing their work plans and assembling teams

- Jun 06 — Debriefings are being held with states that were not offered subcontracts and plans are underway to share documents, tools and methods with states that are not subcontracted to the project.

Upcoming Activities (cont.)

Summer 2006

- Assessment of Variation
  - States will form multi-stakeholder work groups to respond to set of HIE scenarios
  - Stakeholder work groups will identify business practices associated with privacy and security
  - Code practices as "good" practices or barriers to HIE
  - Identify policy and legal drivers behind barriers

Upcoming Activities (cont.)

Fall 2006

- Regional and Statewide meetings will be held to share progress and information

Fall/Winter 2006/2007

- Analysis of Solutions and Implementation Plans

Spring 2007

- Nationwide Meeting and Reports

A Roadmap for National Action on Clinical Decision Support

Steering Committee

Jerome A. Osheroff, Thomson Micromedex, *presenter*

Jonathan M. Teich, Brigham & Women's Hospital / Harvard U., *presenter*

Blackford F. Middleton, Partners Healthcare

Elaine B. Steen, American Medical Informatics Assoc.

Adam Wright, Oregon Health & Sciences University

. Detmer, American Medical Informatics Assoc.

What is CDS?

- **Giving clinicians, patients, and others relevant information in context**, that helps them make better decisions, prevent errors, and improve care quality and outcomes

- **CDS interventions** include guidelines, alerts, order sets, tools to interpret patient data

- **Studies show value:** guideline adherence, fewer medication errors/adverse events

CDS Opportunity Example: The Community Initiatives

- Workgroups support exchange of data key to clinical decision making
  - meds, labs, messaging, biosurveillance

- CDS helps turn data into best care, by:
  - Organizing, explaining, guiding, alerting

- Can amplify the value of each initiative
  - e.g., fewer medication errors, consumer guidance, lab interpretation, surveillance

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Full Potential is Unrealized

- Knowledge/tools are not interoperable
  - Each vendor/provider reinvents the wheel

- Adoption is limited/difficult
  - Unclear business case
  - Usability/deployment problems

- Care quality/efficiency problems persist

The CDS Roadmap

An ONC-commissioned blueprint for *coordinated national action* to ensure that *usable* and *effective* clinical decision support is *widely used* by providers and patients to improve healthcare

A Multi-Stakeholder Effort

- CDS/informatics pioneers
- Providers: academic/ community centers
- Patient/consumer advocates
- HIT/CDS vendors
- Payers
- Consulting firms

- Healthcare quality & safety experts
- Legal/policy experts
- Standards organizations
- Government
  - ONC, AHRQ, NIH, VA, CMS, FDA, NLM, IOM, CCHIT
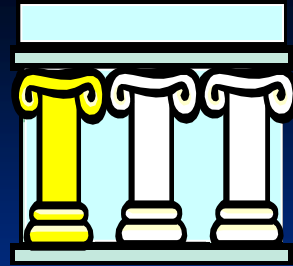
Enhanced Health & Healthcare Through CDS

Best Knowledge Available When Needed

High Adoption and Effective Use

Continuous Improvement of CDS Methods and Knowledge
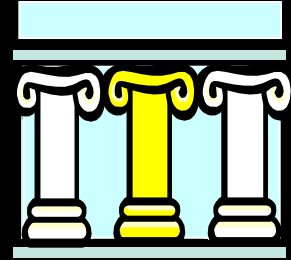
6 Strategic Objectives
Best Knowledge Available When Needed

1. Develop *practical* standard formats for representing CDS knowledge and interventions

2. Establish standard approaches to organizing and distributing CDS

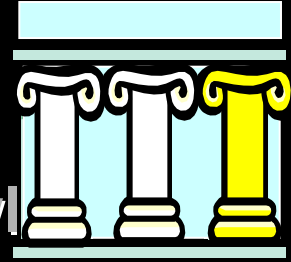# 6 Strategic Objectives
High Adoption and Effective Use

3. Develop solutions to policy, legal and financial barriers

4. Compile and disseminate best practices for usability and implementation

6 Strategic Objectives
Continuous Improvement of CDS & Knowl...

5. Develop standards to collect, learn from, and share national CDS experience

6. Use EHR data systematically to advance knowledge

'Critical Path' Action Steps Recommended in Roadmap

- Create ongoing stakeholder group/forum

- Collect and promote best CDS practices

- Develop and conduct pilots of usable, valuable, scalable CDS
  - based on strategic objectives
  - targeting high-priority clinical areas

- Support/leverage pertinent initiatives

American Health Information Community

Looking Forward:
Goals, Objectives, and Strategies

Strategic Framework

- Original Strategic Framework was released in July of 2004

- Articulated 4 goals and 12 strategies

- Vetted, discussed, and refined goals and strategies over the last two years to produce the updated strategic framework
    - Reflects market based orientation
    - Will be used to develop internal performance measures
    - Communication vehicle with public and private partners

Each Strategy Fits into One of Three Categories:

1. Strategy has been initiated and specific actions are being taken

2. Strategy is under active consideration and requires further discussion

3. Strategy is for future discussion

10 Initiated Strategies

Goal 1: Inform Health Care Professionals

Strategy 1.1.1: Simplify health information access and communication among clinicians

- EHR Workgroup is focusing on access to needed clinical information

Strategy 1.2.3: Lower risk of EHR adoption

- CCHIT Contract
- CMS DOQ-IT Initiative

10 Initiated Strategies

Goal 2: Interconnect Health Care

Strategy 2.1.1: Establish well-defined health information standards

- HITSP contract
- CCHIT contract

Strategy 2.1.2: Ensure federal agency compliance with health information standards

- FHA
- NIST

Strategy 2.1.3: Exercise federal leadership in health information standards adoption

- Workgroup's recommendations

Strategy 2.3.1: Support the development and implementation of appropriate privacy and security policies, practices, and standards for electronic health information exchange

- HISPC contract
- Workgroup recommendation to create a privacy and security subgroup
- HHS Policy Council

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10 Initiated Strategies

Goal 3: Personalize Health Management

Strategy 3.1.2: Expand access to personal health management information and tools
- Consumer Empowerment Workgroup recommendations

Strategy 3.2.1: Promote adoption of remote monitoring technology for communication between providers and patients
- Chronic Care Workgroup recommendations

Goal 4: Improve Population Health

Strategy 4.1.1: Enable simultaneous flow of clinical care data to and among local, state, and Federal biosurveillance programs
- Biosurveillance Workgroup recommendations

Strategy 4.4.1: Foster the availability of field EHRs to clinicians responding to disasters
- Gulf Coast Digital Health Information Recovery Contract
- Rapid response EHR initiative

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6 Strategies for Active Consideration

Goal 1: Inform Health Care Professionals

Objective 1.2: Low Cost and Low Risk EHRs

Strategy 1.2.1: Foster economic collaboration for EHR adoption

Hospitals, public health agencies and health plans are interested in supporting physician adoption of EHRs. Yet, they face legal and practical barriers to this type of collaboration. Policies that allow such collaboration when not contrary to public interest would increase health information technology uptake.

6 Strategies for Active Consideration

Goal 1: Inform Health Care Professionals

Objective 1.2: Low Cost and Low Risk EHRs

Strategy 1.2.2: Lower total cost of EHR purchase and implementation

The costs of EHRs are high because a large amount is spent on custom integration and accessing non-standard information systems. Also, the cost of consultants, training, and implementation of these specialized systems is high. In addition to allowing disparate parties to collaborate in installing EHRs, efforts that lower the total cost of ownership will enable many providers to use these tools.

6 Strategies for Active Consideration

Goal 2: Interconnect Health Care

Objective 2.2: Sustainable Electronic Health Information Exchange

Strategy 2.2.1: Stimulate private investment to develop the capability for efficient sharing of health information

The United States lacks the capacity for widespread and low cost health information sharing. There is nothing in health care similar to the carriers that operate and compete in telephony or broadband. To develop this capability in health care, a common technical architecture and substantial private sector investment is required. These will together create supply side entry of offerings that will in turn allow more hospitals and physicians to access these tools.

6 Strategies for Active Consideration

Goal 2: Interconnect Health Care

Objective 2.2: Sustainable Electronic Health Information Exchange

Strategy 2.2.4: Support state and local governments and organizations to foster electronic health information exchange

Health care continues to be delivered locally and regionally, and it is difficult for a top-down federal solution to meet the needs of America's diverse communities. Many states are developing strategies to foster health information exchange, but local and regional efforts are also occurring as well. States have unique laws that affect privacy and security, licensure, practice of medicine, insurance, liability, and have a natural interest in improving health care for their citizens. Therefore, the states are the natural units for health information exchange customization, and should be supported and guided in this new role.

6 Strategies for Active Consideration

Goal 3: Personalize Health Management

Objective 3.1: Consumer Use of Personal Health Information

Strategy 3.1.1: Establish value of personal health records, including consumer trust

Personal health records (PHRs) are in the early stage of development, and no standard exists today to ensure that they meet a minimum set of requirements. Additionally, PHRs today are generally not linked to the clinical information within EHRs, requiring extensive manual data entry and knowledge of particular details of medical information. Although PHRs have the capability to give consumers better control over their care, consumers have no history from which to assess whether they should place their trust in PHRs.

6 Strategies for Active Consideration

Goal 4: Improve Population Health

Objective 4.2: Efficient Collection of Quality Information

Strategy 4.2.1 Develop patient centric quality measures based on clinically relevant information available from interoperable longitudinal electronic health records

Much of quality measurement is currently provider focused – to assess performance of individual providers on a limited number of metrics. Most of health care dollars, however, are spent on patients whose care spans multiple providers and settings. As interoperable health information becomes available, there will be the ability to assess care at the patient-level across the continuum of care. This will allow tremendous opportunity for systemic improvement in our health care delivery system, supported by more informed public policy and decisions.

16 Strategies for Future Discussion

Goal 1: Inform Health Care Professionals

Strategy 1.1.2: Increase support for clinicians to use EHRs

Strategy 1.3.1: Increase investment in sources of evidence based knowledge

Strategy 1.3.2: Increase investment in tools that can access and integrate evidence based knowledge in the clinical setting

Strategy 1.3.3: Establish mechanisms which will allow clinicians to empirically access information and other patient characteristics that can better inform their clinical decisions

Strategy 1.4.1: Ensure low-cost EHRs for clinicians in underserved areas

Strategy 1.4.2: Support adoption and implementation by disadvantaged providers

16 Strategies for Future Discussion

Goal 2: Interconnect Health Care

Strategy 2.2.2: Use government payers and purchasers to foster interoperable electronic health information exchange

Strategy 2.2.3: Adapt federal agency health data collection and delivery to NHIN solutions

Strategy 2.3.2: Develop and support policies to protect against discrimination from health information

Goal 3: Personalize Health Management

Strategy 3.3.1: Promote consumer understanding and provider use of personal genomics for prevention and treatment of hereditary conditions

Strategy 3.3.2 Promote multi-cultural information support

16 Strategies for Future Discussion

Goal 4: Improve Population Health

Strategy 4.1.2: Ensure that the nationwide health information network supports population health reporting and management

Strategy 4.2.2: Ensure adoption of uniform performance measures by health care stakeholders

Strategy 4.2.3: Establish standardized approach to centralized electronic data capture and reporting of performance information

Strategy 4.4.2: Improve coordination of health information flow during disasters and crises

Strategy 4.4.3: Support management of health emergencies