SHARP: An ONC Perspective
2010 Face-to-Face Meeting

Wil Yu, Special Assistant, Innovations and Research
Wil.Yu@HHS.gov

Office of the National Coordinator for Health Information Technology (ONC)
“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.”
Federal Government Responds: HITECH Act

- Part of American Recovery and Reinvestment Act of 2009 (ARRA)
- Goal: Every American to have an EHR by 2014
- Systematically addresses major barriers to adoption and Meaningful Use:
  - Money/market reform
  - Technical assistance, support, and better information
  - Health information exchange
  - Privacy and security
HITECH Vision

• A major transformation in American health care

• Each patient receives optimal care through nationwide health information exchange

• Programs and regulations to help you overcome obstacles to adoption and Meaningful Use of electronic health records (EHRs)
Promoting Nationwide Health Information Exchange

- Private, secure, and comprehensive EHRs mean more informed clinical decision-making
- Better clinician-patient communication
- Efficient and convenient delivery of care
- Early diagnosis of disease, with potential to improve health outcomes and reduce costs
- Improved patient safety
- Efficiencies for administrative tasks
Challenge: EHR Adoption Levels


NOTES: Any EMR/EHR is a medical or health record system that is either all or partially electronic (excluding systems solely for billing). The 2009 data are preliminary estimates (as shown on dashed lines), based only on the mail survey. Estimates of basic and fully functional systems prior to 2006 could not be computed because some items were not collected in the survey. Starting in 2007, the skip pattern after the all or partial EMR/EHR systems question was removed. Includes nonfederal, office-based physicians. Excludes radiologists, anesthesiologists, and pathologists.

SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey.
Hospital adoption levels:

- 1.5% percent of U.S. hospitals have a comprehensive electronic records system
- An additional 7.6% have a basic system
- Only 17% of hospitals have implemented computerized provider-order entry for medications

Barriers to EHR Adoption

Percent of Physicians Reporting a “Major Barrier”

- Lack of capital: 67%
- Uncertainty of ROI: 51%
- Finding a system that meets your needs: 54%
- System becoming obsolete: 45%
- Capacity to implement: 39%
- Loss of productivity: 41%

HITECH Act Implementation

- Regional extension centers
- Workforce training
- Medicare & Medicaid Incentives and penalties
- State grants for health Information exchange
- Standards & certification framework
- Privacy & Security framework
- Adoption of EHRs
- Meaningful Use of EHRs
- Exchange of health information
- Improved individual and population health outcomes
- Increased transparency and efficiency
- Improved ability to study and improve care delivery

Research to enhance HIT

HITECH Regulations and Programs

- Standards and Certification Criteria
- Medicare & Medicaid EHR Incentive Programs (including Meaningful Use)
- Regional Extension Centers (RECs)
- State Health Information Exchange (HIE)
- Workforce Training Programs
- Beacon Communities
- Strategic Health Information Technology Advanced Research Projects (SHARP)
- Nationwide Health Information Network (NHIN)
## How HITECH Addresses Barriers to Adoption

<table>
<thead>
<tr>
<th>Obstacle</th>
<th>Intervention</th>
<th>Funds Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Failure, Need for Financial Resources</td>
<td>- Medicare and Medicaid EHR Incentive Programs for “Meaningful Use”</td>
<td>$27.3 B*</td>
</tr>
<tr>
<td>Addressing Adoption Difficulties</td>
<td>- Regional Extension Centers</td>
<td>$643 M</td>
</tr>
<tr>
<td></td>
<td>- Health IT Research/Resource Center</td>
<td>$50 M</td>
</tr>
<tr>
<td>Workforce Training</td>
<td>- Workforce Training Programs</td>
<td>$84 M</td>
</tr>
<tr>
<td>Addressing Technology Challenges and Providing Breakthrough Examples</td>
<td>- Strategic Health Information Technology Advanced Research Projects</td>
<td>$60 M</td>
</tr>
<tr>
<td></td>
<td>- Beacon Communities Programs</td>
<td>$250 M</td>
</tr>
<tr>
<td>Privacy and Security</td>
<td>- Policy Framework</td>
<td>Addressed across all Programs</td>
</tr>
<tr>
<td></td>
<td>- New Privacy and Security Policies</td>
<td></td>
</tr>
<tr>
<td>Need for Platform for Health Information Exchange</td>
<td>- NHIN, Standards and Certification State Cooperative Agreement Program</td>
<td>$64.3 M $548 M</td>
</tr>
</tbody>
</table>

*$27.3 B is high scenario
EHR Incentive Programs and Meaningful Use

• Criteria for Medicare- and Medicaid-eligible professionals and hospitals to receive incentives for using certified EHR technology in a meaningful manner

• The Recovery Act specifies the following 3 components of Meaningful Use:
  1. Use of certified EHR in a meaningful manner (e.g., e-prescribing)
  2. Use of certified EHR technology for electronic exchange of health information to improve quality of care
  3. Use of certified EHR technology to submit clinical quality and other measures
Meaningful Use: Health Outcome Policy Priorities

- Improving quality, safety, efficiency, and reducing health disparities
- Engage patients and families in their health care
- Improve care coordination
- Improve population and public health
- Ensure adequate privacy and security protections for personal health information
Standards and Certification Criteria

• Develop interoperability specifications that:
  – Identify harmonized standards
  – Provide detailed technical specifications for how those standards need to be used

• Work with health care organizations and standards-development organizations to ensure that standards are available for use nationally
Regional Extension Centers (RECs)

• Goal: Assist at least 100,000 providers in achieving Meaningful Use by 2012

• Establish RECs nationwide to support providers in adopting and becoming Meaningful Users of HIT through comprehensive, “on-the-ground” services:
  - Outreach and education
  - EHR vendor selection support
  - Project management assistance
  - Workflow redesign support
  - Help with achieving Meaningful Use
Regional Extension Centers (RECs)

Focus on supporting primary care providers that are least likely to achieve Meaningful Use on their own:

- Small practices with less than 10 providers
- Public and critical access hospitals
- Community health centers and rural health clinics
HITRC: Research to Support RECs

The Health Information Technology Research Center (HITRC) is charged with helping the RECs collaborate with one another and with stakeholders to identify and share best practices in:

- EHR adoption
- Meaningful use
- Provider support
State Health Information Exchange

- Goal: Give every provider options for meeting health information exchange (HIE) Meaningful Use requirements
- 4-year program to support state programs to ensure the development of HIE within and across their jurisdictions
- 56 states and territories awarded funding for HIE planning and implementation
- States need an ONC-approved State Plan before federal funding can be used for implementation
- Exchange must meet national standards
Workforce Training Programs

• Goal: Help train up to 50,000 new HIT workers to assist providers in becoming Meaningful Users of EHRs

• Four distinct programs that aim to support the education of new HIT professionals, including:
  – Community college consortia
  – Curriculum development centers
  – University-based training
  – Competency examination program
## Workforce Training Programs

<table>
<thead>
<tr>
<th>Community College Consortia</th>
<th>Curriculum Development Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five regional multi-institution consortia, creating non-degree training programs that can be completed in six months or less.</td>
<td>Five awards to develop educational materials for key HIT topics to be used by Community College Consortia program.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University-Based Training Programs</th>
<th>Competency Examination Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine awards supporting existing programs to produce trained HIT professionals (most courses of study completed in ≤12 months).</td>
<td>One award to create an objective assessment of basic competency for HIT individuals (non-degree programs and other members of workforce).</td>
</tr>
</tbody>
</table>
The Nationwide Health Information Network (NHIN)

A set of policies, standards and services that enable the Internet to be used for secure and meaningful exchange of health information to improve health and health care.
• Improves patient care by linking:
  – Health information exchanges
  – Integrated delivery networks
  – Pharmacies
  – Government
  – Labs
  – Providers
  – Payers
  – Other stakeholders

• Not a large database of patient records or a physical network that runs on HHS servers
NHIN Exchange and NHIN Direct

• NHIN Exchange (original project begun in 2005)
  – Group of participants who have agreed to be part of NHIN Collaborative
  – Focus on patient lookup & summary record exchange
  – Several important efforts live
    • Social security-MEDVirginia
    • VA-DoD-KP

• NHIN Direct (new initiative)
  – Designed to support 2011 MU exchanges
  – Simpler “push” scenarios
  – Initial implementation this fall
Transcendent Program: Beacon Communities

- To demonstrate how high levels of meaningful use in a community can drive improvements in health and care
- These communities can serve as beacons for the nation
- 15 grants to communities announced
- Competition open for two more
Transcendent Program: Beacon Communities

- **Goal:** Share best practices that help communities achieve cost savings and health improvement
- **15 demonstration communities** that will:
  - Build and strengthen their HIT infrastructure and exchange capabilities and showcase the Meaningful Use of EHRs
  - Provide valuable lessons to guide other communities to achieve measurable improvement in the quality and efficiency of health services or public health outcomes

*Two additional communities to be funded in Summer 2010*
Transcendent Program: SHARP – Strategic Health IT Advanced Research Projects

To establish targeted research projects focused on areas where breakthrough improvements can greatly enhance the transformational effects of health IT and address problems that have been barriers to adoption and progress along the pathway to Meaningful Use.

“We are asking that these sites bring to bear the absolute highest level of expertise that can be assembled in the nation.”
HITECH Act Implementation

- Regional extension centers
- Workforce training
- Medicare & Medicaid Incentives and penalties
- State grants for health Information exchange
- Standards & certification framework
- Privacy & Security framework

Adoption of EHRs → Meaningful Use of EHRs → Exchange of health information → Improved individual and population health outcomes

Research to enhance HIT

SHARP Award Information

- $60 million program
- Four year awards, in the form of cooperative agreements
- Eligibility
  - Institutions of higher learning
  - Public / Private entities with a research mission
SHARP Research Focus Areas

• Secondary Use of EHR Data: Focus on strategies to enhance re-use of EHR data in analytics and informed decision-making applications to improve the overall quality of health care

• Healthcare Application and Network Platform Architectures: Focus on development of new and improved architectures for EHRs and health information exchange
SHARP Research Focus Areas

• Security of Health IT: Address challenges of developing security and risk mitigation policies and technologies necessary to build public trust as health IT systems use proliferates.

• Patient-Centered Cognitive Support: Address the challenges of harnessing the power of health IT so that it integrates with, enhances, and supports clinicians’ reasoning and decision making.
Key Features of Sites

- Targeted Research Agenda
  - Multidisciplinary Approach
  - Near-term and Long-term Mission
- Highest Level of Expertise and Coordination
- Relationship to ONC and HHS programs
- Multi-sector Partnerships
- Translation of research into health care and public health innovations; i.e. partner with industry to rapidly transfer short-term results of this research into health IT products
SHARP Governance and Structure

- ONC / HHS
  - Project and Grant Officer – oversight, reporting, Federal role coordination
  - Federal Steering Committee (FSC)
    - OSTP, CDC, NIH, AHRQ, CMS, DoD, VA, FDA, HRSA, IHS, SAMHSA, etc.
    - Sub-committees for each SHARP awardee
  - Evaluation

- Project Advisory Committee