ARRA – HITECH
Meaningful Use Objectives
&
Implications to Public Health Lab

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DISCLAIMER

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Session Objectives

• Meaningful Use
  – Overview
  – Stages & Timeline
  – Priorities & Objectives

• Public Health Objectives
  – Review Three PH objectives under Menu Set

• Public Health Laboratories
  – Implications
  – Best practices
  – Opportunities for Assistance
  – Potential for future stages
MEANINGFUL USE
Authorizing Legislation

- **Health Information Technology for Economic and Clinical Health (HITECH) Act 2009**
  - Provides the Department of Health and Human Services (HHS) with authority to establish programs to improve health care quality, safety, and efficiency through the promotion of health IT, including electronic health records (EHR) and electronic Health Information Exchange that is private and secure.
Requirements Overview

• As part of HITECH Congress specified three types of requirements for meaningful use:
  
  – Use of certified Electronic Health Record (EHR)
  – Improving the quality of care by connecting a certified EHR to enable Electronic Exchange of Health Information
  – Reporting of Clinical Quality Measures
Use vs. Meaningful Use

- Meaningful use is about processes – how the software is used and how data flows in an ecosystem of stakeholders.
- Meaningful not about products and vendors can’t assure meaningful use.
Incentives Overview

- Incentive funding for Health care providers who demonstrate “Meaningful use of health information technology (HIT)”
- To accelerate the adoption of HIT and utilization of qualified electronic health records (EHRs)
- Estimated payments of $44.7 Billion
- Eligible Providers can receive
  - Up to $44,000 under Medicare, over 4 years starting CY 2011
  - Up to $63,750 under Medicaid, over 6 years starting CY 2011
  - Medicaid incentives are managed by States
  - Medicare incentives are managed by Federal Government
- Hospitals can receive a $2 million base incentive plus a per discharge amount calculation based on the Medicaid/Medicare share with no maximum incentive amount.
Stages and Timeline Overview

- Progressive rollout with multiple stages

2011 - 2012

- **Stage-1**
  - Data Capture

2013 - 2014

- **Stage-2**
  - Data Aggregation

2015 +

- **Stage-3**
  - Data Use to Impact Outcomes

- Two year periods for each stage
- The requirement that all providers reach Stage 3 by 2015 is dropped
- Alignment with Health Information Exchange (HIE) seems more of Stage-2
High Level View of Three Stages

- **Stage 1** "Meaningful Use" criteria, beginning in 2011, are focused upon the electronic capture of medical information in a fully-coded format and **the use of that information** to track clinical conditions and for the purpose of assisting with care coordination. Stage 1 also proposes the use of clinical decision support applications to facilitate disease and medication management and requires the reporting of **clinical quality metrics** and **public health information**.

- **Stage 2** criteria will be based upon the findings of Stage 1 and are expected to leverage the broader use of the EHR technology implemented during 2011 and 2012. Stage 2 will bring greater emphasis on disease management, clinical decision support, medication management, patient access to personal health information, care transition of care, and bi-directional communication between physicians and public health agencies.

- **Stage 3** will be centered on improvements in quality, safety and efficiency; will require clinical decision support for conditions of high-priority to the general public health; and provide patient access to health self-management tools.
### Meaningful Use - Priorities & Objectives

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Required Core Objectives</th>
<th>Menu Set Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving quality, safety, efficiency, and reducing health disparities</td>
<td>Engage patients and families in their health care</td>
<td></td>
</tr>
<tr>
<td>Engage patients and families in their health care</td>
<td>Improve Care Coordination</td>
<td></td>
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<tr>
<td>Improve Care Coordination</td>
<td>Ensure adequate privacy and security protections for personal health information</td>
<td></td>
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<tr>
<td>Ensure adequate privacy and security protections for personal health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve population and public health *</td>
<td></td>
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</tr>
</tbody>
</table>

* At least one Public Health objective is required from the Menu Set
Stage-1 Objectives

• Core Set
  – 14 objectives for Hospitals and Critical Access Hospitals (CAH)
  – 15 for Eligible Providers
  – *Population and Public Health requirements are not part of Core Set, but they are part of the Menu Set*

• Menu Set (choice about what to elect to do)
  – 10 “electable” objectives
  – 5 out of 10 listed objectives must be implemented
  – *At least one of the five should be from Public Health objectives*

• Centers for Medicare and Medicaid Services (CMS) suggests all Menu Set objectives become Core set objectives during Stage-2

**Meaningful Use and the Implications For Public Health**
Companion Initiatives

• Regional Extension Centers for technical assistance
• State Health Information Exchange (HIE) Cooperative Agreements
• Health IT policy and standards committees and workgroups
• Workforce training

HITECH Grants:
http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_hitech_and_funding_opportunities/1310
MEANINGFUL USE
PUBLIC HEALTH IMPLICATIONS
Implications for Public Health

• Public Health Objectives
  – Review Three PH objectives under Menu Set

• Public Health Laboratories
  – Implications
  – Best practices
  – Opportunities for Assistance
  – Future stages for Public Health

• Real World Example
Public Health Objectives

• Capability to submit electronic data to immunization registries/systems

• Capability to provide electronic syndromic surveillance data to public health agencies

• Capability to provide electronic submission of reportable lab results to public health agencies (hospitals only)
Public Health Objectives (continued....)

• Clarification on Public Health Agency:

“A public health agency is an entity under the jurisdiction of the U.S. Department of Health and Human Services, tribal organization, State level and/or city/county level administration that serves a public health function.”
• Reportable Lab Results
  – Objective: Capability to submit electronic data on reportable (as required by state or local law) lab results to PH agencies and actual submission in accordance with applicable law and practice.
  – Measure: Performed at least one test of EHR’s technology’s capacity to provide results electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)
Public Health Objectives (continued....)

• Submission to Immunization Registries
  – Objective: Capability to submit electronic immunization data to immunization registries or immunization information systems and actual submission in accordance with applicable law and practice.
  – Measure: Performed at least one test of EHR’s technology’s capacity to submit electronic data to immunization registries and follow-up submission if the test is successful (unless none of the immunization registries to which eligible provider, eligible hospital or CAH submits such information have the capacity to receive the information electronically).

• Syndromic Surveillance
  – Objective: Capability to submit electronic syndromic surveillance data to PH agencies and actual submission in accordance with applicable law and practice.
  – Measure: Performed at least one test of EHR’s technology’s capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible provider, eligible hospital or CAH submits such information have the capacity to receive the information electronically).
Reportable Lab Results – Electronic Lab Reporting

**Meaningful Use:**
- Electronic Lab Reporting (ELR) data flow to Public Health Agency (PHA) from Certified EHR technology at Hospitals

**Outside of MU:**
Electronic Lab Reporting (ELR) data flow to Public Health Agency (PHA) from non certified EHR systems and other organizations
Implications to Public Health Labs

• No direct stipulation on PHLs

• **Relevance**: Electronic Lab Reporting of Reportable Lab Results
  
  – Adoption of ELR Implementation Guide, specified in ONC standards, provides a common baseline with Hospital EHR systems
  
  – Capability to electronically submit will provide operational efficiencies at PHL
  
  – Potential to enhance technical infrastructure with respect to integration and interoperability and be ready for future data flows
## Comparison of MU Objective in the context of PHL

<table>
<thead>
<tr>
<th>Component</th>
<th>MU : Reportable Lab Results Objective</th>
<th>In the context of Public Health Lab</th>
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</thead>
<tbody>
<tr>
<td><strong>Reporting source</strong></td>
<td>Hospital</td>
<td>Public Health lab</td>
</tr>
<tr>
<td><strong>Receiving entity</strong></td>
<td>Public Health Agency</td>
<td>1. Public Health Agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Hospital lab/EHR as part of ETOR (response to test order) as a potential</td>
</tr>
<tr>
<td><strong>Direction of message</strong></td>
<td>Submit to PH Agency</td>
<td>Submit to PH Agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Submit to Hospital as part of ETOR (response to test order)</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>Certified EHR</td>
<td>Laboratory Information Mgmt System (LIMS) along with an Integration Engine</td>
</tr>
<tr>
<td><strong>Incentive payment to reporting source</strong></td>
<td>For Medicare and Medicaid patients</td>
<td>1. Not eligible for MU incentives</td>
</tr>
<tr>
<td><strong>Message</strong></td>
<td>HL7 2.5.1 and LOINC</td>
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</tr>
<tr>
<td><strong>Implementation specifications</strong></td>
<td>HL7 ELR Implementation Guide</td>
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</table>
PHL: Opportunities for Assistance

• Infrastructure and Interoperability Support for Public Health Laboratories
  – Supports 10 Epi and Lab Capacity (ELC) grantees

• Laboratory Technical Implementation Assistance for Public Health
  – Award to Association of Public Health Laboratories

• Standard and Reusable Solutions for Hospital Laboratory Submission of Reportable Lab Results to Public Health
  – Award to Surescripts

• Public Health Lab Interoperability Solution Solutions Architecture (PHLISSA)
  – Contract with SAIC

Meaningful Use and the Implications For Public Health
• HIE Challenge Grant
  – Status : Open
  – This funding announcement for the Health Information Exchange Challenge Program encourages breakthrough progress for nationwide health information exchange in five challenge areas identified as key needs since Federal and State governments began implementation of the HITECH Act. The awards will fund the development of technology and approaches that will be developed in pilot sites and then shared, reused, and leveraged by other states and communities to increase nationwide interoperability.
  – The five themes include: 1. Achieving health goals through health information exchange 2. Improving long-term and post-acute care transitions 3. Giving patients access to their own health information 4. Developing tools and approaches to search for and share granular patient data (such as specific lab results for a given time period) 5. Fostering strategies for population-level analysis
  – Awards will range between $1 million and $2 million each, and will be in the form of supplemental funding to State Health Information Exchange Cooperative Agreements, which have provided approximately half a billion dollars to states and State designated entities to enable health information exchange. Funding for this initiative is approximately $16 million which ONC anticipates will support 10 awards.
PHL: Best Practices – Business Process

• Review and align all current and future implementations with ONC specified standards
• Leverage technologies that are available currently while keeping future initiatives in mind
  – For example future integration with HIEs
• Establish Partnerships
  – Hospitals
  – Public Health Agencies
• Form collaborations amongst PHLs to develop and share reusable components in the context of electronic information exchange architectures and solutions
**PHL: Best Practices - Systems Architecture**

**RLR: Electronic Lab Reporting to PHAs** (PHL → PHA; Send)

### Public Health Laboratory (Sender)

<table>
<thead>
<tr>
<th>Manual Process</th>
<th>Capture Lab Test Results in LIMS</th>
</tr>
</thead>
</table>

### Automation

1. Is this a **Notifiable Disease?**
2. Extract Information from LIMS
3. Perform Transformations and Translations
4. Route to PHL's Outbound Gateway
5. Encrypt Message
6. Route to PHA
7. Message sent To PHA

### Systems view

- LIMS - Laboratory Information Management System
- RCMT - Reportable Condition Mapping Tables
- PHA - Public Health Agency
- PHL - Public Health Laboratory

**Meaningful Use Presentation**
PHL: Future Stages for Public Health

• Electronic Test Order and Results

Meaningful Use Stage-1
Reportable Lab Results:
Electronic Lab Reporting (ELR) data flow to Public Health Agency (PHA)

Electronic Test Order & Results (ETOR) between Lab and Hospital (or other entity like EP, Clinical lab, etc.)

Meaningful Use and the Implications For Public Health
Real World Example

Hepatitis A Case in Food Handler
Pre-Meaningful Use

Day 1 Exposure

Day 7, Sx appear

Day 9, consult physician, conduct test

Day 13, test result to physician

Day 15, PHA notified

Day 16, food handler status ID’d

Day 18, clinic held
Real World Example

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Preventive measures possible

Restaurant closed

Meaningful Use Presentation
Real World Example

Hepatitis A Case in Food Handler
Post-Meaningful Use

Pre-MU

Day 1
Exposure

Day 7, Sx appear

Day 9,
consult physician,
conduct test

Day 11,
Test result received,
PHA Notified,
Food Handler Status ID’ed

Day 13,
test result to
physician

Day 15,
PHA notified

Day 16,
food handler status ID’ed

Day 18,
clinic held

Post-MU

Immunization Records identified two workers who had been previously immunized and these workers could continue working.

Preventive measures possible

Restaurant closed

Restaurant closed

Meaningful Use Presentation
Conclusion

• Through Meaningful Use, Public Health will be able to respond faster and more effectively to public health events
• Faster and more effective response maximizes protections to the population as a whole
• Faster and more efficient response minimizes economic impacts of public health events.
• Faster and more effective response minimizes unnecessary treatment