

# Public Health Meaningful Use: Views from the Field



change is everywhere...opportunity is here

## HIMSS HIE Roundtable May 19, 2011

t r a n s f o r m i n g   h e a l t h c a r e   t h r o u g h   I T <sup>™</sup>

# Public Health and Meaningful Use: Views from the Field

**HIMSS HIE Roundtable  
May 19, 2011**

**Noam H. Arzt**

President, HLN Consulting, LLC  
(858) 538-2220 (voice)  
(858) 538-2209 (fax)  
[arzt@hln.com](mailto:arzt@hln.com)  
<http://www.hln.com/noam>

**Laura Rappleye**  
DCH, HIT Specialist  
[rappleyel@michigan.gov](mailto:rappleyel@michigan.gov)

**Amy Zimmerman**

State HIT Coordinator  
Executive Office of Health and Human Services  
(401) 222-1439  
[amy.zimmerman@health.ri.gov](mailto:amy.zimmerman@health.ri.gov)

**Paul Groll**

DTMB, Enterprise Architect  
[grollp@michigan.gov](mailto:grollp@michigan.gov)

# Agenda

- Public Health & Meaningful Use:  
An Introduction
- Views from the Field  
Michigan  
Rhode Island
- Questions and Answers

# Public Health & Meaningful Use: An Introduction

**HIMSS**<sup>®</sup>

www.himss.org



change is everywhere...opportunity is here

**Noam H. Arzt**

President, HLN Consulting, LLC

(858) 538-2220 (voice)

(858) 538-2209 (fax)

[arzt@hln.com](mailto:arzt@hln.com)

<http://www.hln.com/noam>

t r a n s f o r m i n g   h e a l t h c a r e   t h r o u g h   I T <sup>™</sup>

# CMS Final Rule

- ***Policy Priority:***  
“Improve population and public health”
- **Three Stage 1 Objectives:**
  - 1) Submit data to Immunization Registries (P, H)
  - 2) Submit reportable lab results (H)
  - 3) Submit syndromic surveillance data (H, P)
- ***Proviso:*** Unless PH does not have the capacity to receive the data

# Immunization

- Immunization use case is a good one for HIE
- **Requirement:** “Performed at least one test of certified EHR technology’s capacity to submit electronic data to immunization registries and follow-up submission if the test is successful”
- Standards are well-developed and harmonized for these transactions
  - HITSP IS10 (Immunization)
  - Direct Project User Story

# Technical Standards: ONC FR

- HL7 v2.3.1 or v2.5.1 using CDC/AIRA Implementation Guides
- ***Vocabulary:*** CVS – Vaccines Administered
- “We encourage migration to this newer implementation specification and believe that it will likely advance interoperability across the country and improve query capabilities.”

# Considerations for Immunization

- Menu set item (one of 3 PH items must be selected)
- Component of quality measures as well
- *Retrieval* of information from an IIS will likely come into play in Stage 3
- Generation of a clinical document (CCD, CCR) from an EHR-S *will not* satisfy MU
- Conversion of an HL7 v2 message generated from an EHR-S before it reaches PH *will* satisfy MU

# Submit Reportable Lab Results

- **Requirement:** “Performed at least one test of certified EHR technology’s capacity to submit electronic data on reportable lab results to public health agencies and follow-up submission if the test is successful”
- All states have reportable lab conditions but they are different state to state
- Disease surveillance is dependent on reliable, *early* reports of suspected and confirmed occurrences
- Standards are well-developed and harmonized for these transactions

HITSP IS11 (PH Case Reporting)

Direct Project User Story

# Technical Standards: ONC FR

- HL7 v2.5 using CDC Implementation Guide
- ***Vocabulary:*** LOINC® version 2.27, when codes are received  
(note that CDC Implementation Guide requires LOINC coding where possible)

# Considerations for Lab Submission

- Menu set item (one of 3 PH items must be selected)
- Objective is for hospitals only in Stage 1
- Will probably be a menu set objective for EPs as well in Stage 2
- Submission of a lab result directly from a LIMS to PH will *not* satisfy MU unless the LIMS is a certified EHR module

# Syndromic Surveillance

- Fundamental building block is the use of data to identify and predict trends as they are occurring
- **Requirement:** “Performed at least one test of certified EHR technology’s capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful
- Often takes the form of analyzing patient chief complaints from hospital emergency rooms and other acute care settings
- Surveillance programs differ state to state
- Standards are just being finalized
  - HITSP IS02 (PH Case Reporting)
  - ISDS MU workgroup

## Technical Standards: ONC FR

- HL7 v2.3.1 or v2.5.1  
(draft Implementation Guide for v2.5.1 just released by CDC)

# Considerations for Syndromic Surveillance

- Menu set item (one of 3 PH items must be selected)
- Will probably move to core measure in Stage 2
- ISDS developed standard data set and uniform business process documentation for hospital submission (no equivalent for ambulatory settings)

# Summary: Issues for Public Health

- Stage 1 requirements relatively light, with a big “escape clause”
- Stage 2 (and 3) requirements likely to be more stringent
- NIST has established a guidance document and testing tools, as has CDC
- Many public health agencies under-funded to enable data exchange capacity in their systems or to refocus data exchange to an HIE, though CDC Interoperability Grants will help
- Good opportunity for PH to get exposure

# Meaningful Use and Public Health in Rhode Island

**Himss**<sup>®</sup>

[www.himss.org](http://www.himss.org)

change is everywhere...opportunity is here

**Amy Zimmerman**

State HIT Coordinator

Executive Office of Health and Human Services

(401) 222-1439

[amy.zimmerman@health.ri.gov](mailto:amy.zimmerman@health.ri.gov)

t r a n s f o r m i n g   h e a l t h c a r e   t h r o u g h   I T <sup>™</sup>

# Goals

- To effectively use data from EHRs to improve the overall health of Rhode Islanders
- To help providers adopt, implement, and use EHRs in an effort to help transform the practice of medicine from the current “individual sick care” system to a “population-based preventive care system”
- To take advantage of “Meaningful Use” by electronically collecting and analyzing data from providers, hospitals, laboratories, etc., in a timely manner in order to inform health care policy and practice at the consumer, provider, and community level

# Objectives

- Develop HEALTH's capacity, infrastructure and technology to leverage electronic health data
- Support providers achieving meaningful use for population health measures
- Develop and implement a coordinated strategy for working with providers, hospitals and EHR vendors
- Define what physician-based syndromic surveillance should include for RI based on national guidance once available
- Assist programs in identifying the work flow and business process implications for transitioning to the collection and use of electronic health data where applicable

# Proposed Governance for HEALTH

- Create intra-departmental EHR workgroup with representation from each Division
- Chaired by Deputy Director and Chief, HIT (position resides in the Director's Office)
- Responsible for prioritizing and coordinating activities across the department
- Need to educate committee on MU

# Background

- Statewide HIE being implemented
- State Designated Entity responsible for administering, operating, and managing statewide HIE
- Very stringent consent model, requires individuals to enroll (148,000 enrolled)
- Ability to use HIE as an intermediary for reporting to public health limited due to consent model
- HEALTH looking for strategy to minimize number of interfaces needed by (each program to every provider office)

# Work to Be Done

- Assure common understanding of HITECH, MU, Direct, etc.
- Determine current readiness and estimate demand on HEALTH
- Identify generic policy questions that need to be answered:
  - what data is needed / required
  - process for certifying that a provider/hospital has met specific public health MU criteria
  - what documentation is needed for audit purposes
- Develop recommendations for Medicaid on requirements associated with meeting public health meaningful use requirements
- Analyze/recommend most efficient approach to EHR data exchange with DOH (enterprise-wide infrastructure and architecture)
- Develop plan to communicate to providers, hospitals and EHR vendors about MU process and needs
- Identify how HEALTH can work with Medicaid to access and use the MU clinical quality measures
- Develop and implement a MU plan

# HEALTH's Meaningful Use Readiness

## **Immunization**

- Childhood registry in place and can accept pediatric immunization files
- Currently not able to accept adult immunizations
- Working to expand KIDSNET (immunization registry, etc.) to include adults

## **Syndromic Surveillance**

- All RI hospitals have been providing syndromic surveillance (ED chief complaint) via RODS
- Syndromic surveillance data from provider offices not in place; policy questions exist related to collecting this data

## **Electronic Laboratory Reporting**

- Insufficient staff resources to support testing

# Technical Assessment

- Requested Technical Assistance (TA) from ONC, such as developing a coordinated strategy for meaningful use public readiness
- HLN provided TA via a site visit and several phone conversations
- Site visit included meetings with staff from Immunization, Syndromic Surveillance, Infectious Disease, Laboratory, Medicaid, and RI's state-designated entity (RIQI)
- Provided short, medium, and long term recommendations

# Recommendations

## Short Term

- Focus on immunization reporting for Stage I MU; use an incremental approach to modifying KIDSNET to accept adult immunizations
  - Option:* test adult files and store data separately until ready to add to KIDSNET
- Adopt a “Wait and See” approach for Syndromic Surveillance from provider practices (better defined nationally)
- Move HEALTH to support a common transport for HEALTH’s Rhapsody, open engine and Chamelon-based messaging interfaces
  - Have HEALTH become Direct enabled and pilot use in one or two cases
- Need staff – project manager

# Recommendations

## Medium Term

- Modify KIDSNET to include adult immunizations
- Implement single common transport method:
  - Gateway approach: gateway converts Direct messages into a format the legacy system natively supports
  - Direct Approach: involves enhancing legacy system to retrieve messages from a direct HISP

## Long Term

- Explore ability to use CCD to provide data to HEALTH (CCD already being generated by providers to go to state HIE via Direct, etc.)

# Challenges

- Staffing resources – difficulty getting positions, etc.
- Changes in leadership and governance
  - New Administration
  - Director of Health resigns
  - Chief, HIT transferring to EOHHS
  - Look to restructure to promote coordination across the department
    - MU unit vs. within programs
    - Where does dept lead live?
- Technical – i.e., Immunization must leave EHR in HL7, cannot leave as CCD and be transformed into HL7; etc.

## Opportunities

- MU Drives Public Health Informatics
  - Looking for efficient technology infrastructure
  - Improve internal organizational structure coordination and collaboration
  - Increase visibility with providers and external partners
  - Help shape HIT & HIE policy locally and nationally



Department of  
**Community Health**

# Supporting Meaningful Use

**himss**<sup>®</sup>

[www.himss.org](http://www.himss.org)



change is everywhere...opportunity is here

**Laura Rappleye**

DCH, HIT Specialist

[rappleyel@michigan.gov](mailto:rappleyel@michigan.gov)

**Paul Groll**

DTMB, Enterprise Architect

[grollp@michigan.gov](mailto:grollp@michigan.gov)

t r a n s f o r m i n g   h e a l t h c a r e   t h r o u g h   I T <sup>™</sup>

# MDCH Systems Supporting MU

System	Role
<b>CHAMPS</b> Community Health Automated Medicaid Processing System	1. Medicaid EHR Incentive Enrollment 2. Medicaid EHR Incentive Attestation 3. Medicaid EHR Incentive Payments 4. Eligibility Tracking
<b>Data Warehouse</b>	1. Patient Identity Management 2. EHR Incentive Monitoring and Meaningful Use Reporting
<b>MCIR</b> Michigan Care Improvement Registry	Stage 1 MU Objective: Capability to submit electronic data to immunization information systems in accordance with applicable law and practice
<b>MDSS</b> Michigan Disease Surveillance System	Stage 1 MU Objective: Capability to submit electronic data on reportable lab results and actual submission in accordance with applicable law and practice
<b>Syndromic</b> Michigan Syndromic Surveillance System	Stage 1 MU Objective: Capability to submit electronic syndromic surveillance data in accordance with applicable law and practice
<b>Bureau of Labs LIMS (STARLIMS)</b>	Stage 1 MU Objective: Incorporate clinical laboratory tests into EHR as structured data

# Michigan's Approach

- United MU Outreach and Testing Process
- Coordinated with HITECH Programs
- Enterprise-wide Technical Architecture
  - Leverages existing SOM technologies
  - Integrated with MiHIN Shared Services
  - Expandable beyond Meaningful Use



- Download System(s) HL7 Specifications
- Email questions and request for meaningful use testing: [DCHPublicHealthMU@michigan.gov](mailto:DCHPublicHealthMU@michigan.gov)
- Links to HITECH Resources:
  - [http://michiganhealthit.org/meaningful\\_use/publichealth](http://michiganhealthit.org/meaningful_use/publichealth)
  - <http://www.micr.orf/MeaningfulUse.html>



**Meaningful Use and Michigan's Public Health Systems**

# MU Testing Process

- Email request to test
- Planning conference call
- Test date scheduled
- Test conducted, analyzed pass/fail recorded
- Letter from Public Health Meaningful Use Coordinator emailed after completion of this process with pass/fail acknowledgment
- Follow-up submission instructions provided

# DCH HITECH Initiatives and Public Health

## MiHIN Shared Services

### Public Health Priorities

- **Phase I**
  - Real-time submission of immunization data from EHRs to the Michigan Care Improvement Registry (MCIR)
  - Real-time submission of notifiable lab results from EHRs/labs to the Michigan Disease Surveillance System (MDSS)
- **Phase II**
  - Query and retrieval of immunization histories from MICR to EHRs
- **Phase III**
  - Real-time submission of syndromic data to MDSS

MiHINSS RFP: <http://www.mihin.org>

## State Medicaid HIT Plan

### Public Health Interoperability Partnerships

- MCIR
- MDSS
- MSSS (Syndromic)
- State Bureau of Laboratories Systems
- Vital Records
- Cancer

## State of Michigan Health Information Exchange (SOM HIE)

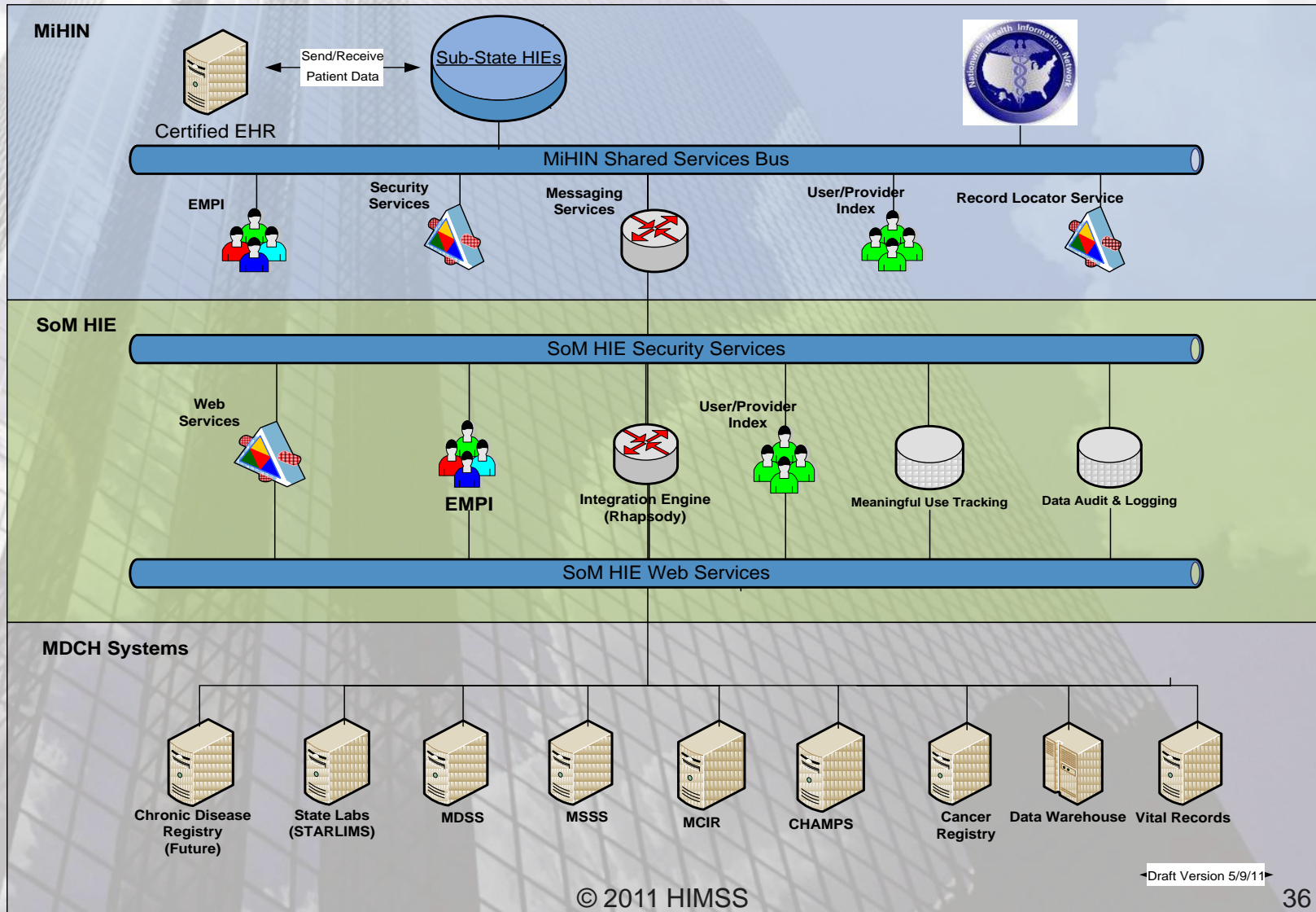
# SoM Health Information Exchange

- Supports the Medicare and Medicaid EHR Incentive Programs and the public health meaningful use objectives
- Enables DCH connectivity with the MiHIN Shared Services and the Sub-state HIEs
- Uniquely identifies citizens across multiple programs to improve health care outcomes
- Uniquely identifies health care professionals across multiple programs to improve communications with health care professionals
- Increases communication among internal SOM applications in order to reduce Fraud and Abuse
- Streamlines the data flow between DCH health information systems and external partners

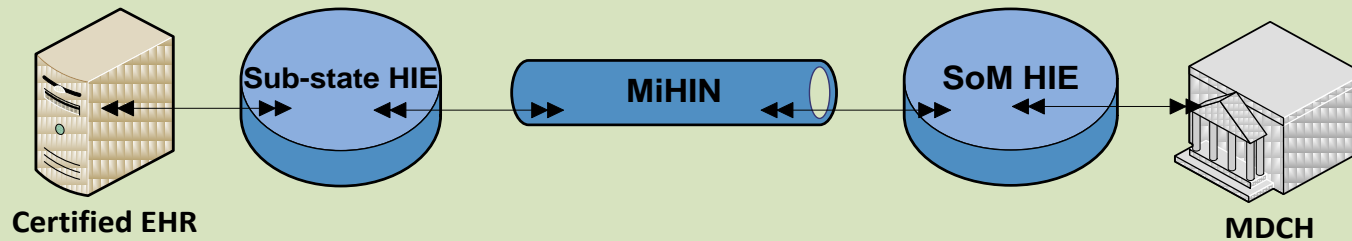
# MDCH Systems Supporting MU

System	Role
<b>CHAMPS</b> Community Health Automated Medicaid Processing System	<ol style="list-style-type: none"> <li>1. Medicaid EHR Incentive Enrollment</li> <li>2. Medicaid EHR Incentive Attestation</li> <li>3. Medicaid EHR Incentive Payments</li> <li>4. Eligibility Tracking</li> </ol>
<b>Data Warehouse</b>	<ol style="list-style-type: none"> <li>1. Patient Identity Management</li> <li>2. EHR Incentive Monitoring and Meaningful Use Reporting</li> </ol>
<b>MCIR</b> Michigan Care Improvement Registry	Stage 1 MU Objective: Capability to submit electronic data to immunization information systems in accordance with applicable law and practice
<b>MDSS</b> Michigan Disease Surveillance System	Stage 1 MU Objective: Capability to submit electronic data on reportable lab results and actual submission in accordance with applicable law and practice
<b>Syndromic</b> Michigan Syndromic Surveillance System	Stage 1 MU Objective: Capability to submit electronic syndromic surveillance data in accordance with applicable law and practice
<b>Bureau of Labs LIMS (STARLIMS)</b>	Stage 1 MU Objective: Incorporate clinical laboratory tests into EHR as structured data

## SoM HIE and MiHIN Shared Services Interoperability Design



## Stage 1 Meaningful Use Public Health Reporting Data Flow



## MiHIN Stage 1 Meaningful Use Public Health Reporting

Certified EHR	Sub-State HIE	MiHIN	SoM HIE	MDCH
<ul style="list-style-type: none"> <li>• Capture required data elements for public health reporting</li> <li>• Send Public Health reporting message according to MDCH Public Health Reporting specifications (ONC standards) to Sub-State HIE</li> <li>• Receive Public Health Reporting message acknowledgment</li> </ul>	<ul style="list-style-type: none"> <li>• Receive certified EHR's Public Health Reporting message per agreed standards and protocols</li> <li>• Validate message format and completeness</li> <li>• Validate provider exists within the MiHIN</li> <li>• Route Public Health Reporting message through MiHIN</li> </ul>	<ul style="list-style-type: none"> <li>• Receive Sub-State HIE's Public Health Reporting message per agreed standards and protocols</li> <li>• Send Public Health Reporting message through MiHIN messaging service</li> </ul>	<ul style="list-style-type: none"> <li>• Receive message from MiHIN per agreed standards &amp; protocols</li> <li>• Validate message format and completeness, translate and transform message to systems requirement (HL7 to XML)</li> <li>• Validate Provider and Patient Identity</li> <li>• Send message to appropriate MDCH system</li> <li>• Send message acknowledgment and data quality report back to certified EHR through MiHIN</li> </ul>	<ul style="list-style-type: none"> <li>• Receive Public Health Reporting message from SoM HIE per agreed standards &amp; protocol</li> <li>• Process message in:               <ul style="list-style-type: none"> <li>• MDSS</li> <li>• MSSS</li> <li>• MCIR</li> </ul> </li> <li>• Data Quality checking, Audit &amp; Logging</li> <li>• Generate data quality report and send to SOM HIE</li> </ul>

# SoM HIE Framework

- Service Oriented Architecture
- Web Services / APIs
- Phased approach leveraging existing technologies
- Incorporates HIPAA compliant security, privacy standards
- Based on ONC security and interoperability standards

# Questions & Answers

## **Noam H. Arzt**

President, HLN Consulting, LLC

(858) 538-2220 (voice)

(858) 538-2209 (fax)

[arzt@hln.com](mailto:arzt@hln.com)

<http://www.hln.com/noam>

<http://www.hln.com/resources/mu-ph.php>

## **Amy Zimmerman**

State HIT Coordinator

Executive Office of Health and Human Services

(401) 222-1439

[amy.zimmerman@health.ri.gov](mailto:amy.zimmerman@health.ri.gov)

## **Laura Rappleye**

DCH, HIT Specialist

[rappleyel@michigan.gov](mailto:rappleyel@michigan.gov)

## **Paul Groll**

DTMB, Enterprise Architect

[grollp@michigan.gov](mailto:grollp@michigan.gov)