

# Connecting Communities Workgroup

Public Health & HIE April 22, 2014 2:00 – 3:00 pm ET

# Reminder

# Please mute your line when not speaking (\* 6 to mute, \*7 to unmute)

# This call is being recorded



# Agenda

- Welcome and introductions
  - Laura Kolkman, President, Mosaica Partners
- Public Health Infrastructure
  - Anna Orlova, PhD, Executive Director, Public Health Data Standards Consortium
  - Marcy Parykaza, Public Health CIO, State of Delaware
- Discussion
- Closing remarks



# **Connecting Communities**

Brings together state and regional HIEs, HIE technology vendors, and other stakeholders to contribute and discuss substantive examples of best practices and educate the industry on issues related to electronic healthcare data exchange and interoperability

- Educational webinars
- Case studies
- Collaborative projects



# **Public Health & HIE**

 Introductions: Laura Kolkman, President, Mosaica Partners (Chair of Connecting Communities)





# Public Health Data Standards Consortium

#### http://www.phdsc.org



Promoting Standards Through Partnerships

Public Health Data Standards Consortium eHealth Inititive Connecting Communities Workgroup Webinar, April 22, 2014

> Clinical Document Architecture (CDA) for Public Health: *CDA State Pilot Projects for Communicable Diseases and Early Hearing Prevention and Intervention*

> > Anna Orlova, PhD

aorlova@jhsph.edu

Executive Director Public Health Data Standards Consortium and Visiting Associate Professor, Johns Hopkins School of Medicine Baltimore, Maryland, USA



### **CDA for Public Health Pilot Projects: Outline**

- Health Level Seven (HL7) CDA Standard
- CDA for Public Health Reporting: Pilot Projects
   Communicable Diseases Programs
   Early Hearing Detection and Intervention (EHDI) Program
   CDA for PH Projects Methodology



### **CDA for Public Health Pilot Projects: Outline**

- Health Level Seven (HL7) CDA Standard
- CDA for Public Health Reporting: Pilot Projects
   Communicable Diseases Programs
   Early Hearing Detection and Intervention (EHDI) Program
   CDA for PH Projects Methodology



# **History of HL7**



Source: Renly S, Krueger J. What's Next? Why HL7 Messages and HL7 CDA Documents are in our Future. Presentation at the CDC PHIN Vocabulary and Messaging Community of Practice, February 21, 2012



## HL7 Document-based Standards: CCD/CDA

- They are the Continuity Care Record (CCD) standard and Clinical Document Architecture (CDA) standard that
- Represent information in documents (i.e., forms)
- Use "post occurrence", i.e. once the actual process is done to provide "snapshots" at a particular time
- Contain data "as it was" when the document was originally created
- Capture information and allow it to be shared
- Can be superseded and corrected, but are "static documents" rather than dynamic objects

The more passive and loosely coupled your communication process is, the more the use of documents is applicable.

Sources: Renly S, Krueger J. What's Next? Why HL7 Messages and HL7 CDA Documents are in our Future. Presentation at the CDC PHIN Vocabulary and Messaging Community of Practice, February 21, 2012 HL7 Version 3: Message or CDA Document? Ringholm White Paper. URL: <u>http://www.ringholm.de/docs/04200\_en.htm</u>

#### **Messages Vs Documents**

#### **Messages** = Continuing communication





Sources: HL7 Version 3: Message or CDA Document? Ringholm White Paper. URL: http://www.ringholm.de/docs/04200\_en.htm

# **The Six Core Principles of CDA R2**

- **Persistence** A clinical document continues to exist in an unaltered state, for a time period defined by local and regulatory requirements (NOTE: There is a distinct scope of persistence for a clinical document, independent of the persistence of any XMLencoded CDA document instance).
- **Stewardship** A clinical document is maintained by an organization entrusted with its care.
- **Potential for authentication** A clinical document is an assemblage of information that is intended to be legally authenticated.
- **Context** A clinical document establishes the default context for its contents.
- Wholeness Authentication of a clinical document applies to the whole and does not apply to portions of the document without the full context of the document.
- Human readability A clinical document is human readable.



# **CDA** Terminology

CDA document is a <u>container</u> <u>concept</u>: a "snapshot" as authored at one specific point in time.







Source: K.W. Boone. The CDATM Book. Springer-Verlag. London. 2011



## **CDA Standard**

#### CDA Case Report (Human Readable)

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#### CDA Case Report (XML Schema)

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  - <code code="33765-9"
  - codeSystem="2.16.840.1.113883.6.1"
  - displayName="WBC"/>
  - <statusCode code="completed"/>
  - <effectiveTime value="200003231430"/>
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- <interpretationCode code="N"
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## HL7 Standards in Meaningful Use of HIT

- Stage I Use HL7 CDA documents
  - Clinical EHRs
- Stage I Use HL7 v2.3.1 or v2.5.1 messages to electronically record, modify, retrieve, submit public health data
  - Syndromic Surveillance use v2.3.1 or v2.5.1
  - Laboratory Results Reporting to Public Health use v2.5.1
  - Reporting to Immunization Registries use v2.3.1 or v2.5.1
- Stage II Use HL7 CDA documents
  - Reporting to State Cancer Registries
  - Reporting of Early Hearing Detection and Intervention (EHDI) Quality Measures to Public Health



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## **CDA Standard for Public Health**

- According to the *Public Health Reporting Reference Implementation Framework* developed by the *Public Health Reporting Initiative, ONC S&I Framework*, only five public health programs had started developing CDA-based public health reports. They are
- communicable diseases (case reporting and laboratory reporting)
- early hearing detection and intervention (EHDI) (newborn hearing screening, Early Hearing Care Plan and newborn screening quality measure)
- cancer
- immunization and
- vital records (birth registration and death registration)
- The work on CDA-based reports for **administrative**, **occupational health** and **obesity** (healthy weight) data started at Integrating the Healthcare Enterprise (IHE).

Public Health Reporting Initiative. Standards and Interoperability (S&I) Framework. Office of National Coordinator for Health IT (ONC). Public Heath reporting Reference Implementation Framework. 2013. URL: <u>ttp://wiki.siframework.org/</u>

### CDA for Public Health Pilot Projects

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#### **Public Health Reporting Today**



**Customized Point-to-Point Interfaces** 



#### **Public Health Reporting Today**



**Customized Point-to-Point Interfaces** 

Over 60,000 customized, siloed public health information systems to which providers have to report often the similar information on different forms through different interfaces

# □Cost is \$8,000 per interface

Underreporting is common for certain diseases (CDC, 2013

http://www.cdc.gov/osels/scientific\_edu/ss1978/SS1978.pdf)



#### From Connectivity to Interoperability Through Standards

#### TODAY



**Customized Point-to-Point Interfaces** 



#### From Connectivity to Interoperability Through Standards



### **CDA for Public Health (PH) Pilot Projects**

#### CDA for Public Health Reporting: Pilot Project for Communicable Diseases

(November 2011 - May 2012)



## **CDA for PH Pilot Project: Case Reporting**

### <u>Goal</u>

Demonstrate ability to receive a CDA-based Public Health Case Report by a Public Health Information System in two jurisdictions



## **CDA for PH Pilot Project: Case Reporting**

# <u>Completed on 05/31/12</u>

- Developed CDA-based Public Health Case Reports for 15 selected conditions in the Model Driven Health Tool (MHDT)
- Conducted 3 pilot projects:
  - □ State of Delaware (Tuberculosis)
  - New York State (Pertussis)
  - San Diego County (Pertussis)
  - CT, MA, MI, OK, SC, WA, OH participated as observers
- PHDSC CDA Project wiki at <u>https://wiki.phdsc.org/index.php/CDA</u>



#### **Building CDA Public Health Reports in MDHT**

#### CDA PH Case Report Templates for Selected Conditions

- 1. Anthrax
- 2. Chlamydia trachomatis genital infection (& Gonorrhea, Syphilis)
- 3. Coccidioidomycosis
- 4. Haemophilus Influenzae, invasive disease, all ages, serotypes
- 5. Hepatitis B, Acute (& Hepatitis C)
- 6. Influenza
- 7. Meningococcal disease, all serogroups
- 8. Pertussis
- 9. Silicosis
- 10. Salmonellosis (& Shigella)
- 11. Streptococcus pneumoniae, invasive disease
- 12. Toxic-shock syndrome
- 13. Tuberculosis
- 14. Tularemia
- 15. West Nile virus (& Lyme)



#### **HL7 CDA Standards for Public Health Case Report**

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- Clinical Information Section
- Treatment Information Section
- Encounters Section
- Relevant Diagnostics and Laboratory Section
- Immunizations Section



## **CDA for PH Pilot Project: Case Reporting**

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#### CDA Public Health Case Reports

https://wiki.phdsc.org/index.php/PH-Lab

- Header
- Social History Section
- Clinical Information Section
- Treatment Information Section
- Encounters Section
- Relevant Diagnostics and Laboratory Section
- Immunizations Section

#### **Example:**

#### **Case Report Documentation: Pertussis Case Reports**

Pertussis - Data Definitions xls

- Pertussis Implementation Guide pdf
- Pertussis Case Report 1 (XML File) (JPG Image) 12-05/10

Pertussis - Case Report 2 w/Labs (XML File) (JPG Image) 12-05/10



#### **Building CDA Public Health Reports (Templates)**

#### **Open Source Model Driven Health Tool - MDHT**

#### MDHT Project Home

#### Project Page

#### mdht

Model-Driven Health Tools Project Created: 06/11/2009

Project Categorization

#### charter

Project Members

Total Project Members: 112 Project Administrators:

David Carlson

John T.E. Timm Site Administrato



#### Welcome to Model-Driven Health Tools (MDHT)

Open Health Tools Model-Driven Health Tools (MDHT) Project is a wide-ranging open source effort to promote interoperability in healthcare infrastructure. It promotes shared artifacts between related healthcare standards and standards development organizations, and works to develop localized specifications. It also delivers a common modeling framework and tools that support seamless integration of design, publication, and runtime artifact creation.



URL: https://www.projects.openhealthtools.org/sf/projects/mdht



#### **Building CDA Public Health Reports in MDHT**

#### **Model Driven Health Tool - MDHT**

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#### The MDHT automatically generates the CDA templates, validation is built-in.

PHDSC PHDSC

# MDHT Library of Public Health Reports

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#### **MDHT Public Health Reports Library**

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Office of National Coordinator for Health Information Technology (ONC). Standards & Interoperability Framework (S&I Framework). Public Health Reporting Initiative (PHRI) Reference Implementation Framework. URL: <u>http://wiki.siframework.org/</u>

#### Public Health Reports Library: Reference Model (7 Programs/Domains)



Office of National Coordinator for Health Information Technology (ONC). Standards & Interoperability Framework (S&I Framework). Public Health Reporting Initiative (PHRI) Reference Implementation Framework. URL: <u>http://wiki.siframework.org/</u>
### **CDA for PH Pilot Project**

#### Tuberculosis Public Health Reporting Schema: DELAWARE



### **CDA for PH Pilot Projects**

### CDA for Public Health Reporting: Pilot Project for Early Hearing Detection and Intervention (EHDI)

(September 2012- May 2013)



### **CDA for PH Pilot Project: EHDI**

### <u>Goal</u>

Demonstrate the ability to receive a CDA-based EHDI Report by a Public Health Information System in two jurisdictions



### **CDA EHDI Report Templates**

**1.Notification of Birth** - based on newborn admission, the birthing facility's EHR sends a report to establish a newborn's record in state public health EHDI information system

- **2.Newborn Hearing Screening (NHS) Outcome Report** based on state-based forms
- **3. EHDI Quality Measure 1a** *it measures the number of children* screened prior to discharge from a birthing facility compared to a total number of live births within the reporting time period; it is based on individual patient-level NHS reports and Notification of Birth reports to compute QM EHDI-1a

4.Early Hearing Care Plan (EHCP) - based on state-based plans



### **CDA EHDI Pilot Project Scope**

**1.Notification of Birth** - based on newborn admission, the birthing facility's EHR sends a report to establish a newborn's record in state public health EHDI information system

- **2.Newborn Hearing Screening (NHS) Outcome Report** based on state-based forms
- **3. EHDI Quality Measure 1a** *it measures the number of children screened prior to discharge from a birthing facility compared to a total number of live births within the reporting time period; it is based on individual patient-level NHS reports and Notification of Birth reports to compute QM EHDI-1a*

4.Early Hearing Care Plan (EHCP) - based on state-based plans



### **CDA for PH Pilot Project**

#### **Public Health Reporting Schema: EHDI**



### **CDA EHDI Pilot Project: TEAM**

### <u>TEAM</u>

- States Participants:
  - □ North Dakota, Oregon
- States Observers
  - Maryland, Massachusetts, Michigan, Florida, Missouri, Ohio, Pennsylvania, South Carolina, Texas, Washington
- PHDSC Team



### **CDA for Pilot Projects**

### CDA for Public Health Reporting: Pilot Project Methodology



### **CDA for PH Pilot Project: Methodology**

### State-Specific Documentation

- State Reporting Requirements (Guidelines)
- State Report Form
- State-specific CDA Report Form
- State-specific Use Case
- State-specific Design
- State-specific Work Plan
- State-specific Test Plan and Test Report with Screenshots and Validation Documentation
- State-specific Project Wiki Pages <u>https://wiki.phdsc.org/index.php/EHDI</u>



### **CDA for PH Pilot Project: Methodology**

### **Outcomes-Deliverables**

- State-specific teams and work schedule:
  - Approvers (PH program staff, agency's IT staff)
  - Implementers (Vendors)
- State-specific work processes
- State-specific data form
- State-specific pilot design
- State-specific implementation
- Project documentation





CDA for Pilot Project: State-Specific Use Case					
Use Case	Newborn Hearing Screening				
Actors: Business Actors Technical Actors	Newborn, Caregiver, Clinicians, Public Health Program Staff EHR, HIE, Public Health (PH) EHDI IS	Data Categories			
Flow of Events	<ol> <li>Child is delivered.</li> <li>Clinician conducts initial physical exam</li> <li>Newborn is due for <hearing test=""></hearing></li> <li>Clinician orders an <hearing test=""></hearing></li> <li>Clinician orders an <hearing test=""></hearing></li> <li>Hospital staff conducts <hearing test=""></hearing></li> <li>Hospital staff enter data on the <hearing test=""> in the EHR database and generate <newborn (nhs)="" hearing="" outcome="" report="" screening=""></newborn></hearing></li> <li>Information is electronically sent on <nhs outcome="" report=""> to the PH EHDI IS directly or via HIE</nhs></li> <li>PH program EHDI IS receives Notification of Report Availability</li> <li>PH programs' staff reviews the report and create PH EHDI IS record on a child in PH EHDI IS and upload <nhs outcome="" report=""> in PH EHDI IS</nhs></li> <li>PH IS sends Acknowledgement of Receipt of the Report to EHR directly or via HIE.</li> </ol>	<ul> <li>1&amp;2. Demographics, Labor &amp; Delivery Record, Newborn EHR</li> <li>3. Consent</li> <li>4. Standing Order</li> <li>5. Hearing Test Results</li> <li>6. Hearing Test Results, NHS Outcome Report</li> <li>7. NHS Outcome Report</li> <li>8. Notification of Report Availability</li> <li>9. Updated Pubic Health EHDI Record</li> <li>10. Acknowledgement of Receipt</li> </ul>			
Pre-Conditions:	EHR System, Health Information Exchange (HIE)				
Post-Conditions:	Public Health Information System <ehdi is=""></ehdi>				
Preferred Timing	Daily updates	Premoting Standards Theorem April			

### **CDA for PH Pilot Project: CDA Reports**

#### State-specific CDA Reports Templates Instances in MDHT

HEARING SCREENING DARKEN CIRCLES THAT APPL	Y     M     D     D     Y     Y       HEARING SCREENING DATE	
RIGHT EAR OPASS OREFE	R LEFT EAR OPASS REFER	
HEARING RISK STATUS: (DAR FAMILY HISTORY PPHN EXCHANGE TRANSFUSI	KEN CIRCLES THAT APPLY) Alaska Early Hearing Detection and Intervention Program State of Alaska, Division of Health Care Services	
REASON HEARING WAS NO (DARKEN ALL CIRCLES THA PARENT/GUARDIAN REI FACILITY TRANSFER NOT YET SCREENED (NI	Bith Facility:         Gender:         M ⊆ F ⊆         Race:           Infant Name:         D08;           Medical D Number:         PCP.           Mother's Name:         PCP.           Address:         Prone:           Address:         Prone:           Screen z ID:         (Drace: 2Dr.)           Screen z D:         Screen Zot:           Pase         Miss           Refer or Risk Factors (complete section below if checked)	
	Risk Fedore:         Admitted bit to NICU for 45 hours or longer           Sigmata or other findings associated with secondoputat, hearing loss         (88886 second)           Catalogic second	
	I would like screening performed, but do not wish to have my infant's newborn hearing screening results ggagg with the State of Alaska.	





### **CDA for PH Pilot Project: Reporting Schema**



*Communicable Disease CDA Pilot Project Report.* 2012. URL: https://wiki.phdsc.org/index.php/CDA *EHDI CDA Pilot Project Report.* 2013. URL: https://wiki.phdsc.org/index.php/EHDI-Pilot

### CDA for PH Pilot Project: Interoperability Standards and Actors

- HL7 Continuity Care Document Standard (Actors: Content Creator)
- HL7 Clinical Document Architecture Release 2 (CDA R2) Standard (Actors: Content Creator and Content Consumer)
- HL7 Implementation Guide for CDA Release 2 on Public Health Case Reporting, Release 1 (Actors: Content Creator and Content Consumer)
- IHE Early Hearing Care Plan (EHCP) Content Profile (Actors: Content Creator and Content Consumer)
- IHE Retrieve Form for Data (RFD) Integration Profile (Actors: Form Manager, Form Filler and Form Receiver)
- IHE Cross-enterprise Document Reliable Interchange (XDR) Integration Profile (Actors: Content Creator and\_Content Consumer)



### **CDA for PH Pilot Project: Time Commitment**

Table 14. CDA Pilot Project: Level of Effort by Site and Project Team Role						
Title	Role Description	Hours Spent on the Project	Desired Hours Needed for the Project			
Delaware						
Public Health and Clinician User Tasks						
Program Public Health Informaticist	Provided subject matter expertise for EHR-based data reporting	40	40			
Program Data Manager	Provided data management expertise from TB Program perspectives	7	2			
¥	47	42				
Technical Team Tasks						
Health Department CIO	Provided oversight of internal team, reviewed work effort to milestones and decision-maker for project	75	40			
Public Health Informaticist	Provided subject matter expertise for DERSS (Delaware Electronic Reporting and Syndromic Surveillance system) data consumption	65	40			
Senior Application Support Specialist	Provided technical support for CDA message transport from Orion Rhapsody server and application changes in DERSS	35	35			
Public Health Informaticist	Provided overall project management	150	200			
	325	315				
Total	372	357 <sup>30</sup>				

Source: Public Health Data Standards Consortium (PHDSC). Clinical Document Architecture (CDA) for Public Health. CDA

### **CDA for PH Pilot Projects**

### Resources:

- PHDSC. Clinical Document Architecture (CDA) for Public Health. CDA Pilot Project: Communicable Diseases. Report. October 2012. URL: <u>https://wiki.phdsc.org/images/f/f1/PHDSC-CDA-for-PH-Pilot-Report-FINAL-10-12-12.pdf</u>
- 2. CDA for Public Health Pilot Project: Communicable Diseases Wiki Pages URL: <u>https://wiki.phdsc.org/index.php/CDA</u>
- 3. CDA for Public Health Pilot Project: Communicable Diseases Forbes on NYS Pilot. URL:

http://www.forbes.com/sites/amywestervelt/2012/08/27/could-technologyhelp-stem-the-spread-of-whooping-cough/

- PHDSC. Clinical Document Architecture (CDA) for Public Health. CDA Pilot Project: Early Hearing Detection and Intervention (EHDI). Report. August 2013. URL: <u>https://wiki.phdsc.org/images/5/56/PHDSC-EHDI-CDA-Pilot-Report\_FINAL-08132013.pdf</u>
- 5. CDA for Public Health Pilot Project: EHDI Wiki Pages.URL: https://wiki.phdsc.org/index.php/EHDI-Pilot



#### NISSIO N

Bring a common voice from the public health community to the national efforts of standardization of healthcare and population health information

PROGRAM AREAS

Standarda Development and Harmonization

Enable public health agencies and healthcare organizations to exchange data in real time

#### Health Information Exchanges

Foster awareness, partnerships and collaboration at the local, state and national levels

#### Privacy and Security

Address Individual and organizational privacy and security issues related to maintaining and sharing health information

#### Workforce Development

Provide continuing education in Public Health Informatics and Health IT standards

CONTACT US www.phdsc.org

#### PUBLIC HEALTH DATA STANDARDS CONSORTIUM PHDSC

#### Promoting Standards Through Partnerships

#### Deploying Interoperability Standards in Public Health: Pilot Projects

Pilot Projects for Communicable Disease Reporting

In May 2012, PHDSC completed pilot projects for reporting cases of communicable diseases from clinical Electronic Health Records Systems (EHR-S) to public health surveillance systems in three jurisdictions:

- State of Delaware (Tuberculosis)
- State of New York (Pertussis)
- San Diego County (Pertussis)

#### PUBLIC HEALTH REPORTING ARCHITECTURE



#### MORE INFORMATION

Communicable Disease CDA Pilot Project Report. 2012. URL: https://wiki.phdsc.org/index.php/CDA EHDI CDA Pilot Project Report. 2013. URL: https://wiki.phdsc.org/index.php/EHDI-Pilot

This project was supported through the CDC Cooperative Agreement #5U38HM000455-05

Pilot Projects for Early Hearing Detection and Intervention

In May 2013 PHDSC completed pilot projects to demonstrate electronic data exchange between EHR-S and Public Health Early Hearing Detection and Intervention (EHDI) program information systems in two jurisdictions:

- State of Oregon (Newborn Hearing Screening Outcome Report from BirthingFacility to State EHDI)
- State of North Dakota (Early Hearing Care Plan from State EHDI to Pediatrician)

### INTEROPERABILITY STANDARDS AND ACTORS

- HL7 Continuity Care Document Standard (Actors: Content Creator)
- HL7 Clinical Document Architecture Release 2 (CDA R2) Standard

(Actors: Content Creator and Content Consumer) IHE Early Hearing Care Plan (EHCP) Content Profile

(Actors: Content Creator and Content Consumer)

HL7 Implementation Guide for CDA Release 2 on Public Health Case Reporting, Release 1

(Actors: Content Creator and Content Consumer) IHE Retrieve Form for Data (RFD) Integration Profile (Actors: Form Manager, Form Filler and Form Receiver) IHE Cross-enterprise Document Reliable Interchange (XDR) Integration Profile (Actors: Content Creator and Content Consumer)

### Acknowledgements: CDA for PH Pilot Project - Communicable Diseases

#### **PHDSC Project Team:**

- Anna Orlova, PHDSC
- □ Maiko Minami, PHDSC
- □ Alla Fridman, PHDSC
- □ Lisa Nelson, PHDSC
- □ Sarah Quaynor, PHDSC
- □ Kendall Patterson, Delaware
- □ Sondra Renly, IBM Research
- Lori Reed-Fourquet, eHealthSign
- □ Nikolay Lipskiy, CDC

#### Subject Matter Experts:

- Gib Parrish, CSTE
- □ Monica Huang, CSTE
- Linda Greengas, Connecticut
- Hwa-Gan H Chang, New York State
- □ Rachel Civen, LA County
- Sarah Correll, Idaho
- □ Shawn McBrien, Washington
- Azadeh Tasslimi, Washington
- Julieann Simon, Washington
- Anne O'Keefe, Nebraska
- □ Marguerite A. Erme, Ohio
- Jeremy Budd, Ohio
- Myra R. Ching-Lee, Hawaii
- Ken Gershman, Colorado
- □ Elena M. Rizzo, New York State
- Orion McCotter, Arizona

#### Subject Matter Experts cont.:

- Riki Merrick, APHL
- Wes Kennemore, APHL
- Rita Altamore, University of Washington
- Geoffrey Calvert, CDC
- Sara Luckhaupt, CDC
- Margaret Filios, CDC
- Genevieve Barkocy Luensman, CDC
- Gautam Kesarinath, CDC
- Eileen Storey, CDC
- Ben Park, CDC
- Elizabeth Briere, CDC
- Amanda Cohn, CDC
- Amanda Faulkner, CDC
- Eric Larson, CDC
- Sundak Ganesan, CDC
- Sheila Abner, CDC
- Jerry Sable, TSJG
- James Case, NLM
- Bob Dolin, Lantana
- Ted Klein, TKlein

#### **Pilot Participants:**

- Marcy Parykaza, Delaware
- Jean Collison, Delaware
- Patricia Burke, Delaware
- Barry Borden, Delaware
- Andrew Rentschler, Delaware

#### **Pilot Participants cont.:**

- Linh H. Le, New York State
- Shannon L Kelley, New York State
- Geraldine Johnson, New York State
- Kathleen S. Brousseau, New York State
- Sarah Goff, New York State
- Kevin Magbitang, New York State
- Kathryn J. Schmit, New York State
- Jessica Yen, San Diego County
- Jeffrey Johnson, San Diego County

#### **Pilot Vendors:**

- Nitin Kunte, OZ Systems
- Terese Finitzo, OZ Systems
- Rachna Bagdi, Core Solutions
- Shishir Mishra, Core Solutions
- David Hellhake, Core Solutions
- Charan Boddu, Core Solutions
- Gregory Anderson, Connexin Software
- Will Lokes, Connexin Software
- Russell von Blank, ATLAS
- David Moton, ATLAS
- Kate Peters, ATLAS
- Rahul Deshpande, ATLAS
- David Trottier, LabWare
- Peter Payne, LabWare

### Acknowledgements: CDA for PH Pilot Project - EHDI

#### **PHDSC Project Team:**

- Anna Orlova, PHDSC
- □ Maiko Minami, PHDSC
- Alla Fridman, PHDSC
- □ Lisa Nelson, PHDSC
- □ Sarah Quaynor, PHDSC
- □ Lori Reed-Fourquet, eHealthSign
- □ John Eichwald, CDC

#### State Teams:

#### State of North Dakota Team

#### North Dakota Early Hearing Detection and Intervention Program (ND EHDI), State of North Dakota

*Ms. Jerusha Olthoff*, Program, Principal Investigator; *Mr. Thomas Orluck*, Database Specialist, Minot State University

#### Sanford Health, North Dakota

*Mr. Scott Egeberg,* Information Systems Interface Analyst;

Mr. Kent Blanchard, Application Support Manager

#### Trinity Health Minot, North Dakota

Ms. Renae Johnson, RN Clinic - Nurse Manager

#### State of Oregon Team

#### Oregon Health Authority, Center for Prevention and Health Promotion

- *Ms. Heather Morrow-Almeida*, Interim EHDI Coordinator;
- Ms. Dina Dickerson, Senior Informaticist;
- Mr. ChiaHua Yu, Public Health Informaticist;
- Ms. Meuy Swafford, EHDI Data Quality Coordinator,
- *Mr. Trong Nguyen*, System Administrator/Informatics Specialist

#### Oregon Health & Science University (OHSU) Hospital,

- Mr. Doug Clauder, Interface Engineer;
- Mr. Tom Drury, Interface Team Manager;
- Mr. Malcolm Chun, Provider Epic EMR Specialist;
- Ms. Karen Alexander, Clinical Workflow Analyst;
- Mr. Bud Garrison, Director of Clinical Informatics;
- Ms. Heather Durham, Audiologist;

#### Vendors

#### <u>Epic</u> *Mr. John Stamm,* Configuration Advisor

#### <u>Orion Health</u> *Mr. John Dunn*, Sales Director;

Mr. Drew Ivan, Rhapsody Product Manager

#### OZ Systems

Dr. Terese Finitzo, Chief Executive Officer; Dr. Ken Pool, Chief Operating Officer; Ms. Lura Daussat, Program Coordinator; Dr. Matt Oefinger, Chief Technology Officer; Mr. Steve Montgomery, Vice-President of Operations;

*Mr. Nitin Kunte*, Director of Research and Development

#### **Contributor**

*Mr. Andrew McCaffrey*, Computer Scientist, National Institute of Standards and Technology (NIST)

# PUBLIC HEALTH AND HEALTH INFORMATION EXCHANCE

**Building Interoperability for Delaware** 

Marcy Parykaza, MGA Chief, Public Health Informatics Delaware Division of Public Health

# Delaware Public Health 10 years ago

Programmatic silos based on funding stream



#### Lack of standards

"Manual" interoperability



No strategic vision



# Rethinking: Taking a "Systems" approach



# Building integration internally and externally

### Public Health approach

- Strategic Plan
- Repeatable "Service" based processes
- Internal HIE
- Mini-data hubs(new "farmettes")
- Leveraged functionality (billing, eligibility)

Connected partners through:

- PHIN MS
- SFTP
- VPN
- Web Services
- Standards based HL7

# Delaware Health Information Network (DHIN)

- Hospitals
- Providers Offices
- Laboratories
- State
  - Public Health
  - Medicaid
  - Long Term Care Resident Protection
- Other HIE's

Pro-Access (inbox, search) Community Health Record Direct SFTP VPN Web Services

# Challenges achieving interoperability

### □ Too many cooks.....

- Communication between all the parties
- Time schedules/commitments
- Different "valid " standards 6
- Different Vendors
- Conflicting priorities

### ....The Big "P"



# More Challenges

- Lack of expertise in HIE exchanges
- EMR vendor landscape is changing
- What happens after MU
- Upgrade and replacement schedules
- What are we to do with the data we are collecting
  - Ownership
  - Privacy
  - Security

# **Biggest Challenge Right Now**

# The Question of Sustainability....has not been satisfactorily addressed.



# Improvements as a result of data exchange

- Strengthened Partnerships
  - .....a common enemy
  - .....a common goal
- New & Improved workflows (technical and business)
- Understanding and adherence to National Standards
- Leveraging IT functionalities
  - Fewer more robust systems
  - Common business workflows
  - Changing the "way we do things around here"

# The Greater Good

- Creating reusable processes across the State(hospitals, providers, government)
- Creating a collection of data for better health care:
  - Population health
  - Patient health
  - Baseline for quality measures and improvements
  - Reporting
- "One stop data shopping" with more robust data for:
  - Trend analysis
  - Syndromic surveillance
  - Research
  - etc. etc. etc.

## What does the Future Hold

- Core Systems
- Dashboards
- Analytics
- GIS based Reporting
- Better partnerships
  New funding models
- Service Broker Model

### Lessons learned/Best practices

- Just because it looks easy doesn't mean it can happen quickly.
- Just because one IT group approves, doesn't mean the others will.
  - Just because the grant is ending doesn't mean the project is ending.
  - Having lots of project managers does not make it go better, easier or faster.

# It takes planning, time and money



# But it is worth it in the end



# **Questions?**

- How does public health fit into the value proposition for health information exchange?
- What are the challenges around interoperability for public health data exchange?
- What public health use cases do you expect HIEs to cover in the future? Which will be most valuable?



ALTH IN

Real Solutions, Better Health

# **Get Involved**

Interested in speaking on a webinar, participating in a case study, or advising on the HIE survey? Please contact <u>alex.kontur@ehidc.org</u>




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## Thank you!

