Improving Public Health through e-Vital Records

CDC Public Health Informatics Conference
April 30, 2014
Presentation Agenda

- Modernizing Vital Records with eVital Standards
- Minnesota e-Birth Records Project
- Interoperability between Vital Records and EHRs in Utah
- Challenges and Opportunities
- Q&A
U.S. Plans for Health Information Technology

“By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care.”

Former President G. W. Bush in State of the Union Address on January 20, 2004

Established goal for most Americans to have access to an interoperable electronic health record (EHR) by 2014

Established the Office of the National Coordinator for Health Information Technology (ONC) through an Executive Order
“To lower healthcare cost, cut medical errors, and improve care, we’ll computerize the nation’s health record in five years, saving billions of dollars in health care costs and countless lives.”

President Barack Obama in First Weekly Address on January 24, 2009

Consistent with Bush’s 2014 goal for electronic health records
American Recovery & Reinvestment Act (ARRA)

- President Obama signed ARRA on Feb. 17, 2009

- ARRA required the Department of Health and Human Services (DHHS) to create, vet and publish an initial set of HIT system standards, implementation specifications and testing criteria to promote adoption and “meaningful use” of EHRs

- ARRA is serving to stimulate adoption of HIT
Standards for Population Health and Healthcare

NCHS and its partner organizations have developed, implemented and maintained many of the critical standards used in population health and healthcare:

- Standard certificates for vital events
- International Classification of Diseases and its clinical modifications
- Uniform data sets for hospital and ambulatory care

These standards can contribute to and benefit from current deliberations on national standards.
National Vital Statistics System

Vital statistics data are widely used to monitor and improve the nation’s health.
Medical and Health Information Captured for the U.S. Standard Certificate of Live Birth

- **Prenatal Care**
  - Visit Information
  - Past pregnancies

- **Risk Factors**
  - Medical Conditions (DM, HTN)
  - Infertility Treatment
  - Previous C-Section

- **Labor & Delivery**
  - Onset of Labor
  - Method of Delivery
  - Maternal Morbidity

- **Newborn**
  - Birth weight
  - Abnormal Conditions
  - Congenital Anomalies
NCHS eVitals Standards Initiative

Develop national standards to facilitate the national exchange of birth, death and fetal death records between electronic health record systems and state vital statistics systems.
Standards to Support Capturing VR Data at the Point of Care or Contact
Why the eVital Standards Initiative?

Hypothesis:
Interoperability with EHRs may improve the timeliness, accuracy and quality of the information collected for vital records purposes.
It is worthwhile to lay the foundation for standardizing the exchange of VR data as efforts towards developing and implementing EHRs continue.
eVital Standards Activities

- Stakeholder Collaboration

- Standards Development Activities

- Trial Implementations, Demonstrations and Pilot Testing
Stakeholder Collaboration

- Ongoing collaboration with the National Association for Public Health Statistics and Information Systems (NAPHSIS) and states/jurisdictions to support standards development activities

- Outreach and partnership with EHR, VR and public health system vendors to develop, test and implement the VR standards
Standards Development Activities

- Participating in standards development activities with the Standards Development Organizations (SDOs)

Health Level Seven International (HL7)

IHE - Integrating the Healthcare Enterprise
Health Level Seven International (HL7)

- Dedicated to developing standards for the exchange, integration, sharing, and retrieval of electronic health information
- Includes over 2,300 members representing more than 90% of the information systems vendors serving healthcare
- VR standards developed through support of the HL7 Public Health and Emergency Response Work Group (PHER WG)

Available at: http://www.hl7.org/about/index.cfm?ref=nav
Promotes the coordinated use of established standards such as HL7 to address specific clinical needs in support of optimal patient care

VR standards developed through support of the IHE Quality, Research and Public Health Committee (QRPH)

Available at: http://www.ihe.net/
IHE Vital Records Standards

IHE Content Profiles

- IHE Birth and Fetal Death Reporting (BFDR)
- IHE Vital Records Death Reporting (VRDR)

VR Form

EHR System

Vital Records System
State Department of Health
HL7 Vital Records Standards

Data Model

- HL7 V3 Domain Analysis Model: Vital Records, Release 1

Functional Profile

- HL7 EHR-S FM VR Functional Profile, Release 1.1

Messaging

- HL7 V2.5.1: Birth & Fetal Death Reporting, R1 Draft Standard for Trial Use (DSTU)
- HL7 V2.5.1: Vital Records Death Reporting, R1 DSTU

Document

- HL7 V3 CDA R2: Birth & Fetal Death Reporting, R1 DSTU
- HL7 V3 CDA R2: Vital Records Death Reporting, R1 DSTU

http://www.cdc.gov/phin/resources/standards/data_interchange.html
Trial Implementations, Demonstrations and Pilot Testing
Acknowledgements

Special thanks to those who have collaborated with us during the trial implementations and demonstrations to support development of the Vital Records standards.
eVitals Standards Pilot Testing

- **Minnesota Department of Health**
  - Evaluating readiness for secure electronic exchange of birth registration information using the IHE and HL7 standards

- **Utah Department of Health**
  - Collaborating with Intermountain Healthcare to test sending death information using the HL7 V2.5.1 message
Challenges are what make life interesting. Overcoming them is what makes it meaningful.
Challenges to eVitals Standards Development and Implementation

• Limited funding to support states/jurisdictions pilot testing/adopting eVital Standards

• Limited EHR and VR system vendors adoption of eVital standards

• Vital Records not specifically recognized in Meaningful Use Regulations
Opportunities for eVital Records Initiative

- **Get Ready**
  - Develop an informatics-savvy workforce
  - Start an eVital Records Initiative
  - Conduct a readiness assessment of state and local partners

- **Be Aware**
  - Become familiar with the available VR standards
  - Contribute to national policy discussions, e-health and standards related activities

- **Get Involved**
  - Participate in SDO activities to review and provide feedback on the VR standards
  - Engage in trial implementation/pilot testing activities
THANK YOU

Any questions???