National Vital Statistics System

7 million events processed per year

4.0 million birth records per year

3.0 million death records per year
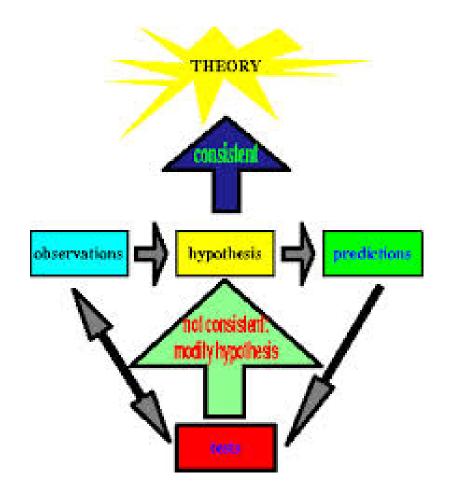
50,000 fetal death records

The Problem

- Vital Events reporting includes demographic, medical, and geographic data derived from birth certificates, death certificates and fetal death reports

- Current process of capturing vital records information is
  - Duplicative
  - Labor-intensive
  - Costly
  - Can be error prone

- Results in issues with timeliness of data submission and the quality and usefulness of these data may be adversely affected

Why Standards for Vital Statistics?

Hypothesis:

Interoperability with EHRs may improve the timeliness, accuracy and quality of the information collected for vital records purposes

Value Proposition

- **Establish interoperable electronic exchange of VR data between EHR and VR Systems**

  - More timely data release
  - Higher quality data for demographic, epidemiologic surveillance and research
  - Improved efficiency for electronic exchange of vital records information
  - Greater integration with other stakeholder electronic systems
  - Greater standardization of electronic Vital Records data collection and exchange
  - Promote consistent statistics between the jurisdictions and national vital records offices

Value Proposition

- **For Public Health**
  - Receive coded information in near real-time
  - Can be incorporated into epidemiology
  - Improve ability to measure the health of the population and detect issues
- **For Providers/EMR Systems**
  - Improve quality of care
  - Improve efficiency of reporting
  - Reduce cost through
    - Re-use of the same standard
    - Minimize custom interfaces

eVital Standards Initiative

To provide support for the development of Vital Records (VR) standards to enable interoperable electronic data exchanges among electronic health record systems, U.S. vital records systems and potentially other public health information systems for birth, death and fetal death events

Stakeholder Engagement and Standards Development Activities

❑ **Collaborating with the National Association for Public Health Statistics and Information Systems (NAPHSIS) and individual states/jurisdictions to support standards development activities**

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

Vital Records Standards

VR Standards that have been developed using national standards include:
- Data Models
- Functional Profiles
- Messaging Standards
- Document Standards

To learn more about the standards that are available for VR, please visit the CDC/NCHS website at:

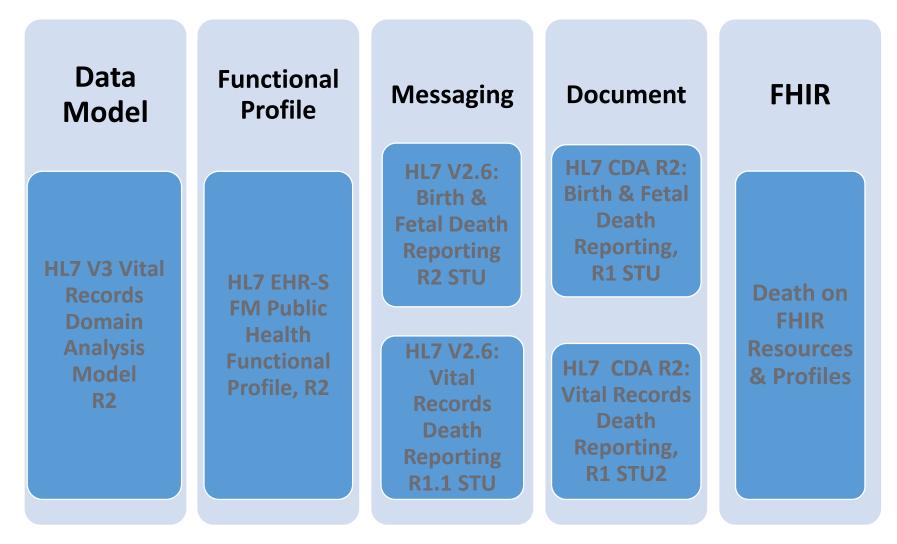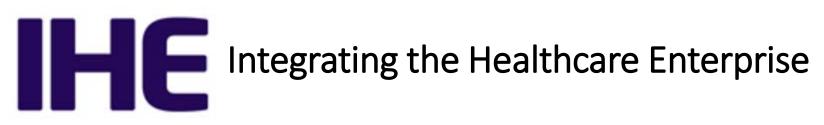https://www.cdc.gov/nchs/nvss/evital_standards_intiatives.htm

Health Level Seven International (HL7)

- Dedicated to developing standards for the exchange, integration, sharing, and retrieval of electronic health information

- Supported by more than 1,600 members from over 50 countries

- 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

HL7 Vital Records Standards

Data Model	Functional Profile	Messaging	Document	FHIR
HL7 V3 Vital Records Domain Analysis Model R2	HL7 EHR-S FM Public Health Functional Profile, R2	HL7 V2.6: Birth & Fetal Death Reporting R2 STU	HL7 CDA R2: Birth & Fetal Death Reporting, R1 STU	Death on FHIR Resources & Profiles
		HL7 V2.6: Vital Records Death Reporting R1.1 STU	HL7 CDA R2: Vital Records Death Reporting, R1 STU2	

IHE Integrating the Healthcare Enterprise

- 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)
  - Birth and Fetal Death Reporting Enhanced (BFDRE)
  - Vital Records Death Reporting (VRDR)

Available at: http://www.ihe.net/

eVital Standards Initiative

Capturing birth and death data in electronic health record systems

Improving the timeliness, accuracy, and completeness of vital records data from provider to Jurisdiction and bi-directional Jurisdiction – National information flows

Electronic Exchange Using HL7 and IHE-based standards

Using eVital standards

Standard Metrics

Testing, Testing, Testing!

- Great to have available standards; however, you need trial and pilot implementation activities to validate the standards

- NCHS continues to support trial implementation testing at Integrating the Healthcare Enterprise (IHE) Connecthaton

eVital Standards Testing and Demos

- HL7 Messages and Document standards developed as draft standards for trial use (DSTU)
  - Testing HL7 V2.5.1 and HL7 V2.6 Death IG by UT DOH and IHC

- IHE Connectathon testing with vendors and state partner organizations
  - Feasibility assessment by MN DOH
  - Pre-pilot testing by Utah DOH, CA DOH, MI DOH

- Demonstrations of real-world scenarios in Interoperability Showcase venues

eVitals Standards Trial Implementations

Trial Implementations at IHE Connectathon

❑ Structured testing event that includes hundreds of vendors, engineers and IT architects

❑ Participate in a full week of interoperability testing using real-world clinical scenarios

❑ Connectathons are held globally in North America, Europe, Asia, Australia, and Japan year-round

eVitals Standards Demonstrations

NAPHSIS   **Public Health Informatics Conference**   **HIMSS**

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 and HL7 V2.6
- Utah & DC study to assess the quality of data automatically populated from a hospital EHR for selected birth certificate medical and health items that had implemented Epic's "Stork" specialty module for obstetrics
- Report: Developing a framework for initial and ongoing evaluation of birth data extracted from electronic health records (EHRs) for vital statistics posted on the NCHS website

❑ **California Department of Health**
- Testing and implementation of Death Reporting to improve mortality data

❑ **Michigan Department of Health**
- Testing and implementation of Birth Reporting (with vendor Genesis)
- Testing and implementation of Death Reporting (using Utah DOH Software)

❑ **DC Department of Health**
- Birth Quality review in collaboration with of Utah DOH to compare manual vs Electronic

How to Participate

- Reach out to your providers to identify those interested in testing and implementation

- Reach out to your EDRS and EBRS vendor(s) to enable standard interface to accept electronic submissions

- Participate in testing venues such as the IHE Connectathon/Projectathon activities
  - http://www.ihe.net/connectathon/

- Work with NCHS for guidance on options and potential approaches

- NCHS is interested in hearing from state partners who are committed to moving forward with VR standards pilot and implementation activities

- NCHS welcomes Unsolicited proposals with cost estimates for pilot projects to help us plan for funding for proposed activities (subject to funding availability)