Developing Standards for Linking Electronic Health Records and Vital Records Systems

## 2012 National Conference on Health Statistics

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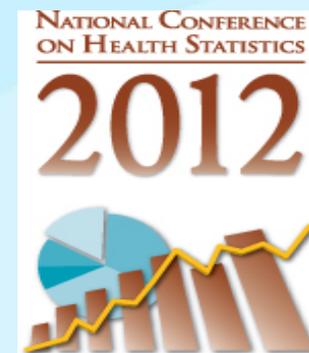
Agenda

- ❑ Background of National Vital Statistics System (NVSS)

- ❑ Current Vital Records Landscape

- ❑ CDC/NCHS Vital Records Standards Initiatives

Background

□ **The National Vital Statistics System (NVSS) ***

- Housed at the National Center for Health Statistics

- Oldest and most successful example of inter-governmental data sharing

- Provides essential data on U.S. births, deaths and fetal deaths

- Over six million vital events are reported annually from 57 registration areas

- Detailed data on all events are transmitted to CDC/NCHS for processing and dissemination

*http://www.cdc.gov/nchs/nvss.htm

Background

❑ ## Vital Records (VR):

- Have established standards for national Birth and Death Certificates, and Fetal Death Report data collection

  - 2003 U.S. Standard Certificate of Live Birth
  - 2003 U.S. Standard Certificate of Death
  - 2003 U.S. Standard Report of Fetal Death
    - Edit Specifications for the corresponding Certificates and Report

  - Mother's Worksheet for the Child's Birth Certificate
  - Facility's Worksheet for the Live Birth Certificate

  - Model State Vital Statistics Act and Regulations

Current Vital Records Landscape

❑ **VR collect much of the same data that are inherent in EHR-S:**

- ▪ demographic, medical and key information about the antepartum period, the labor and delivery process and the newborn/fetal death

- ▪ mother's and infant's medical records serve as the source for more than ½ of all data items collected on the 2003 U.S. Standard Certificate of Live Birth and the U.S. Standard Report of Fetal Death

❑ **VR can serve as the bookends of a longitudinal EHR**

- ▪ Beginning with birth and ending with death

Current Vital Records Landscape

- ❑ **Vital Statistics Systems - becoming more electronic**
    - ▪ State Web-based Systems (in late 2011)
        - • 44 Jurisdictions with Electronic Birth Registration Systems
        - • 37 Jurisdictions with Electronic Death Registration Systems
        - • ALL Jurisdictions will collect Birth data electronically by January, 2014

    - ▪ Data entry at the provider level are done via manual processes and stand-alone systems

NCHS Focus on Standards

It is worthwhile to lay the foundation for standardizing the transmission of vital records data as efforts towards developing and implementing EHRs continue

CDC/NCHS Vital Records Standards Initiatives

❑ **The Goal:**

  ▪ Improve the timeliness, accuracy, and completeness of vital records (VR) data.

❑ **Debates abound:**

  ▪ Will the quality and timeliness of vital records data improve?

  ▪ Will the data collection become more or less standardized?

  ▪ Will it lead to a reduction in the redundancy of data entry and lower costs for both hospitals and states?
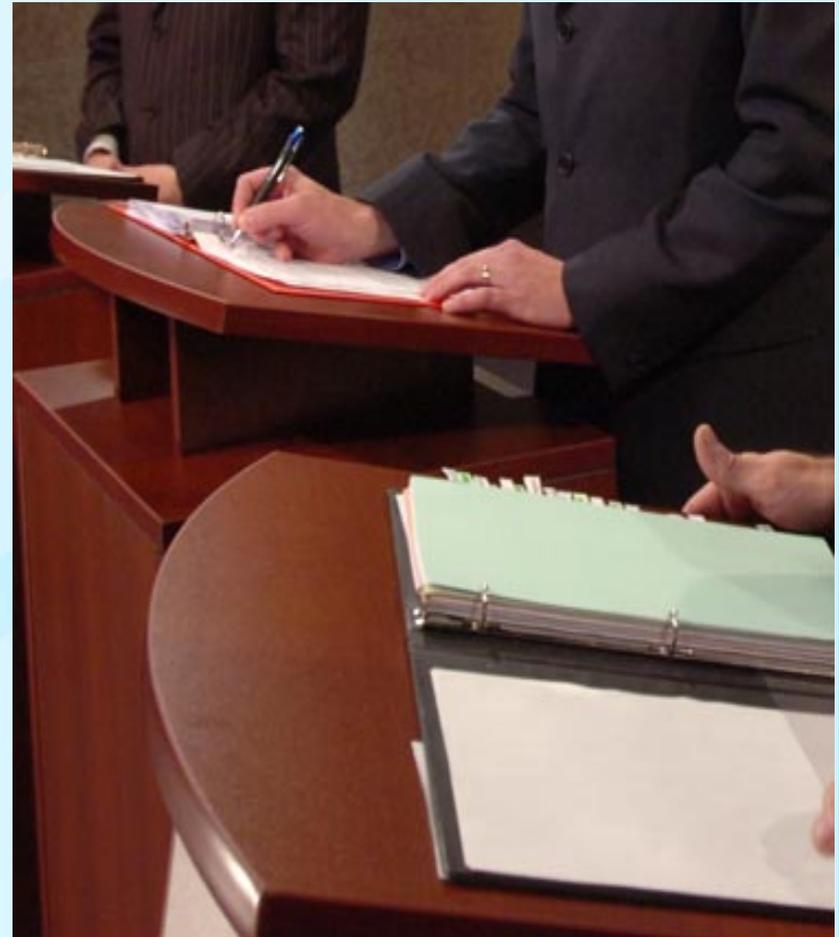
CDC/NCHS Vital Records Standards Initiatives

❑ **Health Level Seven (HL7) Vital Records Domain Analysis Model (VR DAM)**

- describes the activities and data required for processing birth, death and fetal death records in compliance with the U.S. Standard Certificates and Reports

❑ **HL7 Electronic Health Record System (EHR-S) Vital Records Functional Profile (VRFP)**

- defines the functional requirements needed to capture vital records data at the point of contact or care with a patient

CDC/NCHS Vital Records Standards Initiatives

❑ HL7 V2.5.1 and Clinical Document Architecture Release 2 (CDA R2) Birth and Fetal Death Reporting Implementation Guides

  ▪ describe the transmission of birth and fetal death related information from a clinical setting to the vital statistics registry

❑ Integrating the Healthcare Enterprise (IHE) Birth and Fetal Death Reporting Technical Supplement

  ▪ Defines the Electronic Health Records Content that may be used to pre-populate and transmit birth and fetal death information to vital record systems for vital registration system purposes

Next Steps

❑ CDC/NCHS is planning to pilot test interoperability between Electronic Health Record and Vital Record systems utilizing these HL7 and IHE standards
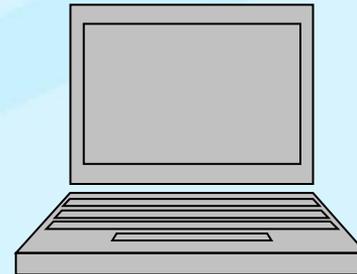
Thank You

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Developing Standards for EHR Birth and Death Data Exchange with Vital Records Systems

Mother

Mother's Worksheet

Birth Information Specialist

Birth Event

Nurse

Physician

Birth Registration System (EBRS)

Electronic Health Record

Registrar

Birth Certificate

State Department of Health
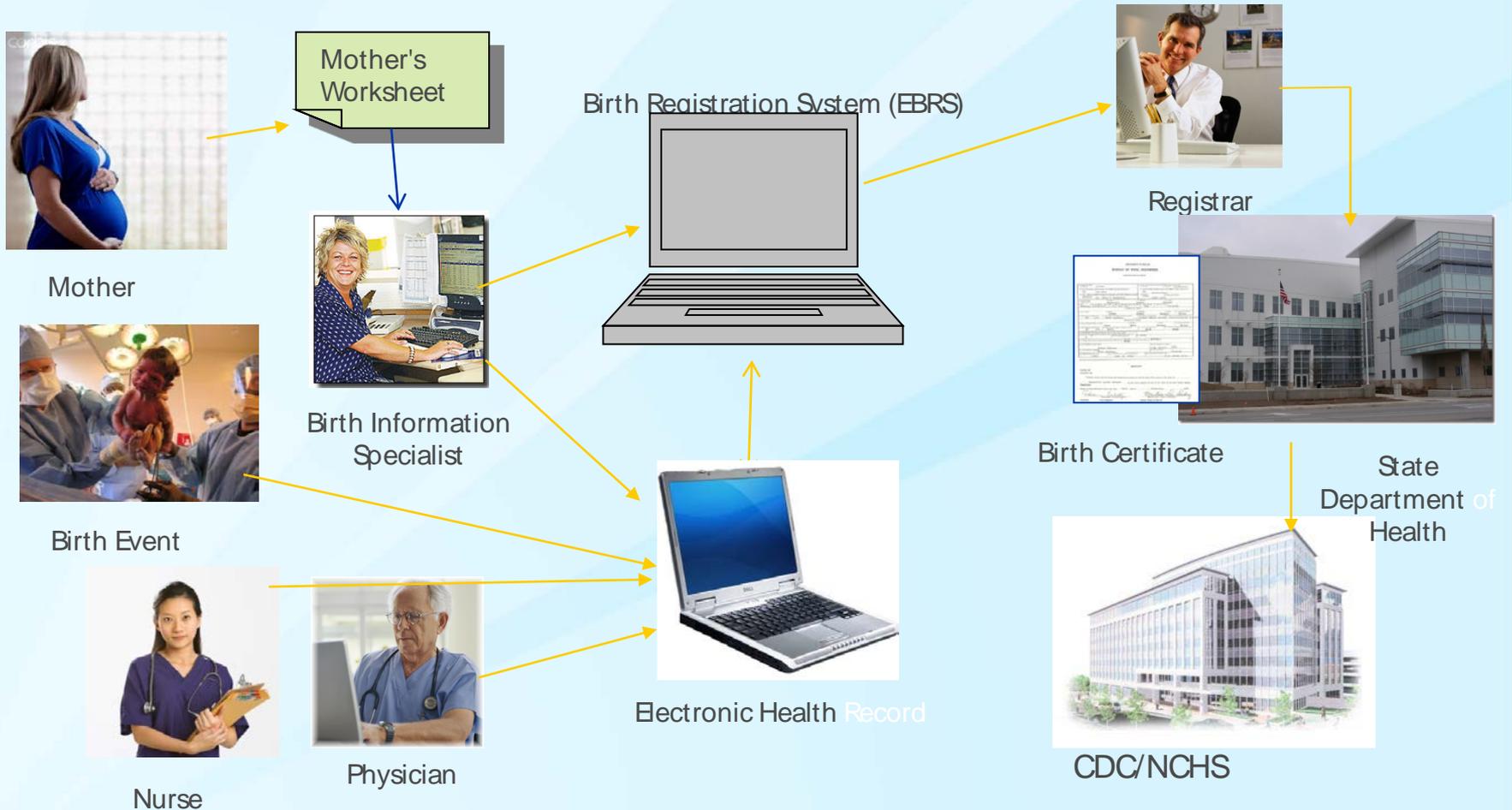
CDC/NCHS

CDC/NCHS Vital Records Standards Initiatives

❑ **VR can influence standards development for EHR systems for relevant data items to:**

- Assure that the data collected is consistent with national requirements

- Identify where commonalities exist in clinical and VR data requirements

- Communicate the needs of the clinical and VR domains and come together where appropriate

- Develop a standard format that may be utilized by clinical systems that includes VR requirements

NCHS Engaged in ONC S&I PHRI

- **Office of the National Coordinator for Health Information Technology (ONC)**
  - **ONC Standards and Interoperability (S&I) Framework**
    - Public Health Reporting Initiative (PHRI)
      - Examines several reporting user stories that share similar business processes, information exchange requirements and data requirements
      - harmonize HIT standards and implementation guides for bi-directional interoperable communication between clinical care and public health entities for selected use cases
      - Includes NCHS User Stories for Division of Vital Statistics and Division of Health Care Statistics