eVitals Records Standards Initiative

February 2014

Overview of U.S. Vital Records System

- The National Vital Statistics System (NVSS) provides essential data on all U.S. births and deaths

  - Over six million vital events are reported annually

  - Events are registered by 57 registration areas: 50 states, 2 cities, and 5 U.S. territories

  - Information collected includes a wide range of demographic, medical, and geographic data derived from 4 million birth certificates and from about 2.4 million death certificates and fetal death reports

Overview of U.S. Vital Records System

- Current birth and death registration processes are characterized by:
  - Higher expectations of data quality and timeliness by stakeholders and the public
  - Separate, costly reengineering projects in various jurisdictions
  - Limited integration among internal vital records systems and with other stakeholder systems
  - Need for a standards-based, uniform, and systematic approach to collecting and exchanging data from vital records
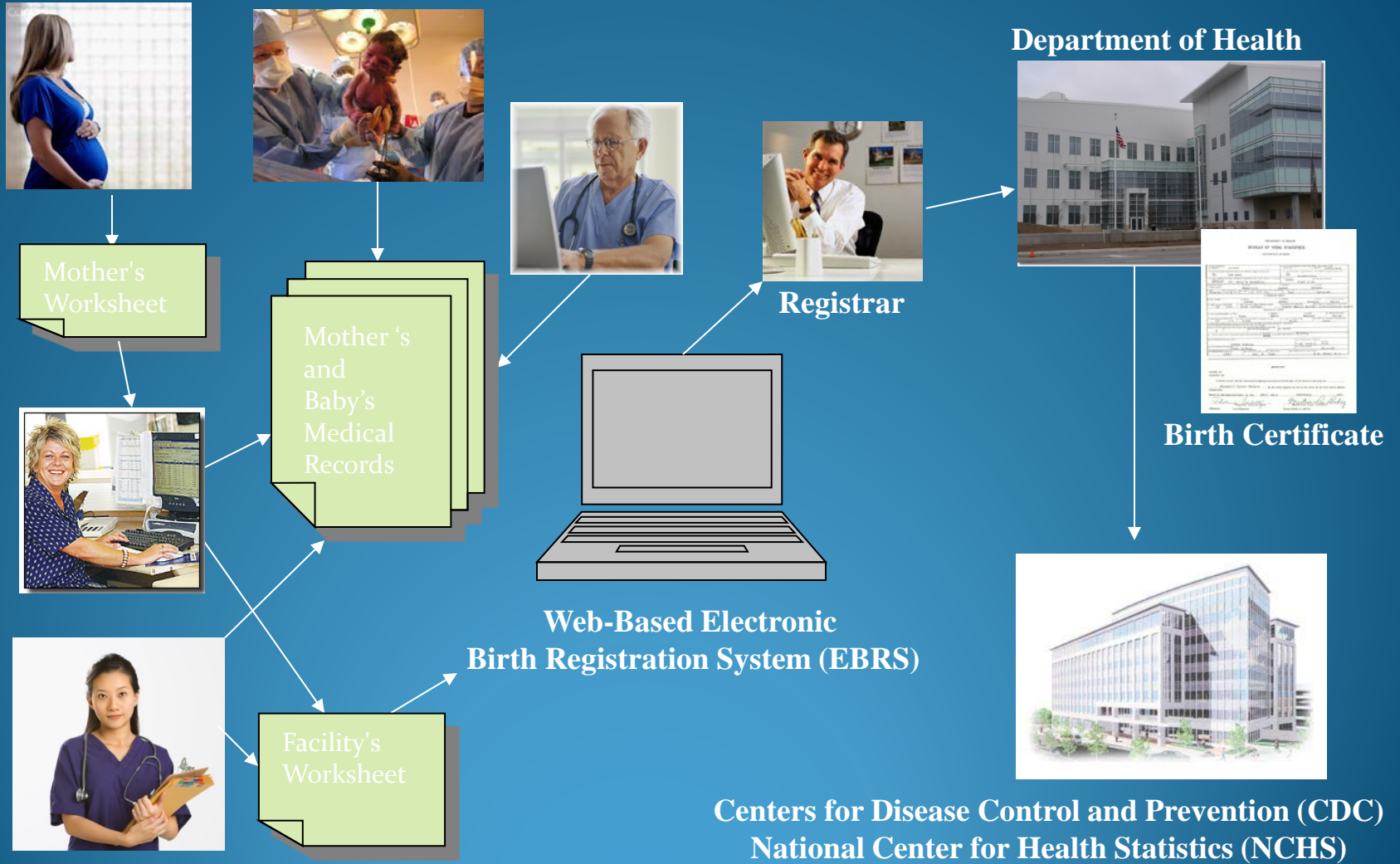
Overview of U.S. Vital Records System

The mother's and infant's medical records are the recommended sources for more than half of all VR data items collected on the U.S. Standard Certificate of Live Birth and Death and the U.S. Standard Report of Fetal Death

Overview of U.S. Vital Records System

- Currently, these data are typically gathered by hospital personnel from the hospital's medical records using standard paper worksheets
  - Mother's Worksheet
  - Facility's Worksheet

- The information is manually entered into the state's or jurisdiction's web based:
  - Electronic Birth Registration System (EBRS)
  - Electronic Fetal Death Report System (EFDRS)
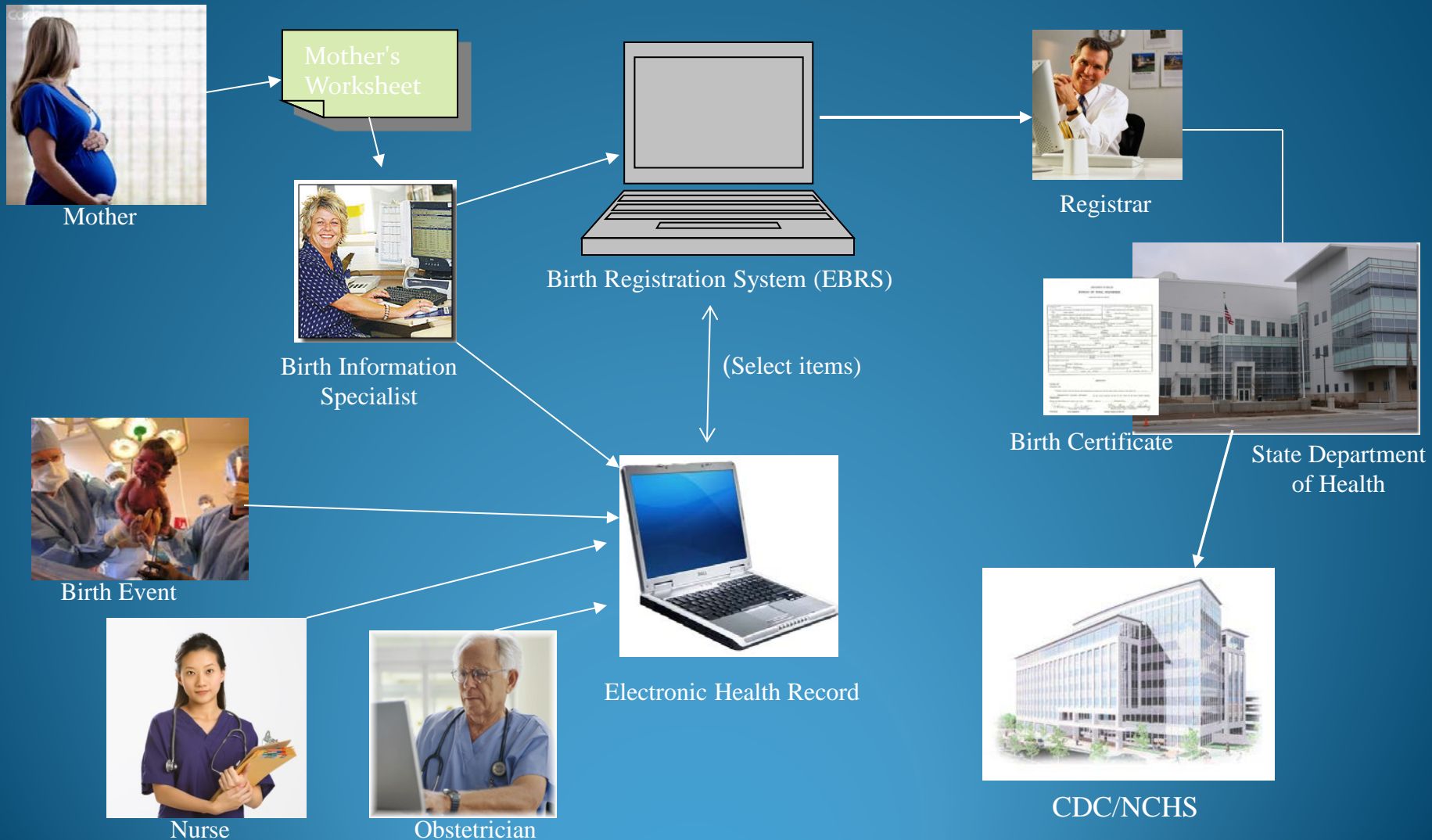 - Electronic Death Registration System (EDRS)

Typical U.S. Birth Registration Process

Mother's Worksheet

Mother 's and Baby's Medical Records

Facility's Worksheet

Web-Based Electronic Birth Registration System (EBRS)

Registrar

Department of Health

Birth Certificate

Centers for Disease Control and Prevention (CDC)
National Center for Health Statistics (NCHS)

eVital Standards Initiative

- CDC/NCHS is providing support and has been collaborating with the National Association for Public Health Statistics and Information Systems (NAPHSIS) and other VR stakeholders to support the eVital Standards Initiative

- Goal:
  - To provide support for the development of 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

Standards to Support Capturing U.S. Vital Records Data at the Point of Care or Contact

Mother

Mother's Worksheet

Birth Information Specialist

Birth Registration System (EBRS)

Registrar

(Select items)

Birth Certificate

State Department of Health

Birth Event

Electronic Health Record

Nurse

Obstetrician

CDC/NCHS

Laying the Foundation for eVital Standards

Debates abound about the:

- Use of EHRs as a source for VR information

- Benefits of EHR approach to VR community

- Improvements in quality and timeliness of VR data

- Reduction in the redundancy of data captured

Laying the Foundation for eVital Standards

It is worthwhile to lay the foundation for standardizing transmission of birth and death events as efforts towards developing and implementing EHRs continue
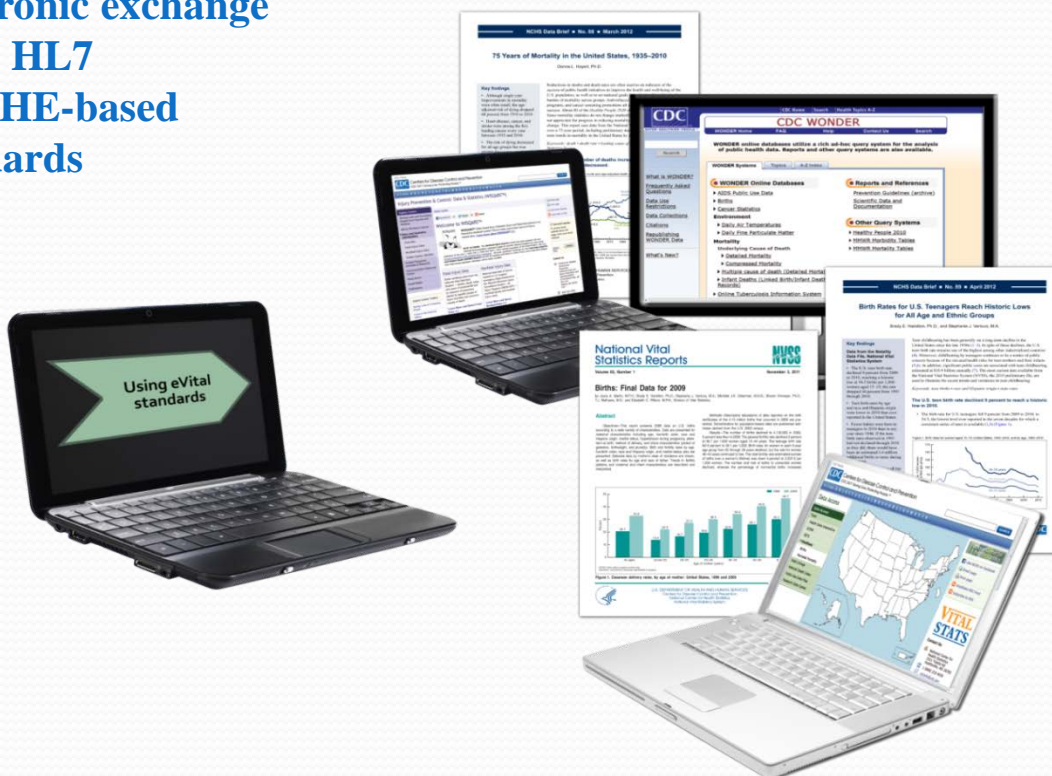
Electronic Health Record (EHR) and Vital Record (VR) Systems Information Exchange

Capturing birth and death data in electronic health record systems

Improving the timeliness, accuracy, and completeness of vital records data

Electronic exchange using HL7 and IHE-based standards

Using eVital standards

eVital Standards Development

- VR Standards that have been developed include:
  - Data Models (HL7 Domain Analysis Model)
  - Functional Profiles (based on HL7 EHR-S FM)
  - Messaging Standards (HL7 V2.5.1)
  - Document Standards (HL7 CDA)
  - Content Profiles (IHE)

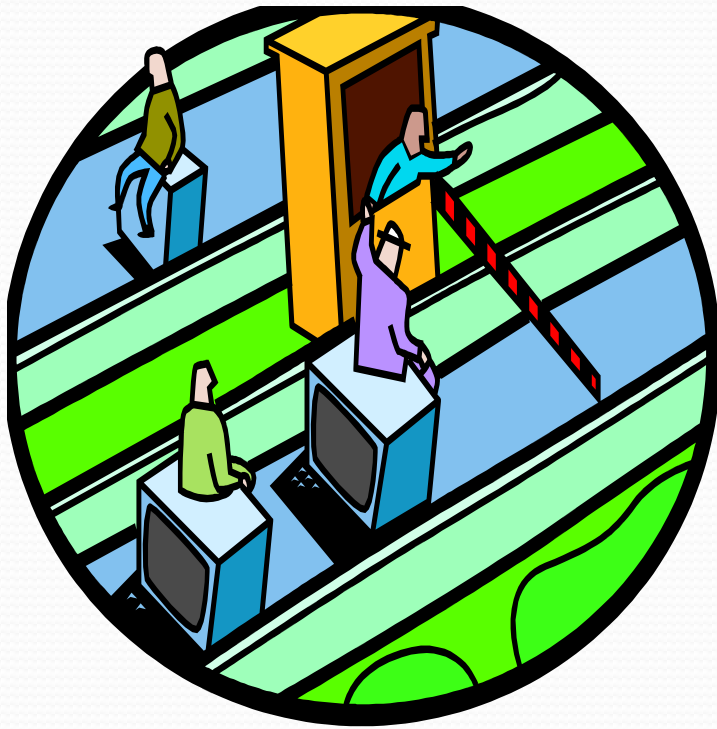Details for the VR standards are available on the CDC/NCHS website at:

http://www.cdc.gov/phin/resources/standards/data_interchange.html

eVital Standards Testing and Demos

- Utah Department of Health - Testing HL7 V2.5.1 Death Reporting Implementation Guide

- Minnesota Department of Health - Feasibility assessment using Integrating the Healthcare Enterprise (IHE) Birth and Fetal Death Reporting Content Profile

- Demonstrations during the 2012 and 2013 NAPHSIS Annual Meeting and the 2012 and 2013 Healthcare Information Management and Systems Society Meetings

Barriers to eVitals Standards Development and Implementation

- Some states/jurisdictions legally responsible for the registration of vital events are concerned about the accuracy and quality of data received via EHRs

- Funding to support states/jurisdictions pilot tests and adoption of eVitals Standards

- EHR vendors adoption of eVitals standards and incorporating VR requirements in their products

- VR system vendors readiness to receive VR data using national standard formats

Contacts

- ## Michelle Williamson
  - CDC/National Center for Health Statistics
  - Classifications and Public Health Data Standards Staff

- ## Hetty Khan
  - CDC/National Center for Health Statistics
  - Classifications and Public Health Data Standards Staff

- ## Contact: Division of Vital Statistics at: (800) 232-4636