Model EHR Format for Children

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Existing EHR systems often do not adequately support the provision of health care to children. The goal is to develop a model EHR format for children, demonstrate that it can be readily used, and package it in a way that facilitates broad incorporation into EHR systems. The project will:

- Develop a framework for the ideal Child EHR;
- Identify gaps between existing systems and this framework;
- Design, develop, test and disseminate the model Format;
- Assess existing products for compliance with the Format;
- Demonstrate consumption of the Format;
- Use CHIPRA demonstrations to assess the impact of the Format.
Sponsors

AHRQ
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

CMS
Centers for Medicare & Medicaid Services

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• Development of Model EHR Format for Children Enrolled in Medicaid or CHIP

• By 1/1/2010 the Secretary shall establish a program to encourage the development & dissemination of a model EHR format for children
By law, the model EHR format for children must be:

- Accessible to Parents, Caregivers and Consumers
- Viewable and understandable by Parents & Caregivers to assure quality
- Designed to allow interoperable exchanges
- Capable of being incorporated into other standards
CHIPRA Demonstration Projects

- Section 401, Model EHR provision: “demonstrate the impact of the model EHR format for children developed and disseminated under subsection (f) on improving pediatric health, including the effects of chronic childhood conditions, and pediatric health care quality, as well as reducing health care costs”
What is a “Format?”

• Requirements for:
  A minimum set of data elements
  Applicable data standards
  Usability
  Functionality
  Interoperability
Foundational Work

- HL7 EHR-S Functional Model R1
- HL7 Functional Profile – Child Health
- HL7 EHR-S Functional Model R2 (in development)
- CCHIT certification criteria
  - Inpatient
  - Ambulatory
  - Child Health
Scope of the Project - Clinical

- *Incremental* functionality for children
- Appropriate external links
  - Foster care, Medicaid, School health
- Family medical record
- Chronic diseases
- Alternate care venues
  - NICU, Hospice, others
- Filling the gaps
Scope of the Project - Technical

• Appropriate Standards
  
  HL7, NIEM, CCR, CCD, …

• Formal requirements management tools
  
  Metadata, Traceability, Dependencies

• Support for user-specific views
  
  System developers (comprehensive)
  System developers (single function)
  System selection and implementation
Target Audience(s) for Format

- CHIPRA grantees
- Developers of existing EHR products
- New developers
- System purchasers
- Certifying bodies
- Standards groups
- Regulators
- Users/developers of “Meaningful use” criteria
Component Tasks

Environmental Scan and Gap Analysis → Development of the Model Format → Conformance Assessment → Prototype Development → Dissemination → Impact Assessment
Environmental Scan

- Publications (inc. gray literature)
- Relevant final standards
- Relevant draft standards
- Product web sites
- Niche products
- Product prevalence
Sources of Expertise

• Technical Expert Panel
  14 members
  Represent many constituencies and technical areas
  Address project scope, direction, and completeness

• Subject Matter Experts
  AAP
  AAFP
  HIMSS EHR-A
  Experienced EHR Users
Gap Analysis

- High level requirements
- Supporting information (metadata)
  - Sources
  - Reliability
  - Importance
Format Development

- Develop Format Consumption Models
- Define the Format Design/Structure
- Select the Environment for Format Development
- Test and Refine and Format Design/Structure
- Capture the Existing HL7 Functional Profile into the Format
- Additional Child Health Requirements
  Develop Format for areas in project scope
  Articulate areas beyond project scope
Conformance Assessment

• How well do widely installed products conform to the ideal?
• “Buyer’s Guide”
• Three *small* projects
• Demonstrate use/consumption of the Format
Dissemination

- Presentations
- Publications
- Public Access to the Format
- Development of targeted extracts
CHIPRA demonstration projects will assess the impact of the model EHR format for children on improving pediatric health, chronic childhood conditions, and reducing health care costs.

Projects in Pennsylvania and North Carolina will participate.
National Information Exchange Model (NIEM)

- Semantic Interoperability
- Designed to develop, disseminate and support enterprise-wide information exchange standards and processes that can enable jurisdictions to effectively share critical information in emergency situations, as well as support the day-to-day operations of agencies.
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Questions?