

# CHIPRA Quality Demonstration Grant Program Webinar Series

Using Health Information Technology  
to Support Child Health Quality

October 15, 2013

AHRQ – Children’s Electronic Health Record Format

Pennsylvania – Children’s Electronic Health Record Model Format Implementation

North Carolina – Testing of the Children’s Electronic Health Record Format

Illinois/Florida – The Statewide Provider Database and Prenatal Minimum Electronic Data Set

# CHIPRA Quality Demonstration Grant Program Webinar Series

- CMS-sponsored series of five webinars designed to share findings and lessons learned from the CHIPRA Quality Demonstration Grants:
  1. August 14 - Understanding the CHIPRA Quality Demonstrations
  2. August 20 - Patient-Centered Medical Home
  3. September 12 - Stakeholder Engagement
  4. September 25 - Improving Behavioral Health Care Quality
  5. October 15 - Health Information Technology
- Open to all interested parties
- Links to Webinar Materials:  
<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Quality-of-Care.html>

# CHIPRA Quality Demonstration Grant Program

- Congressionally mandated program
- \$100 million in funding
- Focus is on children in Medicaid/CHIP
- Goals
  - Evaluate promising ideas
  - Identify strategies that can drive improvements
  - Multi-state collaborations encouraged

# Webinar Agenda

- Welcome
- Introductions
- Presentation of Overarching and State-specific Project Spotlights
  - AHRQ
  - Pennsylvania
  - North Carolina
  - Illinois/Florida
- Questions

# Using Health Information Technology to Support Child Health Quality

Model Children's Electronic Health Record Format

Erin Grace

Chief, Health IT Translation

Agency for Healthcare Research and Quality (AHRQ)

# Agenda

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- Rationale for the Model Children's Electronic Health Record (EHR) Format
- Overview of the development process
- Topics included in the Format
- Timetable
- Questions

# Children's EHR Format

- Existing EHR systems often do not optimally support the provision of health care to children
- Federal Response: Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) Section 401(f): Development of a Model EHR Format for Children Enrolled in Medicaid or CHIP
  - AHRQ and CMS charged with responsibility by the Secretary
  - Technical Expert Panel created
    - Physician informaticians (Children's health focus, general health focus)
    - Non-physician clinicians
    - Children's advocacy organizations
    - Medicaid agencies
    - EHR Vendors
    - Federal agencies (Office of the National Coordinator, Indian Health Service)

# Project Team

## Prime Contractors:



## Subcontractors:



**CHIPRA Quality Demonstrations**  
Strengthening the Quality of Children's Health Care



# What is a “Format?”

- Requirements for
  - Applicable data standards
  - Usability
  - Functionality
  - Interoperability



# Requirements Development Process

- Identify gaps between existing systems and an optimal EHR for children
- Design, develop, test, and disseminate a format based on those gaps
- Assess existing products for conformance with the format
- Demonstrate use of the format in prototype development
- For each topic area
  - Review findings from gap analysis
  - Initial requirements for some topics drafted by TEP
  - Additional requirements drafted by subject matter expert (SME)
  - Project team review
  - Outside SME and TEP review(s)

# Topics

- Activity Clearance
- Birth Information
- Child Abuse Reporting Form
- Child Welfare
- Children with Special Health Care Needs
- EPSDT
- Growth data
- Immunizations
- Medication Management
- Newborn Screening
- Parents, Guardians, and Family Relationship Data
- Patient (Child) Identifier
- Patient Portals – Personal Health Record
- Prenatal Screening
- Primary Care
- Quality Measures
- Registry Linkages
- School-based Linkages
- Security and Confidentiality
- Special Terminology and Information
- Specialized Scales and Scoring
- Well Child and Preventive Care

# Timetable

- Publicly Released February 2013
  - Accessible through [www.healthit.ahrq.gov/childehrformat](http://www.healthit.ahrq.gov/childehrformat)
- Disseminating and encouraging use by:
  - EHR vendors
  - Pediatric clinicians
  - Standards organizations
  - Certifying bodies
- Being migrated to HHS-managed platform – United States Health Information Knowledgebase (USHIK)
- Creating a Children’s EHR Format email list – to receive updates on the Format (e.g., when it transitions to USHIK)
  - To join the list send an e-mail to [listserv@list.ahrq.gov](mailto:listserv@list.ahrq.gov) and type SUBSCRIBE ChildEHRformat in the body of the e-mail message
  - Leave the subject line of the e-mail message blank

# Questions

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# Using Health Information Technology to Support Child Health Quality

## Pennsylvania's Model Children's Electronic Health Record (EHR) Format Implementation Project

Kelli Sebastian  
Pennsylvania Department of Public Welfare

Gary Shusta  
St. Christopher's Hospital for Children

# Agenda

- Highlights of Pennsylvania's Quality Demonstration Grant
- PA Department of Public Welfare's Project Goals
- Results of the Grantee Gap Assessments and Implementation Analyses
- Top Four Topic Sets Worked on by Grantees
- Implementation Challenges/Lessons Learned
- Questions

# Overview of PA's CHIPRA Quality Demonstration

- PA Department of Public Welfare is partnering with six hospitals and one federally qualified health center (FQHC)
- Category A – Testing and reporting on the Centers for Medicare & Medicaid Services' (CMS) initial core set of children's health care quality measures
  - Quality measure data extracted directly from electronic health records (EHRs)
- Category B – Promoting the use of health information technology in children's health care delivery
  - Electronic health screening project for identification of children with developmental and behavioral health concerns
- Category D – Implementing the CHIPRA model children's EHR format
  - Building and testing a pediatric-specific EHR



# PA Department of Public Welfare's Goals for the Model Format Implementation

- Creation of a pediatric-specific EHR will support PA Medicaid's quality improvement goals by:
  - Enabling population-level health management
    - Supporting PA's CMS dental strategy/action plan
    - Increasing access to care by analyzing patient-level data
  - Helping streamline mandatory reporting
    - Moving from plan-level to practice-level reporting
    - Improving immunization records by linking to PA's statewide immunization registry
  - Improving health care quality and efficiency
    - Well child and dental visits are a component of PA's managed care pay for performance measures

# Gap Analysis and Implementation Assessment of the Model Format

- Each of the five category D grantees performed a gap analysis of their current EHR in comparison to the model format
- Deficient areas of the EHR were then analyzed with a custom built implementation assessment tool
- Grantees then determined which requirements had the most clinical value and greatest return on investment by topic set
  - Well child/preventive care
  - Children with special healthcare needs
  - Immunizations
  - Quality measures

# Topic Set: Well Child/Preventive Care

- **Key Requirements**
  - Incorporating care plans in tasks that are assigned and routed
  - Identifying age specific screening and preventive care based on documented risk factors, previous preventive care, and specific preventive care
  - Alerting staff with system flags to deliver age appropriate screening tools
  - Capturing administration/completion of age specific screening tools
- **Grantee implementation plans**
  - Children's Hospital Pittsburgh
    - Develop a re-admission risk prediction model
    - Utilize medical records to identify high-risk patients and ensure appropriate follow-up
    - Implement the electronic screening from CHIPRA Category B
  - St. Christopher's Hospital for Children
    - Design care plans for tasking assignments
    - Support age specific screening/preventive care through e-screening project and dental referrals through EHR referral module
  - Hershey Medical Center
    - Implement pediatric decision support rules in pediatric clinics

# Topic Set: Children with Special Health Care Needs

- Key Requirements
  - Incorporating care plans in tasks that are assigned and routed
  - System flagging of patients with complex conditions to facilitate care management and decision support
  - Ability to document standard assessments in relation to age, gender, health condition
- Grantee Implementation Plans
  - Hershey Medical Center
    - Creation of advanced growth chart
      - Documents height, weight, body mass index, and head circumference
      - Supports the plotting of bone age and mid-parental height
      - Includes three premature growth charts and three Down's syndrome growth charts
  - St. Christopher's Hospital for Children
    - Develop care coordination template that will expand the amount of special health care needs flagged

# Topic Set: Immunizations

- Key Requirements
  - Transmission and retrieval of data in support of patient registries
  - Ability for the system to recommend required immunizations
  - Ability to manage immunization by searching, storing, and retrieving data for quality measure reporting
- Grantee Implementation Plans
  - Hamilton Health Center
    - Developing registries for tracking the care of children with chronic conditions
    - Implementing bi-directional linkage to the PA Department of Health statewide immunization registry
  - Pocono Medical Center
    - Building custom reports to mine immunization data to provide monthly reports and distinct quality data
  - St. Christopher's Hospital for Children
    - Planning application development to enhance the Immunization Order Sets present in the EHR and implement the bi-directional interface
    - Creating system alerts to notify physician if vaccine dose order is not in the patient immunization forecast

# Topic Set: Quality Measures

- **Key Requirements**
  - Systems shall be able to capture, retrieve, export, and display codified data for CHIPRA-required quality measures
  - Systems should also be able to capture, retrieve, export, and display codified data for user-defined or other endorsed quality measures
- **Grantee Implementation Plans**
  - All grantees are reporting a subset of the CHIPRA initial core set of children's health care quality measures directly from their EHRs
  - The ability of the grantees to report the CHIPRA measures correlates with their ability to report National Quality Forum quality measures under meaningful use requirements

# Implementation Challenges and Lessons Learned

- **Conflicting Projects**
  - Struggle to keep the grant work a priority in an environment of evolving business needs and changing strategic objectives
- **Resources**
  - Staffing turnover and availability throughout the life of this project has created a stop and start condition that has impeded progress
  - Given the pressure on the physicians to provide patient care and perform day-to-day duties, it is difficult to generate understanding, interest, and commitment to work on CHIPRA
  - It has been difficult to get clinicians who are relatively new to using an EHR to be effective contributors to the CHIPRA project
- **Requirements**
  - Written in ambiguous language making it difficult to achieve consensus on interpretation and action to take
  - Sheer number of requirements is overwhelming

# Implementation Challenges and Lessons Learned

- **System Interoperability**
  - Issues between systems (ambulatory vs. ED vs. inpatient) makes it difficult, and in most case prohibitively costly to implement CHIPRA requirements
- **System Interfaces**
  - Information exchanges between schools, daycares, and registries, and outside entities may not be available or sufficiently developed by the EHR vendors to fulfill the related measures
- **Vendors**
  - EHR vendors slow to respond and prioritize grantee requests as they are concentrating on Meaningful Use, ICD-10 and other mandated initiatives
- **Core Quality Measure Rates**
  - Very difficult to validate because the state is filtering data based on continuous enrollment of the participant, which affects the numerator and denominator
- **Grant Timeline**
  - Complexity and sheer number of requirements in the model format and their applicability to the unique business/patient care models at the institutions preclude their complete implementation during the life of the grant
  - A number of the requirements planned for implementation will be addressed in future system upgrades scheduled beyond the grant's timeline



# Implementation Challenges and Lessons Learned

- **Lessons Learned**
  - The adoption of the Model Format Pediatric Health Record has challenged us to understand at a far deeper level:
    - How we collect data
    - How we store data
    - And how that data affects the continuum of care
  - Participating in the testing, collecting and reporting of Core Quality Measures has broadly expanded:
    - Our understanding of our patient community related to the quality data
    - Our use of electronic health information
    - And most of all it has helped establish strategic decision support goals to help us increase our ability to provide the highest level of care

# Questions

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# An Overview of North Carolina's Testing of the Model Children's Electronic Health Record Format

Kern Eason  
Pediatric EHR Consultant  
Community Care of North Carolina

# Agenda

- Overview of CHIPRA Grant in North Carolina
- Grant Spotlight: Testing the Model Children's Electronic Health Record Format
  - Implementation Team
  - Activities to Date
  - Project Variables
  - Current EHR Capabilities & Training Opportunities
  - Practice Resources
  - Lessons Learned

# Category A – Child Core Quality Measures (CQMs)

- Several Core Quality Measure are reported to practices throughout the state on a quarterly basis
- Quality Improvement Specialists work with practices to understand data and utilize data to improve care
- Community Care of North Carolina (CCNC) has seen rates increase since the beginning of the grant (range of years, e.g., 2006-2009?):
  - Dental varnishing rates (4+ treatments): 52% to 58%
  - Modified Checklist for Autism in Toddlers (M-CHAT) screening: 42% to 55%
  - Adolescent screening rates: 7% to 12%
  - Body Mass Index (BMI) % coding: 3% to 13%

# Category C – Medical Home Models

- 26 practices participate in a learning collaborative
- Areas of focus
  - Obesity
  - Oral health
  - Developmental and behavioral screening for all ages (0-20)
  - Immunizations

# Category D – Improving EHRs Used in Pediatric Primary Care

- Goals:
  - Evaluate pediatric EHR format's impact on 16 quality measures in 5 topic areas: Oral Health; Obesity Prevention; Developmental & Behavioral Health; Early Periodic Screening Diagnosis, and Treatment (EPSDT); and Asthma
  - Evaluate pediatric EHR format's impact on costs for practices, payers, and patients
- Partners:
  - 7 Electronic Health Records (EHR) vendors
  - 14 pediatric practices on-board with 6 pending (target is 40-50)

# CHIPRA Category D Team in North Carolina

## Children's EHR Format Team

- **Pediatric EHR consultant** - Provides strategic and daily operations leadership
- **4 EHR coaches** - Recruit and train practices, provide technical assistance, connect practices to other resources, gather feedback on use of EHR and interpretation of Model Format
- **1 lead EHR coach consultant** - Assisted in developing coach role and orienting new hires
- **Data analyst** - Provides guidance on data collection and leads analysis of clinical and other measure data
- **Stakeholders at 14 networks and North Carolina Area Health Education Center (Regional Extension Center)** - Provide technical assistance and quality improvement expertise to participating practices.



# Activities to-date or Steps Taken

- Recruit EHR vendors and NC practices to participate
- Create strong, sustainable relationships
- Orient participating vendors and practices to model EHR format
- Introduce tools and resources, identify roles and goals, explain quality measures
- Collect and analyze practice demographic data, clinical quality (process) data, provider and patient satisfaction data
- Document the evaluation process and analyze barriers or variables impacting success

# Project Variables

Variables impacting successful implementation of the Model Format include:

- Model Format Complete
- Model Format Medically Relevant
- Model Format Easily Interpreted
- Model Format Implementable
- Vendor readiness for quality measurement (structured data)
- Vendor platform flexible enough to adapt to Model Format
- Provider awareness of quality standards and best practices
- Provider ability to fully utilize EHR
- Provider ability to use data for quality improvement
- Patient satisfaction impacted by better EHR

# Current EHR Capabilities and Training Opportunities

- **Conformance** – EHR vendor self report versus practice report of system capability relative to the Model Format, reveals gaps in current implementation and exposes practice training needs
- **Baseline clinical quality reports** – EHR vendors have begun submitting baseline data sets against which we will track quality improvement for the remainder of the grant
- **Training opportunities** – EHR coaches have received training on several EHR systems and are training providers
- **Development opportunities** – EHR Vendors are using the Model Format and provider feedback to develop solutions that fill gaps identified during the conformance phase.

# Pediatric Practice Technical and Clinical Data Resources

- Children's Health & Development Interactive System (CHADIS) <http://www.chadis.com>
- North Carolina Health Information Exchange <http://www.nchie.org>
- CCNC Informatics Center <http://www.communitycarenc.org/informatics-center>
- Expert workgroups including general pediatrics, EHR specific users, foster care, oral health, and obesity prevention

# Lessons Learned

- **Patience** – in recruiting vendors and practices to participate in the project
- **Leverage, leverage, leverage!** (for example, reaching out to large or influential practices in order engage a vendor)
- **Larger healthcare environment cannot be ignored**
  - **Super vendors (Epic)** – this relates to their nimbleness in adapting to new requirements, whether or not they are closed systems that are not compatible with other information systems, and how much priority they give to pediatric customers
  - **Kaiser model** – this relates to the pressure many practices are feeling when large, local hospital systems offer buyouts to bring practices “in network”
  - **Claims and exchange challenges** – North Carolina’s recent challenges in Medicaid payments due to system changes at the state level. Also the lack of a bi-directional immunization registry interface
  - **Partnership with other QI initiatives**

# Lessons Learned Continued

- Role of provider relationships and coaching is key factor in driving practice change
- Cost impact is difficult to measure - (Emergency department utilization is a commonly used metric)
- Not all practices or vendors are ready for quality improvement

# Questions

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# Using Health Information Technology (HIT) to Support Child Health Quality

Statewide Provider Database  
Prenatal Minimum Electronic Data Set

Gwen Smith, CHIPRA Project Director  
Illinois Department of Healthcare and Family Services



# Agenda

- Florida/Illinois CHIPRA Overview
- Grantee Spotlight:
  - Statewide Provider Database (SPD)
  - Prenatal Minimum Electronic Data Set (MEDS)
- Questions

# Florida/Illinois CHIPRA Quality Demonstration Overview

- Category A: Reporting the Children's Core Set Measures
- Category B: Using HIT to Improve Quality
- Category C: Improving/Enhancing Medical Homes
- Category E: Improving Birth Outcomes

# Grantee Spotlight: HIT Strategies to Improve Quality

- Statewide Provider Database (SPD)
  - SPD is a care coordination tool for medical homes
  - Developed and maintained for the Illinois Department of Children and Family Services through a collaboration with Northwestern University
- Prenatal Minimum Electronic Data Set (MEDS)
  - A minimum set of prenatal data available to prenatal providers/hospitals electronically
  - Used to inform appropriate level of care and avoid duplicate testing

# Statewide Provider Database Overview

- SPD was originally developed to address needs of state wards and began with community mental health programs
- Expanded to include non-clinical resources (e.g., after school programs, food pantries, clothing, etc.)
- Recently added health clinics (e.g., general medical, preventive health care, family planning, Veterans Affairs medical centers, etc.)
- SPD is now used as a care coordination tool by many providers and organizations to locate needed resources for clients, patients, and wards
  - Child welfare caseworkers
  - Community-based organizations
  - Local health departments
  - WIC and prenatal care coordinators
  - Primary care providers and medical homes
  - Others

# SPD Overview: Content and Structure

- Over 1,700 agencies in the SPD
- Over 4,100 programs including: mental health, substance abuse, early childhood, parenting, domestic violence, etc.
- Over 23,000 service types, including: anger management, counseling, drug testing, educational testing, etc.
- Special target populations include: visually impaired, hearing impaired, early childhood, homeless, etc.
- Program information includes: hours, services, eligibility requirements, languages, staff credentials, evidence-based practices, etc

# SPD Overview: Functionality

- Search feature with geocoding
  - Search criteria: program type, payment type, special population, service type, language, geographic area, distance, etc.
  - Service provider match report: list of agencies that meet search criteria with embedded links to agency/program website and Google map
  - Keyword search: lacks geocoding; returns information alphabetically by name of city
- Detailed program report
  - Agency name, address, phone, contacts, level of care, office hours, languages, forms of payment, eligibility, staffing, services offered, etc.

# Making SPD Accessible to CHIPRA Grantee Practices

- Extended offer of SPD access and training to CHIPRA medical home providers and provided them with training materials; future access for all primary care/medical home providers
- Expanded SPD resources to include nutritional counseling and recreational/physical activities to assist providers in addressing obesity
- Developing capacity to register for and access SPD directly through the Medicaid Electronic Data Interchange, a secure portal to which all enrolled Medicaid/CHIP providers have access
- Annual provider survey to assess local resource needs

# Current Status of SPD

- Minimal uptake by CHIPRA practices
- Developing strategy to more rigorously promote the use of SPD by primary care providers and medical homes for care coordination
- Staffing issues have delayed development of the automatic registration process
- Waiting on results of provider survey to identify local resource needs



# Using the SPD to Improve Child Health Care Quality in Medicaid and CHIP

- Facilitates care coordination: allows providers to locate and connect patients to needed clinical and non-clinical services
- Improves access: provides patients with access to services and resources that fit their specific needs
- Allows for assessment of gaps in resources to address geographic and local needs
- Allows new types of resources to be added to address state priorities (e.g., obesity resources)
- Improves efficiency and encourages collaboration: a single statewide resource eliminates the need for individual organizations to maintain resource lists

# Grantee Spotlight: Prenatal MEDS

- A tool to assist in providing appropriate level of care and avoiding duplicate testing
- Developed based on recommendation from perinatal Peer Review Panel in 2009
- Data set developed by CHIPRA perinatal experts with assistance from eQ Health Solutions
- Based on American Congress of Obstetricians and Gynecologists (ACOG) and American Academy of Family Physicians (AAFP) guidelines
- Started as a tool for hospitals; adapted for use by prenatal care providers and emergency departments

# Prenatal MEDS Overview: Content and Structure

- MINIMUM data set: key information needed for treatment decisions
- Focus on ease of use: organization and labeling of information
- Most important information first:
  - Patient/prenatal provider information
  - Problem list
  - Medical history
  - Obstetrical history
  - Medication list
  - Prenatal visits (Gestational age, weight, blood pressure, fetal heart tone, body mass index)
  - Delivery plan
  - Prenatal labs (date, test, result)

# Prenatal MEDS Overview: Functionality

- Ability to accept information from providers with or without an Electronic Health Record (EHR)
  - No EHR: Direct entry to secure portal
  - EHR: Direct extraction from EHR
- Information available to providers via the Illinois Health Information Exchange (ILHIE)
- Information securely stored in accordance with Integrating the Healthcare Exchange (IHE) requirements
- Key information needed for treatment decisions available electronically 24/7 to prenatal providers, emergency departments and hospitals
- Standardized format with information organized by importance

# Prenatal MEDS Overview: Status

- CHIPRA collaboration with ILHIE
- Data elements mapped to ACOG Antepartum Summary electronic format
- Template completed; repository secured; secure portal completed
- Reviewed and endorsed by the State Quality Council of Illinois' Regionalized Perinatal System
- Working with Perinatal Network Administrators to identify pilot test teams – CHIPRA mini grants
- Timeline:
  - January 2014 – Direct entry testing to begin
  - March 2014 – EHR extraction testing to begin

# Using Prenatal MEDS to Improve Child Health Care Quality in Medicaid and CHIP

- Promotes continuity of care: providers in various settings have access to information about a woman's prenatal care
- Reduces unnecessary testing: Prenatal MEDS includes tests received and test results
- Improves provider/hospital efficiency: prenatal information accessible 24/7; eliminates need to locate prenatal records after hours or on weekends
- Improves quality: Prenatal MEDS includes key information to inform and guide treatment decisions, such as risk factors and test results

# Questions

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Thank you for participating in today's webinar and the 2013 CHIPRA Demonstration Grant Program webinar series.

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