Thursday, February 14, 2019
10:00 AM – 4:00 PM ET
Hyatt Regency Orlando | Celebration 5
In Conjunction with HIMSS Global Conference & Exhibition

AGENDA

10:00 am – 10:15 am
Call to Order and Introductions
Hon Pak, Chair, PEHRC

10:15 am – 11:00 am
National Coordinator Welcome Remarks & Policy Discussion
Don Rucker, National Coordinator for Health Information Technology, ONC

11:00 am – Noon
Member Update Presentations
Care Pathway Models
Dr. Stephen Hasley, CMIO, ACOG

Immunization Integration Program
Tom Leary, Vice President Government Relations, HIMSS
Mary Beth Kurilo, MPH, Policy and Planning Director, AIRA

DataDerm Update
Jim Taylor, Cleveland Clinic / American Academy of Dermatology (AAD)

Noon – 1:00 pm
Lunch Panel – HIEs: Past, Present, & Future
Dan Paoletti, the Ohio HIE CliniSync
Melissa Kotrys, CEO, Health Current
Brandon Neiswender, COO, CRISP
Facilitator: Mari Greenberger, MPPA, Director, Informatics, HIMSS

1:00 pm – 2:00 pm
Strategic Priorities for AMIA and Major Trends that Impact Specialty Societies
Doug Fridsma MD PhD FACP FACMI, President and CEO of AMIA

2:00 pm – 2:45 pm
Work Group Updates & Discussion
Jessica Peterson - Direct Trust Work Group
Steve Waldren - CPG Work Group

2:45 pm - 3:45 pm
Closing Session: Introduction to EHRA and How We Can Work Together
Sasha TerMaat, EHR Association Vice Chair

3:45 pm – 4:00 pm
Closing Remarks
Hon Pak, Chair, PEHRC

Save the Dates
May 10, 2019 Chicago, IL
August/September 2019 Washington D.C. Area
November 22, 2019 Arlington, VA

About PEHRC
The Physicians’ Electronic Health Record Coalition (PEHRC) is comprised of more than 20 medical societies representing more than 600,000 physicians, who share information to support the use of health information technology (IT).

The PEHRC helps physicians—particularly those in small- and medium-sized ambulatory care medical practice—acquire and use affordable, standards-based electronic health records (EHRs) and other health IT to improve quality, enhance patient safety, and increase efficiency. PEHRC is committed to taking practical steps to educate physicians about the value and best use of EHRs, help them select systems, and focus the market on high-quality and affordable products.
Development of Care Pathways

Translating narratives into code

Steve Hasley
ACOG CMIO
Narrative documents

- Benefits
  - First-rate review of current literature and thought
  - Well-established process for creation and review
    - Highly trusted
  - We “own” the Standard of Care in women’s health

- Gaps
  - Evidence-based medicine has gaps
  - Open to interpretation
  - Depends on lots of a priori knowledge
  - May have contradictions
  - The test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function. *F. Scott Fitzgerald*
  - And we don’t seem to be able to move the needle on Outcome metrics
Outcomes

- Maternal Mortality 2x up over last 20 years
- Many other US metrics at third world levels
- Delivery of preventive services less than 40%

- We are failing in basics
  - Only 40% of pregnant women get a flu shot
  - Only 7% (in Louisiana) get 17-OHP

- So how do we get our guidance to the Point of Care?
Current State

- Most EHR’s are transactional billing systems, with some provider stuff tacked on.

- Transactional
  - Think of a transaction at WalMart
    - Date/Time/Location
    - Item Number
    - Amount
    - Your credit card number

- Woefully inadequate to understand where this patient is on a care pathway
EHR must contain:
- All discrete data elements
- Metrics and Dashboards
- CDS and Pathways
- Duplicates of all other sources of data
- Immunizations
- Labs
- PDMD
- Med Lists

Narratives require:
- Interpretation
- Translation
- Fill in the gaps
- Version control
Future State

• APIs

• Interoperable Data Models
  • FHIR

• Care pathways for digital platforms
  • BPM+
    • BPMN
    • DMN
    • CMMN

• Thoughtful separation of Concerns
  • Knowing what belongs where
  • No more square pegs in round holes
What are the goals of the IT group?

• External to ACOG
  • Create Care Pathways for digital platforms
    • EHRs
    • Mobile
    • Web-based
    • Apps
    • Other
  • Coordinate with other professional societies
    • AAFP, ACS, ACEP, ADA, VA, CDC, ACR,
    • HSPC, OMG, MITRE

• Internal goals within ACOG
Care Pathways

• Provide clear, precise, unambiguous instructions for software engineers
  • Platform independent
  • Transparent methodology
  • Include necessary ......
    • Data elements
    • Rules
    • Decision models
    • Performance measures
      • eCQMs
      • CQL scripts

• Skate to where the puck is going to be
How do we translate narratives to “Artifacts”

• Scrape Recommendations from ACOG narratives
  • Called out Recommendations
• Link Recs to Problems
  • Had to create a curated PL for OB
• Make the BPM+ model
• SME review
• Working Group for triaging
  • OK to go out the door
    • Nothing per vagina for Placenta Previa
  • Needs more formal ACOG review
    • Check for A fib if patient on levothyroxine, refer to cardiology
BPM+

• BPMN
  • Flow diagrams
  • Good for processes

• DMN
  • Can make complex decisions
  • Can input numbers, T/F, valuesets, dates and durations
  • Can have multiple outputs

• CMMN
<table>
<thead>
<tr>
<th>U</th>
<th>Copy of Current Dose</th>
<th>Copy of Determine T4 dose status</th>
<th>Adjust levothyroxine dose</th>
<th>Weeks for next TSH</th>
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Save the date: BPM+ Health Industry Workshop

Wednesday, March 20, 2019 from 9:00 am to 5:00 pm

Hyatt Regency Town Center, Reston, VA, USA (Washington, DC area)

Object Management Group® (OMG®) is proud to sponsor the Business Process Management for Health (BPM+ Health) workshop to convene healthcare professional colleges and societies, health providers, payers, and vendors to explore viable solutions to the pressing need for capturing, distributing, sharing, and adopting best practices.

This workshop is a key first step toward organizing an industry Community of Practice to establish broadly-accepted approaches to documenting care pathways, workflows, and clinical practices to promote more effective adoption, more accurate interpretations, and improved internal consistency of the guidance being provided.
Questions ??
Objectives

• Explain the Immunization Integration Program and the role of the HIMSS-AIRA Immunization Collaborative
• Understand the purpose and goals of the Immunization Collaborative
• Explore the structure of the Immunization Collaborative
• Describe the benefits for the key stakeholders of the Immunization Collaborative
• Learn how to participate and get involved
HIMSS Immunization Integration Program

- Testing and recognition program for EHRs and other products with immunization tracking capabilities
- Collaboration with Drummond Group and Chickasaw Health Consulting, LLC (CHC) under a contract with the CDC
- IIP is advancing the inclusion of immunization-related capabilities within EHRs and other clinical software by:
  - Facilitating agreement on priority immunization-related software capabilities that align with clinical workflows
  - Enabling software developers to voluntarily test and achieve recognition of their products for inclusion of immunization capabilities
  - Providing guidance for improving usability of immunization-related software functions
  - IIP is an ONC Approved Testing Partner
IIS... are confidential, population-based, computerized databases that record all immunization doses administered by participating providers to persons residing within a given geopolitical area.
EHR and IIS: Their Differences and How They Work Together

**EHR**
- Captures patient health information within the same medical organization
- Replaces written health records of medical encounters

**IIS**
- Captures immunization information for a broad population
- Consolidates immunization records by reaching across health care providers and networks
EHR and IIS: Their Differences and How They Work Together

**EHR**
- Supports provider decisions about a patient’s care
- Automates and streamlines provider workflow

**IIS**
- Provides clinical decision support and vaccine forecasting
- Identifies areas of need, where lower immunization rates exist
EHR and IIS: Their Differences and How They Work Together

**EHR**
Can communicate bidirectionally with IIS

**IIS**
Can communicate bidirectionally with other IIS and EHRs
The Challenge

Standards (and standardized implementations) across both IIS and EHRs likely get us 90-95% of the way to broad, universal interoperability…

But the last 5-10% may benefit from some collaborative fine-tuning

Why?

Varied provider workflows, unique EHR implementations, vague or unclear standards, jurisdictional IIS policies or laws, variations in interpretation of standards, etc.
American Immunization Registry Association – AIRA /air-uh

- Standards Development
- Advocates for Collaboration
- Measurement & Improvement
- Education
- Facilitates National Conversation
- Drives Meaningful Results for Public Health Policy
AIRA’s Reach

More than 600 members representing:

• Public Health Organizations throughout the US and its Territories
• Businesses and Sponsors
• Individuals from IIS Programs and Partners
Immunization Collaborative

• Convened by AIRA and HIMSS
• Supported by the CDC
• **Objective:**
  – Establish a representative body to achieve consensus among key stakeholders on common issues and recommended solutions to improve immunization interoperability
New Opportunities with HIMSS AIRA Collaborative

01 Strengthen relationships
02 Identify and prioritize most pressing interoperability challenges
03 Define and gain consensus
04 Develop/recommend guidance and model clinical practices
05 Communicate and support adoption

New Opportunities with HIMSS AIRA Collaborative

Strengthen relationships

Identify and prioritize most pressing interoperability challenges

Define and gain consensus

Develop/recommend guidance and model clinical practices

Communicate and support adoption
Immunization Collaborative Goals

• Improve immunization management, workflow, standards, usability and data sharing

• Develop a value proposition sought by EHRs, IIS, and clinicians, based on results of our evaluation

• Enable collaboration between organizations that can implement necessary changes (in EHRs or IIS, and/or the related standards)

• Build on the work of the Immunization Integration Program

• Ensure longevity and sustainability of the IIP
The Immunization Collaborative will:

• Establish and resolve issues list as prioritized
• Address ongoing feedback on deliverables
• Work in collaboration with existing AIRA and HIMSS workgroups, including the AIRA Standards and Interoperability Steering Committee and the HL7 User Group.
• Develop/recommend model clinical practices, Examples include:
  – Standards, definitions, usability and data sharing issues
  – Addressing messaging and conceptual alignment between HL7 Version 2 and FHIR development and implementation
  – Workflow for managing non-potent immunization administrations
  – Workflow for managing acknowledgement messages
Immunization Collaborative

• Program Impact:
  – The Collaborative will identify challenges and define actionable solutions to improve immunization workflow, interoperability, usability and data sharing between health IT systems and organizations and IIS that will ultimately improve patient care and outcomes, and bring greater value to providers.
Immunization Collaborative

- Measurements of Success:
  - Improve IIS and EHR immunization information related to workflow and usability
  - Improve immunization interoperability and information sharing
  - Increase adoption of immunization-related best practices
  - Promote greater engagement of health information exchange organizations, pharmacy and other clinic-based care settings, and other critical stakeholders
Work Products

The initial work products for the Collaborative will be:

• Produce an **Immunization Roadmap** to address the key interoperability challenges for the immunization ecosystem.

• Publish **Key Recommendations and Model Practices**. The Collaborative will Gain consensus and publish recommendations and model practices.
Stakeholders and Benefits - Clinicians

• Deliver better patient care by managing immunizations more effectively

• Get more timely access to immunization histories and forecasts, and benefit from better information sharing between EHRs and immunization registries.

• Reduce the burden associated with reporting data and performance measures, providing immunization-related information to patients and caregivers, and other administrative tasks.
Stakeholders and Benefits - EHRs

- Enable providers to deliver better care
- Give feedback as to what capabilities are demanded by the market and the challenges of implementation
- Contribute to guidance and best practices

Stakeholders and Benefits – IIS

- Streamline the time and resources needed to move EHRs and providers through the onboarding process
- Improve the quality and consistency of data reported to IIS
- Ensure IIS data is broadly used to improve patient care and reduce and prevent vaccine preventable diseases
Other Stakeholders

- Consumers
- Professional Societies
- Health Information Exchanges
- Academic Health Systems
- Special Interest Groups
- Pharmacies
- CMS - Medicaid
- ACOs
- Schools & Childcare Facilities
Immunization Collaborative Structure

- Collaborative Co-chairs
- Technical Advisory Panel
- Executive Committee Members
- Stakeholder Members
Getting Involved

• In-person meetings scheduled on an ad-hoc basis, at least twice a year
• First quarterly virtual meeting and official launch of the Collaborative:
  – 2nd Quarter 2019
• Email us at ImmunizationCollaborative@himss.org
Strategic Priorities for AMIA and Major Trends that Impact Specialty Societies

Doug Fridsma, MD, PhD, FACP, FACMI
President & CEO, AMIA
AMIA is the professional home for more than 5,400 informatics professionals, representing frontline clinicians, researchers, public health experts and educators who bring meaning to data, manage information and generate new knowledge across the research and healthcare enterprise.
Start with the patient
Patients will be first order participants in their care
Health IT will change how doctors interact with patients

- Precision Medicine
- Cures legislation
- Consumer devices
- Information-empowered Patients
- Apple, Amazon, Google
EHRs will not be the primary Health IT in the future
The Physician’s Automobile
Its Advantages and Disadvantages.

PROFITING BY THE OTHER MAN’S EXPERIENCE.

ROLANDUS G. WALKER, M.D.
DENVER.

BUY a car proved good by others’ experiences. Do not buy a machine that was worn out by a previous owner, or one that was built to sell cheaper than a good, substantial automobile can be sold. My car has proved a great satisfaction to me. It is a well-made, four-cylinder runabout (102*), 20 h. p., easy access to all working parts, plenty of space for satchels, rides easily and is operated economically.

Advantages of Automobiles.
The advantages of automobiles as compared with all other vehicles are, in brief, their speed, absence of fatigue, ease of control in not running away, in not starting unbidden, in being safely left untended, in excellence of brakes, economy in requiring less stable room, less immediate attention on return from a journey, and less lengthy attention before starting on one, the access they give to beautiful scenery, the access to a large circle of friends when living in the country, and the access to the country when in town, the health they bring with fresh air, all united with an absorbing pursuit, distraction from work, ease of traveling, and perfect harmlessness in broadening, we commend an auto trip Not a cut-and-dried affair, where the details have been arranged in advance, but a go-as-you-please, with no definite route in view. Just go when and where the spirit moves you. Don’t hurry. Take things easy, and if you come to a brooked bridge, don’t swear, just consider it one of the experiences, back up and find another way around. It is these unexpected things that bring the best recreation. Let down the top and give the sun and air a chance to get at you. They are both great gifts and ought not to be shut out. Stop at every town, talk with its people, compliment them if you see anything worthy, and carry home with you added knowledge of human nature and a sense of satisfaction that will do you good.

The Auto a Time Saver.
The automobile is a great time saver, which is an item of great importance to the physician. The auto enables the physician to spend more time in his office, which can be profitably employed in reading and studying or recreation, the value of which can not be computed in dollars and cents. The saving of time, the fresh air, the forgetting of little annoyances, the absorption in the car in motion, and the possessing of a hobby which one enjoys while actually doing his work, bring the doctor home at night fresh and ready for his reading.

Study Your Car.
Non-medical health data will be bigger than medical health data
Research will be key to translating knowledge into generalizable action
Growth in the use of informatics for health research is growing exponentially.
Growth over time in publications indexed on 'biomedical informatics' in PubMed

Bill Hogan
Univ. of Florida
The future is an ecosystem, integrated horizontally across different scales of engagement.
The learning health system

Informatics, standards, workforce, business drivers, governance
Other challenges for the clinical informatics community
The importance of data quality

\[
\int_{i=0}^{\infty} \text{garbage} = \text{garbage}
\]
We will need to train health care providers to understand informatics, not just technology
Health informatics is a unique skill set
Three kinds of education and training is needed

Basic “informatics literacy” for all health professionals that goes beyond computer or HIT literacy.

- Literacy in informatics should become part of medical education, biomedical research, and public health training to give clinicians the skills needed to collect and analyze information and apply it in their practice.

Intensive applied informatics training to improve leadership and expertise in applying informatics principles

- This level of training will ensure a supply of qualified professionals for the emerging roles of chief medical information officers, chief nursing information officers, chief clinical informatics officers, chief research officers, and similar roles.

- Support for education professionals who will advance the science and train the next generation of informatics professionals
Core Competencies for Health Informatics

Big Circles
• Health
• Information science and technology
• Social and Behavioral Science

Intersecting Circles
• Health information science and technology
• Human Factors and Socio-technical systems
• Social and Behavioral Aspects of Health

Core
• Social, Behavior, Information Science and Technology Applied to Health

Pervasive Skills
• Leadership
• Professionalism
• Interprofessional Collaborative Practice
Clinical Informatics Diplomates
### Board-certified Clinical Informaticians

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<th>Cohort</th>
<th>ABPM</th>
<th>Pathology</th>
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<td>3. 2026 recertification</td>
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<td>4. 2027 recertification</td>
<td>353</td>
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<tr>
<td>TOTALS</td>
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</table>

- **Approximately 1700 board-certified clinical informaticians in the US**
Totals: 13,142 credits earned since MOC-II program inception

<table>
<thead>
<tr>
<th>Activity</th>
<th># MOC-II credits awarded</th>
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<tbody>
<tr>
<td>CIC 2018</td>
<td>1136 credits by 84 diplomates</td>
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<tr>
<td>AMIA 2017</td>
<td>3487.5 credits by 200 diplomates</td>
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<tr>
<td>iHealth 2017</td>
<td>727 credits by 61 diplomates</td>
</tr>
<tr>
<td>AMIA 2016</td>
<td>3093 credits by 193 diplomates</td>
</tr>
<tr>
<td>iHealth 2016</td>
<td>571 credits by 60 diplomates</td>
</tr>
<tr>
<td>AMIA 2015</td>
<td>2886 credits by 191 diplomates</td>
</tr>
<tr>
<td>iHealth 2015</td>
<td>196 credits by 35 diplomates</td>
</tr>
<tr>
<td>AMIA 2014</td>
<td>1045.5 credits by 100 diplomates</td>
</tr>
</tbody>
</table>
The pipeline

Over 35 ACGME programs so far (Goal is 50-75)

Program acceleration
  • Foundation funding for new programs
  • Resources for program directors

Medical schools
  • Meeting with AAMC, NBME, AMA, others
  • Need additional resources to get clinical informatics into the curriculum
Health Informatics Professionals
Workforce Survey Respondents

- 3263 individuals started the workforce survey
- 2352 completed the survey
- 2000 identified their informatics domain as Clinical Informatics, Consumer Health Informatics, or Public Health Informatics (= Health Informatics or HI)
- ~1500 HI professionals (excluded ~500 boarded physicians who are outside the scope of AHIC)
- ~50% are current or past AMIA members
Primary Health Domain

- Health Informatics: 451, 31%
- Nursing: 181, 12%
- Medicine: 198, 13%
- Pharmacy: 411, 28%
- Public Health: 108, 7%
- Nutrition: 32, 2%
- Dentistry: 46, 3%
- Other: 59, 4%
Primary Informatics Domain

- Clinical Informatics (e.g., Nursing)
- Clinical Research Informatics
- Consumer Health Informatics
- Public Health Informatics
- Translational Bioinformatics
- Other Informatics

- 1100, 74%
- 61, 4%
- 165, 11%
- 85, 6%
- 64, 4%
- 11, 1%
Primary Informatics Role

- Practitioner: 943, 63%
- Researcher: 180, 12%
- Educator: 171, 12%
- Student/Trainee/Fellow: 156, 11%
- Other: 36, 2%
Current Career Stage

- Training: 151, 10%
- Emerging: 237, 16%
- Intermediate/Senior: 480, 32%
- Advanced: 618, 42%
## Challenges to Professional Advancement

<table>
<thead>
<tr>
<th>Biggest Challenges to Advancement (Frequent themes in free text responses)</th>
<th>Health Informatics (~1500)</th>
<th>CI Diplomates (~300)</th>
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</thead>
<tbody>
<tr>
<td>Informatics field &amp;/or my role not well understood</td>
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<td>88</td>
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<tr>
<td>Organizational structure/culture</td>
<td>71</td>
<td>30</td>
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<tr>
<td>Limited resources</td>
<td>51</td>
<td>24</td>
</tr>
<tr>
<td>Lack of opportunities</td>
<td>124</td>
<td>20</td>
</tr>
</tbody>
</table>
Employer Survey Respondents

- Employer Survey distribution: Industry Advisory Council, Academic Forum, HIMSS
- 75 individuals completed survey, representing 61 organizations
- 64% of organizations are health systems or hospitals, 12% industry, 3% government
- 50 of 75 respondents are responsible for recruiting or hiring informatics professionals
- 64% of organizations have 1000 or more employees
Informatics Professionals @ Work

Distribution of Current Informatics Professionals

- Entry Level: 28%
- Mid-Level: 26%
- Senior Level: 46%

Distribution of Planned Informatics Hires

- Entry Level: 14%
- Mid-Level: 31%
- Senior Level: 55%

- 72 of 75 organizations employ health/clinical informatics professionals
- 46 of 75 organizations employ physician clinical informaticians
Professional Certification
Professional certification – current status

- We have completed the CI practice analysis (board-eligible MDs)
- We have completed the HI practice analysis for advanced and mid-career levels
  - AHIC practice analysis (minimum dual masters eligibility and advanced career stage) and the
  - Professional certification practice analysis (minimum single masters eligibility and mid-career stage)
- By March, 2019, we will also have
  - A comparison between the CI and HI practice analyses
  - Data on which to base AHIC eligibility requirements
  - The AHIC exam blueprint
  - Guidance on credentials that will be value to early/mid-career HI professionals.
AHIC – Next steps

• Build toward an AHIC certification (using the current eligibility criteria) with a goal for 2020 examination.
AHIC – Next steps

• Use HI practice analysis results to inform strategy for a professional HI certificate (master’s only eligibility criteria) and to understand the delta between CI board competencies and AHIC competencies
  • Are AHIC competencies closer to CIS or to a professional certification?
  • How much work will it be to develop additional certification options?

• Can we develop a career map based on the different practice analysis that we have completed?
Doug Fridsma MD PhD
THANK YOU!
Fridsma@amia.org
Knowing is not enough; we must apply. Willing is not enough; we must do. Goethe

Doug Fridsma, MD PhD FACP FACMI
President & CEO, AMIA
www.AMIA.org fridsma@amia.org
@Fridsma @AMIAinformatics
AMIA is the professional home for more than 5,400 informatics professionals, representing frontline clinicians, researchers, public health experts and educators who bring meaning to data, manage information and generate new knowledge across the research and healthcare enterprise.
HIMSS EHR Association

Sasha TerMaat
Vice Chair, Executive Committee
• Overview of EHRA
• Direct - Interoperability
• Clinical Practice Guidelines
• Questions and Discussion
We are EHR developers who work with hospitals and providers that represent the majority of EHR users in the US. We have lots of common expertise on EHR policy, standards, and best practices.
EHRA members are

- HIMSS Corporate Members
- EHR developers
- Marketing products commercially available in US
- Represent the majority of EHR users in the US
- Companies of all shapes, sizes, and specialties
- Committed to collaborating on issues that impact collective business and customers
EHRA’s Purpose

• Advance EHR industry as a whole
• Accelerate safe adoption of EHRs
• Provide collaborative forum for EHR developer community
• Increase value to healthcare organizations and patients
• Improve healthcare quality and productivity
EHRA members believe

• Collaboration with stakeholders is critical
• EHR adoption is essential to improve the quality of patient care
• EHRs are a key enabler of healthcare transformation
• Fostering safe healthcare delivery and innovation
• Operating with high integrity in the market
• Commitment to users, patients, and families
How We Operate

FY19 Executive Committee

**Cherie Holmes-Henry**  
NextGen Healthcare  
*Chair*

**Sasha TerMaat**  
Epic  
*Vice Chair*

Hans Buitendijk  
Cerner

David Bucciferro  
Foothold Technology

Barbara Hobbs  
MEDITECH, Inc.

Emily Richmond, MPH  
Practice Fusion

Rick Reeves, RPh  
Evident

Courtney Tesvich, RN  
Nextech

Leigh Burchell  
Allscripts  
*Ex-Officio*

Carl Dvorak  
Epic  
*Ex-Officio*
### How We Operate

#### Workgroups/Task Forces

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>Certification</td>
<td>Addresses both government and private sector efforts related to certification of EHRs</td>
</tr>
<tr>
<td>Clinician Experience</td>
<td>Focuses on the clinician experience, workflow, and usability efforts</td>
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<tr>
<td>Delivery System Reform</td>
<td>Focuses on the significant reform efforts underway in the United States toward value-based reimbursement, including efforts that extend beyond traditional EHRs, yet leverage EHR data</td>
</tr>
<tr>
<td>Interoperability Measurement Task Force</td>
<td>Addresses the challenge of measuring the impact of interoperability</td>
</tr>
<tr>
<td>Opioid Crisis Task Force</td>
<td>Examines how to best utilize EHR data and capabilities as a tool in the nationwide effort to fight opioid abuse</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>Collaborates with member companies and stakeholders to advance the safe use of EHRs</td>
</tr>
<tr>
<td>Privacy &amp; Security</td>
<td>Addresses efforts that relate to privacy and security of protected health information (PHI) managed or exchanged through an EHR</td>
</tr>
<tr>
<td>Public Policy Leadership</td>
<td>Facilitates leadership in key public policy initiatives of importance to EHR developers</td>
</tr>
<tr>
<td>Quality Measurement</td>
<td>Focuses on opportunities and barriers to how EHRs can facilitate improvements in care quality</td>
</tr>
<tr>
<td>Standards &amp; Interoperability</td>
<td>Addresses efforts, both public and private, on the best use of standards to achieve nationwide interoperability</td>
</tr>
</tbody>
</table>
What We Do

- Education to Congressional staff & policymakers
- Representation on panels and committees
- Whitepapers, implementation guides, and tools
- Blog Posts
- Comments, letters, testimony
- Surveys & data collection
- Advice and recommendations
- Speaking engagements
# What We Do

## Projects

<table>
<thead>
<tr>
<th>Opioids</th>
<th>Interoperability</th>
<th>Usability</th>
<th>Patient Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-by-State Landscape</td>
<td>Interoperability Success Stories</td>
<td>Persona Library</td>
<td>Design Patterns for Patient Safety</td>
</tr>
</tbody>
</table>

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**Timeliness and Responsiveness**

**Prescribing Controlled Substances (PCS)**

**Interoperability Success Stories: The Journey Continues**

*June 2017*

**Persona Library**

*Carolyn Coolidge, RN Hospital Nurse*
Value to Industry

- “Go-To” resource for agencies
- Insights into perspectives of customers
- Foresight in identifying unintended consequences
- Collaboration with both public and private-sector initiatives
- Multi-stakeholder engagement
- Publish freely available guidance, education, and tools
- Combating negative messaging with data and evidence
As a trade association, EHRA can:

- Collaborate on best practices
- Join voices in advocacy and education
- Share information with our membership
As a trade association, EHRA cannot:

- Share information that is not appropriate for competitors to share
- Dictate requirements to our membership
Direct Messaging Exchange

Brief History

• 2010 - ONC sponsored Direct Project
  – Conceived in response to HIT Standards Committee discussions to enable **simple** direct exchange of health information over the internet
  – A virtual network of **trusted** email addresses
  – Wide Industry collaboration
  – Developed a set of specifications and protocols into production use within 9 months

• 2012 – Inclusion in ONC 2014 Certification Edition and CMS Meaningful Use Stage 2
  – Transitions of Care (provider focused)
  – View, Download, and Transmit (patient focused)
Based on Widely Adopted Technology Stack

- Internet based
- Direct Address – validated, secure email address
- X.509 certificates
  - Organization – Health Domain Name
  - Address – for each Direct Address
- MIME encoded content (e.g., PDF, C-CDA, .jpg)
- IHE XDM can be used to describe the content
  - XDR and MHD are optional variants
Value

- Addresses critical use cases such as referrals, care notifications, and general care coordination benefiting from **timely awareness** of health care information
- **Secure** replacement for fax, phone calls and paper-based communications
- Utilizes a familiar metaphor **everyone understands**
- Not required to be part of an HIE or national network to start exchanging information
Adoption Experience

• All certified EHRs support it
• By the numbers (using DirectTrust, the largest Direct community):
  – **1.8+ million Direct Addresses** through DirectTrust
  – 274 million transactions between DirectTrust addresses in 2018 alone (**110 million in the fourth quarter**)
  – **800+ million** Direct Addresses contributed to a national DirectTrust Directory
• Direct Standard© anticipated to be managed by DirectTrust (pending ANSI-accreditation as Standards Development Organization)

Adoption Opportunities

• Continued integration into familiar EHR workflows to reduce reliance on fax, phone and paper-based communication methods

• Continued integration of opportunities to action off the information received via Direct within EHR workflows

• Broaden access to Direct workflow capabilities for additional participants involved in care coordination (e.g., payers, non-clinicians).
Future

• Will HL7® FHIR® take over?
  – Not in the short/mid-term
  – Different interaction use case
  – Dialogue on reuse of Direct trust framework to support FHIR is underway

• Can it only support documents as payload?
  – No
  – Work in progress to include HL7® V2 for state management (e.g., IHE 360X Closed Loop Referral Management)
  – Work in progress to include HL7® FHIR requests as a Direct payload
Clinical Practice Guidelines

Definition

- Clinical practice guidelines are recommendations for clinicians about the care of patients with specific conditions. They should be based upon the best available research evidence and practice experience.

Guidelines have two parts

- Information on the scientific evidence
- A set of recommendations
Use in EHRs

• Clinical Decision Support (CDS) system with links to relevant evidence-based information.

• The use of infobuttons
  – “links between clinical information systems and online knowledge resources”
Clinical Practice Guidelines

Benefits:

- Closing the gap between theory and practice
- Give providers easy access to evidence and reference materials
- May potentially reduce diagnostic or treatment errors
Challenges

1. Limitations in the scientific evidence
2. Variation in EHR workflows
3. Conflicting guidelines
4. Guideline maintenance
5. Alarm fatigue
EHRA recently published an implementation guide to help hospitals, physician practices, other care settings and the EHR developer community operationalize the CDC’s recommendations.
Implementation Guide

Goals

• Provide a CDS implementation model that is “low lift” - approachable by organizations of all sizes, IT capabilities; can be done iteratively

• Improve quality, safety, and patient experience in pain management

• Reduce unwarranted and dangerous variance in care

• Support risk/benefit decision making when using opioid medications - help clinicians make a more informed decision

• Develop the Implementation Guide with input from clinicians and medical organizations
Implementation Guide

- Designed to assist the information technology team of healthcare provider organizations, as well as software developers supporting them
- Increase adoption of CDC’s Guidelines
- Allow for more rapid design and implementation of clinical decision support by clinicians who treat and manage pain
- Not all recommendations will be equally applicable to every clinical environment

<table>
<thead>
<tr>
<th>Target Healthcare Provider Organizations</th>
<th>Exclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulatory specialty clinic</td>
<td>Behavioral Health</td>
</tr>
<tr>
<td>Ambulatory surgery center</td>
<td>Long-term care</td>
</tr>
<tr>
<td>Federally qualified health center</td>
<td>Retail pharmacy</td>
</tr>
<tr>
<td>Home health</td>
<td>Palliative care</td>
</tr>
<tr>
<td>Hospital</td>
<td>Cancer treatment centers</td>
</tr>
<tr>
<td>Hospital outpatient surgery center</td>
<td></td>
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<tr>
<td>Primary care</td>
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</tbody>
</table>

Note: This is not a comprehensive list of stakeholders and roles. Include all applicable stakeholders in your organization’s opioid stewardship initiatives.
Guideline 1: Opioids are not a first line therapy

How Technology Can Help: EHRs provide the platform for order entry and treatment selection, so there are natural opportunities to guide clinicians towards the selection of nonpharmacologic therapies as a first line approach to pain management.
For more information about or to engage with the EHR Association, please contact Sarah Willis-Garcia at swillis@ehra.org.