



# Solutions and How to Engage Within Interoperability: Perspectives from the Nursing Informatics Community and IHE Part 2

**himss** North America

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## ***Presenters***

- **Catherine Ivory**, PhD, RNC-OB, RN-BC, Associate Chief Nurse Executive, VP for Professional Practice and Care Transformation, Indiana University Health System
- **Emma Jones**, MSN, RN-BC, Expert Clinical Business Analyst, Community Solutions, Allscripts

# Objectives

- *Discuss the history of IHE*
- *List past and current IHE initiatives*
- *Discuss the challenges and opportunities to using IHE standards in health system settings and their applicability to nursing*

# HIMSS and IHE Relationship

- IHE co-founded by HIMSS and RSNA (Radiological Society of North America) in 1998
  - IHE separate 501.c3 organization from HIMSS & RSNA
- IHE International oversees development the technical frameworks
  - Oversees 12 technical and clinical domains similar to the PCC
- IHE Regional Deployment Committees like IHE USA are focused on implementation in their region
  - Host annual interoperability testing event, IHE North American Connectathon annually in January in Cleveland, OH.
  - Support deployment of technical frameworks in U.S.
- Learn more by visiting our websites
  - IHE International ([www.ihe.net](http://www.ihe.net))
  - IHE USA ([www.iheusa.org](http://www.iheusa.org))

# Integrating the Healthcare Enterprise (IHE)

- An initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information
- Use Case Driven - promotes the coordinated use of established standards such as DICOM and HL7 to address specific clinical needs in support of optimal patient care.
- Provides specifications, tools and services for **interoperability**
- Organized by clinical and operational domains

**Cardiology**

**Dental**

**Eye Care**

**IT Infrastructure**

**Pathology and Laboratory**

**Medicine**

**Patient Care Coordination**

**Patient Care Devices**

**Pharmacy**

**Quality, Research and Public Health**

**Radiation Oncology**

**Radiology**

- **Mammography**

- **Nuclear Medicine**

# IHE Technical Frameworks (a few)

- IT Infrastructure
  - Integration Profiles - PIX, XDS, ATNA, PDQ, XUA, XCA, BPPC, etc
  - Trial Implementation – APPC, CSD, XCDR, XCPD, HPD, IUA, PIXm, etc
- Patient Care Coordination
  - Integration Profiles, Transactions and Content Modules – XDS-MS, EDR, XPHR, IC
  - Trial Implementation – DCP, MCV, RECON, ROL, etc
- Quality, Research and Public Health
  - Trial Implementation – EHDI, SDC, VRDR, etc

# Interoperability ...what is it?

- *"The ability of two or more systems or components to exchange information and use the information that has been exchanged."*
  - Functional interoperability – information interchange
  - Semantic Interoperability – capacity to understand and use the shared information

# Why use interoperability standards?

- Information senders and receivers need to share a common “reference framework”
- Healthcare Standards (types)
  - Messaging and data interchange
  - Terminology
  - Document
  - Conceptual
  - Application
  - Architectural



## Office of the National Coordinator (ONC)

- Standards and specifications for health IT interoperability needs
- Supports US providers (and patients) use of information exchange
  - allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share patients vital medical information electronically—improving the speed, quality, safety and cost of patient care.
- Shared Nationwide [Interoperability Roadmap](#)
  - 2015-2017: Send, receive, find and use priority data elements to improve health and health care quality
  - 2018-2020: Expand interoperable health IT and users to improve health and lower cost
  - 2021-2024: Achieve nationwide interoperability to enable a learning health system



# Standards Advisory

## Interoperability Standards Advisory (ISA)

The Interoperability Standards Advisory (ISA) process represents the model by which the Office of the National Coordinator for Health Information Technology (ONC) will coordinate the identification, assessment, and determination of the “best available” interoperability standards and implementation specifications for industry use to fulfill specific clinical health IT interoperability needs. For detailed background on the Advisory, its purpose, and its processes please review the 2015 Advisory.

### 2015 Interoperability Standards Advisory

The 2015 Interoperability Standards Advisory was published as an “open draft” designed to begin an interactive process to prompt focused industry dialogue on areas where disagreement exists regarding the best available standards as well as greater certainty and clarity on areas where widespread consensus exists. ONC accepted public comments on the 2015 Advisory for approximately 90 days, which ended at 5 pm ET on Friday, May 1st, 2015.

### Draft 2016 Interoperability Standards Advisory

The Draft 2016 Interoperability Standards Advisory (Draft 2016 Advisory) represented feedback we received from public comment on the 2015 Interoperability Standards Advisory and also recommendations from the HIT Standards Committee. ONC accepted public comments on the Draft 2016 Advisory for 45 days that ended on Friday, November 6, 2015. The public comments were used to update the draft in order to publish the [final 2016](#)

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# ONC - Interoperability Standards Advisory

- Used by the healthcare industry to address
  - Clinical , public health and research purposes
- Include the following **IHE** Profiles
  - Dynamic Care Planning
  - Antepartum
  - Labor and Delivery
  - Perinatal Workflow
  - Postpartum Visit Summary
  - Newborn Discharge Summary

# IHE PCC– Profile Development Process

- Call for proposal
- Proposal Evaluation
- Volume 1
- Volume 2+
- [Public Comment](#)
- Profile publication for trial implementation

“The elements of nursing are all but unknown”

*Florence Nightingale*

# Perinatal Case Study: Meet Ms. Jones

- Recently relocated from Georgia to New York
- G2 P1
- Establishes care at a midwifery clinic associated with an urban medical center
- Previous pregnancy complicated by gestational diabetes



Image source:  
<https://upload.wikimedia.org/wikipedia/commons/7/7c/PregnantWoman.jpg>

# The Midwife Data Needs

- Previous care records
  - History
  - Complications
  - Birth experience
- Ms. Jones' concerns and preferences

# The OB/GYN Data Needs

- G, P, EDC
- Antenatal labs
  - GBS
- Problem list
- Meds, Allergies
- Admission assessment
  - Subjective, Cx, FHT, Ctx, Bleeding, ROM, presentation, scarred uterus, Hx HSV



# The Consulting MFM Data Needs

- Genetic testing results
- Glucose Control/ BP
- Imaging/FHR strips
- Complications/Follow up

# Nursing Data Needs

- Prenatal history
- Demographics
- Risk Factors
- Orders, care plan
- Ms. Jones' plan for birth and her newborn

# Birth Certificate

## ACOG Antenatal form

## NPIC

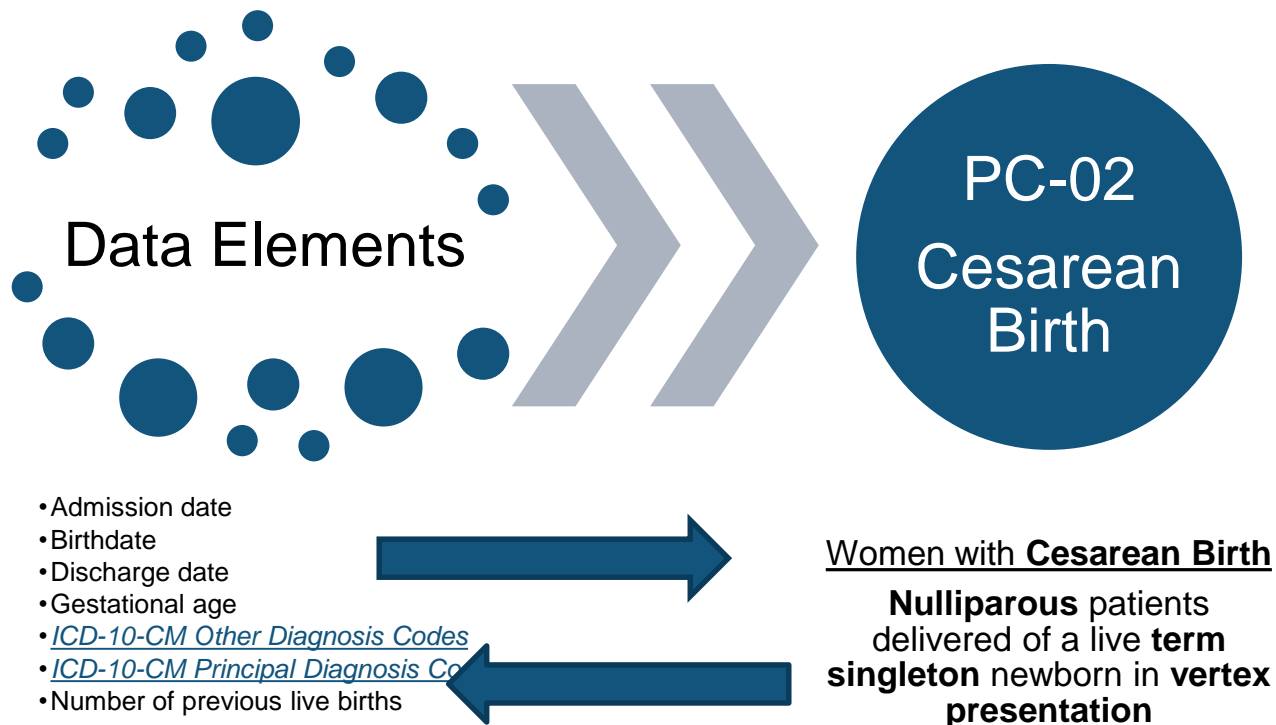
## MQIP

## TJC PC Measures

## Nursing Quality Measurement



Figure 1. Data complexity in a single maternity care quality measure



# The Maternal Health Information Initiative (MHII)

- Organization requested by SMFM in 2014
- Three face to face meetings
  - 2014 at SMFM
  - 2015 at ACOG
  - 2016 at AWHONN
- Engagement from:
  - Vendors
  - The Joint Commission
  - The CDC

# MHII because of EHR Frustration

- Clinician Dissatisfaction
- Documentation Burden
- Time away from patients and families
- The same data being needed for multiple reasons and views

# MHII because: Quality reporting and benchmarks

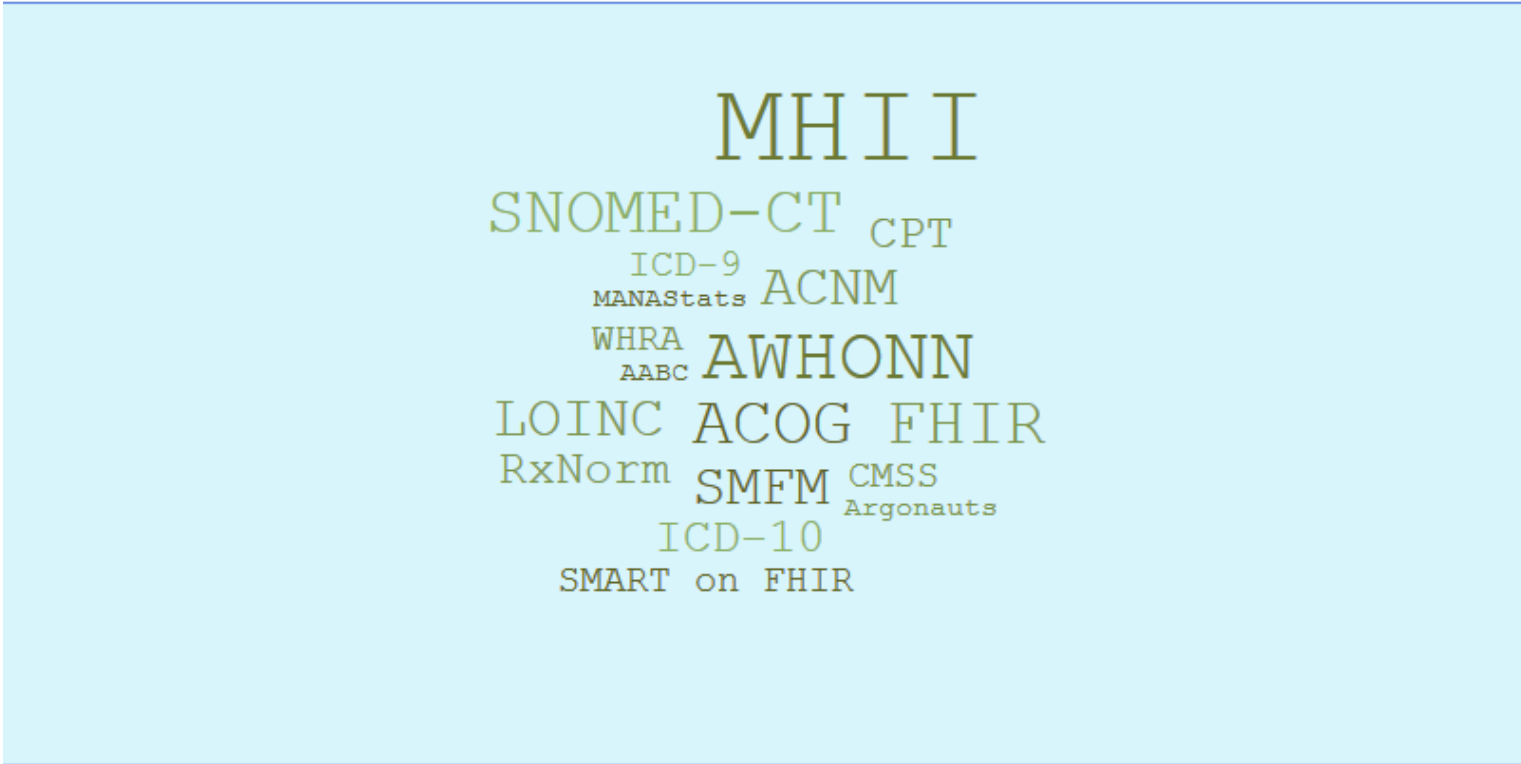
- Many “quality” reports involve duplication of effort
- May not measure what matters
- Inaccurate or missing data contributes to decreased trust in analysis
- Some quality measures may be hard to capture in the medical record

# MHII because: Non-clinical need for accurate data

- Analytics
- Research
- Registries
  - MQIP
- MACRA/MIPS
  - Tied to billing and reimbursement
  - eCQMs
  - MU
  - Resource utilization
  - Clinical practice and process improvement
- Quality/Process Measurement
- Staffing
- Vital statistics



# Need for Coordination



# Nursing-Good News

- AWHONN is a founding collaborator of MHII
- AWHONN position statement: *Health Information Technology for the Perinatal Setting*
- AWHONN is a member of the Alliance for Nursing Informatics (ANI)
- NICHD fetal monitoring terminology standard
- Maternal Fetal Triage Index (MFTI) pilots underway in EHR systems
- Perinatal Nursing Care Quality Measures available for testing

# Nursing– Bad News

- Documentation (and reporting) burden!
- Lack of discrete data for analysis of specific interventions and specific outcomes
- Some data needed for quality measurement may be difficult to find or absent from medical records
- Surveillance may be separate from documentation

# Nursing- Needs

- Structured Data!
- Informatics competency in data science
- Documentation that captures what is important but does not take away from patient care



Providers & Professionals

Patients & Families

Policy Researchers & Implementers

Policymaking, Regulation, & Strategy

Research & Innovation

Privacy & Security Policy

ONC Health IT Certification Program

Interoperability

HITECH Programs & Advisory Committees

HealthIT.gov > For Policy Researchers & Implementers > Interoperability > Standards Acceleration > Standards Advisory

Print Share

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# How You Can Help

1. Spread the word!
2. Advocate for Standards
3. Decrease customization
4. Use standard definitions
5. Let MHII know what works...and what doesn't work

# Participation

- IHE Planning or Technical Committees
  - Volunteer in the development of IHE Profiles or standards
  - Submit your toughest interoperability challenges to be solved by IHE
  - Voice your opinion in IHE's Public Comment
- IHE's Global Connecthathons – Interoperability testing events
  - Volunteer or test your systems
- Register for IHE's free webinar series to learn more about each IHE domain
  - July – August annually
- Visit [www.ihe.net](http://www.ihe.net) to learn more and participate

# About the HIMSS Nursing Informatics Community

- Founded in 2003 in response to the increased recognition of the role of the informatics nurse professional in healthcare and management systems
- The effort was intended to build a community within the HIMSS membership for those with a role in nursing informatics.
- Purpose is to articulate a cohesive voice for the HIMSS Nursing Informatics Community and to provide domain expertise, leadership, and guidance to HIMSS activities, initiatives, and collaborations with the global nursing informatics community



# 2017 Activities in the HIMSS Nursing Informatics Community

- Standardized Job Descriptions Documents
  - CNIO
  - Nurse Informatics Generalist
- Population Health Management Workgroup
  - Video deliverable depicting the importance of a CNIO in a Population Health setting
- NI Education & Networking Task Force
  - National Nurses Week
  - Educational Offerings

# In Conclusion

# Questions?

Email:

Catherine Ivory, PhD, RNC-OB, RN-BC, Associate Chief Nurse Executive, VP for Professional Practice and Care Transformation, Indiana University Health System

[civory@iuhealth.org](mailto:civory@iuhealth.org)

Emma Jones, MSN, RN-BC, Expert Clinical Business Analyst, Community Solutions, Allscripts

[Emma.Jones@allscripts.com](mailto:Emma.Jones@allscripts.com)

**himss** *North America*