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IHE North American Connectathon 2020
Setting the Stage
Healthcare is Data Rich

• Electronic health records (EHR)s are now ubiquitous
  – 99% of U.S. hospitals use EHRs compared to 31% in 2003
• 30% of the world’s electronic data storage is occupied by healthcare information
• The average person will leave a trail of > 1 million gigabytes of heath-related data in their lifetime
  – Includes EHR data, images, and wearable medical device data

Digital Devices Must be Connected

Healthcare devices are an extension of care!

• Are they secure?
• Who coordinates the information?
• Is the information accurate?
• Does the data transfer across systems?
Person and Family-Centered Care

- Coordinated Care at Home and in Community
- Improved Quality
- Increased Access
- Lower Costs
- Better Population Health
Healthcare Providers are an essential part of the process.

It’s time to recognize the critical contribution nurses and midwives make to global health!
Nurses Ranked Most Trusted Profession

• For 18 years in a row, Americans have rated nurses as the #1 most ethical and honest profession

• 85% of Americans rated nurses’ honesty and ethical standards as “high” or “very high”

• The poll included other medical professionals, including physicians, dentists, and pharmacists

• Nursing holds a high margin as the most honest and ethical, with the next most honest profession, engineering, ranking at 66%

Nurse-led Innovation

Incremental innovations in mobility, interoperability, and patient education technologies are emerging as the next wave of informatics and health IT solutions

Kelley, T. (2019). Emergence of nursing innovation influenced by advances in informatics and health IT. www.nurseleader.com
What is Interoperability?
Interoperability is the ability of different information systems, devices and applications ('systems') to **access, exchange, integrate and cooperatively use data** in a coordinated manner, within and across organizational, regional and national boundaries, to **provide timely and seamless portability of information** and optimize the health of individuals and populations globally. Health data exchange architectures, application interfaces and standards enable data to be accessed and shared appropriately and securely **across the complete spectrum of care, within all applicable settings and with relevant stakeholders**, including by the individual.
Four Levels of Interoperability

- **Foundational** - establishes the inter-connectivity requirements needed for one system or application to securely communicate data to and receive data from another.

- **Structural** - defines the format, syntax, and organization of data exchange including at the data field level for interpretation.

- **Semantic** - provides for common underlying models and codification of the data including the use of data elements with standardized definitions from publicly available value sets and coding vocabularies, providing shared understanding and meaning to the user.

- **Organizational** - includes governance, policy, social, legal and organizational considerations to facilitate the secure, seamless and timely communication and use of data both within and between organizations, entities and individuals. These components enable shared consent, trust.

Source: HIMSS 2019 ‘What is Interoperability: Interoperability in the Health Ecosystem’
What is Integrating the Healthcare Enterprise (IHE)?
<table>
<thead>
<tr>
<th><strong>1998 - IHE</strong></th>
<th><strong>2009 - IHE International</strong></th>
<th><strong>2010 - IHE USA</strong></th>
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<tbody>
<tr>
<td>• Established by HIMSS &amp; RSNA</td>
<td>• Incorporated as 501.c.3 not-for-profit corporation</td>
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<td>• Domain Committees</td>
<td>• Principles of Governance</td>
<td>• ByLaws</td>
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<td>• Technical Framework</td>
<td>• Board of Directors</td>
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<td>• Test Tools/Gazelle</td>
<td>• Secretariat: RSNA</td>
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<td>• IHE Connectathons</td>
<td>• Development focus</td>
<td>• Deployment focus</td>
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<td>• Education</td>
<td>• Fee-based membership model launched in 2015</td>
<td>• Hosts annual IHE North American Connectathon</td>
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<td>• Demonstrations</td>
<td>• Conformity assessment</td>
<td>• Education</td>
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What is IHE USA?
• IHE USA is a 501.c.3 not-for-profit corporation founded in 2010 as a national deployment committee of IHE International
  – Other deployment committees include IHE Europe, IHE Canada, IHE Japan, IHE China, etc…

• Leader in advancing interoperable solutions and testing programs in the US by promoting the adoption and use of IHE and other world-class standards, tools, and services for interoperability.

• Engages all levels of public and private sector participants to test, implement, and use standards-based solutions for all health information needs. > 5,000 list serv subscribers
Our Vision

• Improving the quality, value, and safety of healthcare by enabling rapid, scalable, and secure access to health information at the point of care

Our Mission

• IHE USA improves our nation's healthcare by promoting the adoption and use of IHE and other world-class standards, tools, and services for interoperability

www.iheusa.org
IHE USA Board Drives its Vision & Mission

9 Directors and officers
President, Vice President
1 appointed member each from HIMSS and RSNA
5 elected members
• **Testing and Tooling**
  – Offers unparalleled opportunities for interoperability testing to assure healthcare providers that products are truly interoperable. Contributes to development of test tools.

• **Education**
  – Hosts and participates in demonstrations, education and networking events with a special focus on interoperability and advancing health information exchange

• **Leadership**
  – Convenes and partners with key stakeholders in the United States and beyond
    • Dept. of Health and Human Services Office of the National Coordinator for Health IT
    • Other government health agencies such as NIST, CDC
    • Health Information Exchanges
    • Standard Development Organizations and other key stakeholders
  – Offers public comments as relevant
IHE USA
Connectathon...Then and Now

IHE NA Connectathon 2007

IHE NA Connectathon 2019
Demonstration...Then and Now

Interoperability Showcase 2008

Interoperability Showcase 2019
What does the Future Hold?
The Office of the National Coordinator for Health Information Technology (ONC) and IHE USA are collaborating to accelerate the creation of new and updated IHE profiles to support the use of the HL7® FHIR® (Fast Healthcare Interoperability Resources) standard.
IHE USA-ONC Cooperative Agreement

• The Ask:
  – Identify potential gaps that may inhibit the RESTful exchange of health information using FHIR®
  – Identify potential ways for IHE USA and ONC to collaborate with HL7, IHE members, and industry partners to promote and sustain the rapid adoption of the FHIR® standard
The Deliverables:

- Environmental Scan and Gap Analysis of IHE profiles that support or complement RESTful exchange of health data
- Collaborative implementation plan based on feedback from ONC and findings of Environmental Scan and Gap Analysis
Establishing IHE Services in the U.S.

- Supports and aligns IHE Connectathon planning, tooling, and technical operations
- Delivers and supports test platforms for deployment projects
- Accelerates adoption of rigorous testing and conformity assessment
- Provides consulting services for IHE Europe and IHE USA operations
Personal Connected Health Alliance and IHE International Join Forces

• At the core of the missions of PCHAlliance and IHE International is a focus on the point of care, and ensuring the interoperability of health data being exchanged between patient, provider, and caregiver.

• The two organizations formally launched the Personal Connected Health subdomain within the IHE Patient Care Device Domain.

• A Joint Task Force will develop IHE profiles that leverage and build upon the Continua Design Guidelines.

• Further alignment and integration of implementation guidance and testing are planned over the coming year.
Informs the Interoperability 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 "recognized" interoperability standards and implementation specifications for industry use to fulfill specific clinical health IT interoperability needs.

https://www.healthit.gov/isa/
Federal Health IT Strategic Plan 2020-2025

Goal 4: Connect Healthcare and Health Data through an Interoperable Health IT Infrastructure

Facilitates seamless exchange and integration of health information between platforms using shared data standards and common terminologies.

Draft for Public Comment
Vision for the Future

• All individuals, their families and healthcare providers should be able to send, receive, find and use electronic health information in a manner that is appropriate, secure, timely and reliable to support the health and wellness of individuals through informed shared decision-making.

• A learning health system is an ecosystem where all stakeholders can securely effectively and efficiently contribute, share and analyze data.

IHE will lead the way!
Questions?

Thank you....

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