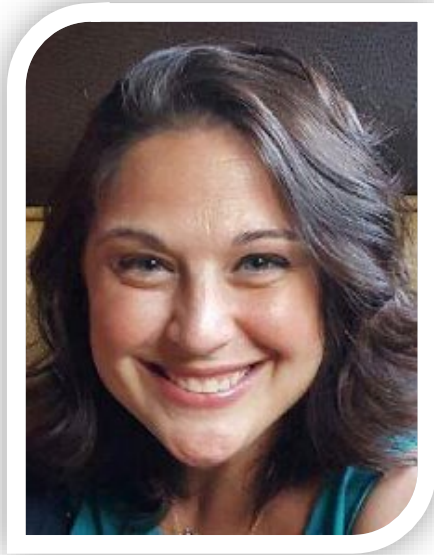


April 27, 2022

THE DOWNLOAD

A monthly webinar diving into the intersection of healthcare and technology





Joanne B. Jarvi

*Senior Director of Outreach and
Market Communications*

MiHIN

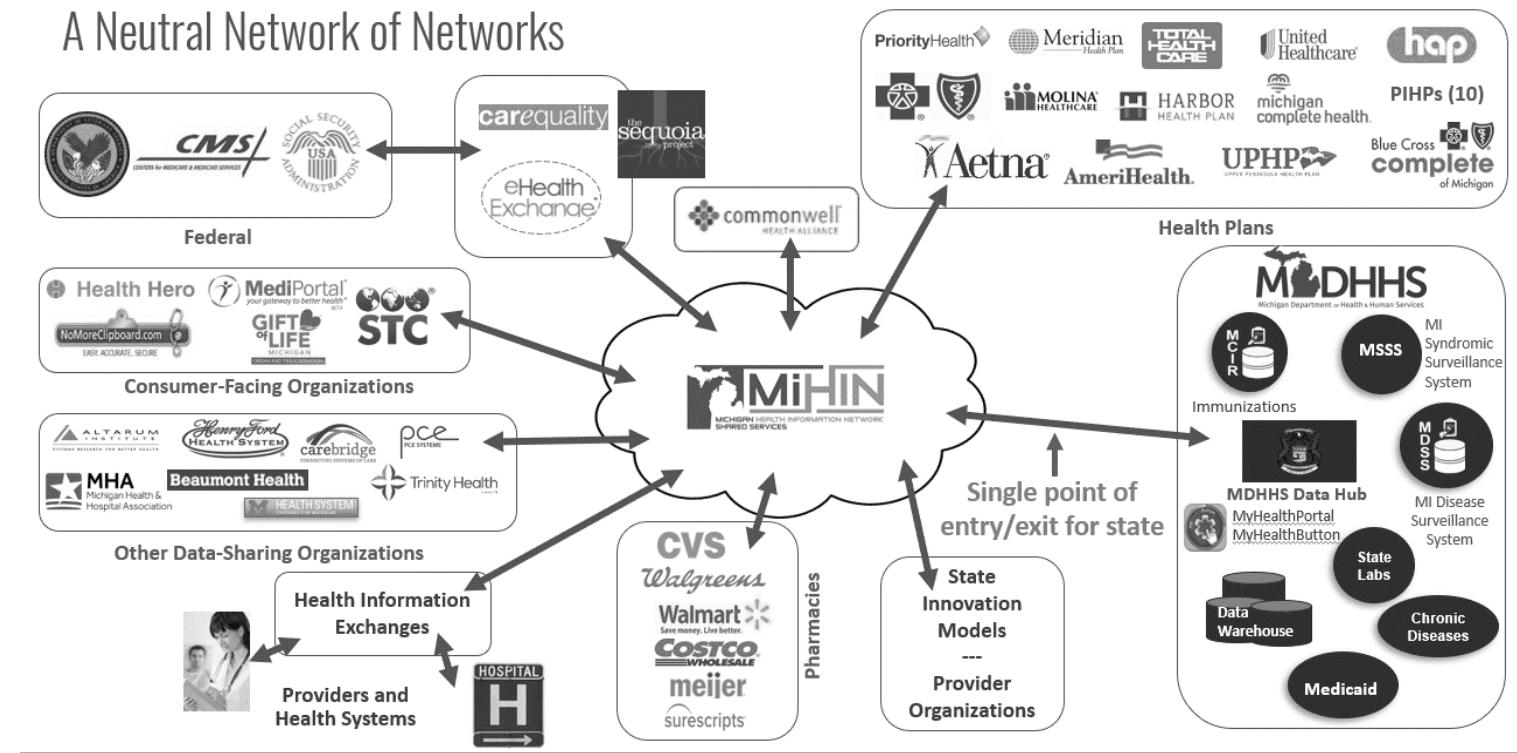
- **Joanne Jarvi** (Facilitator)
- **Rachel Kelley** (Webex Chat Moderator)



Michigan Health Information Network Shared Services (MiHIN) is a non-profit organization that provides technology and services to connect disparate sectors, *our stakeholders*, to securely share health information.

An unbiased data trustee, MiHIN does not provide health care services, produce health care data or compete in the marketplace.

Instead, we help convene to share vital health information to advance care, better outcomes and lower costs.



Technology is a tool. Humans are the energy! Technology supports human ability to connect, communicate, and collaborate.

Today's Agenda

01

Welcome

Joanne Jarvi

02

Interoperability: What is it, why is it important, and how do we get there?

Kendra Baker – Community Coordinator, Interoperability Institute

03

Adjourn

Joanne Jarvi



**INTEROPERABILITY
INSTITUTE**

Interoperability: What is it & why is it important?

Kendrah Baker

Community Coordinator

AGENDA

01

Concrete Interoperability
Example

02

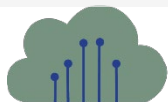
What is Interoperability?

03

Types of Interoperability

04

Goals, Steps, Benefits &
Standards



Factors in a Healthcare Encounter



Patient



Practitioner



Location



Coverage



Vital Signs



Procedure

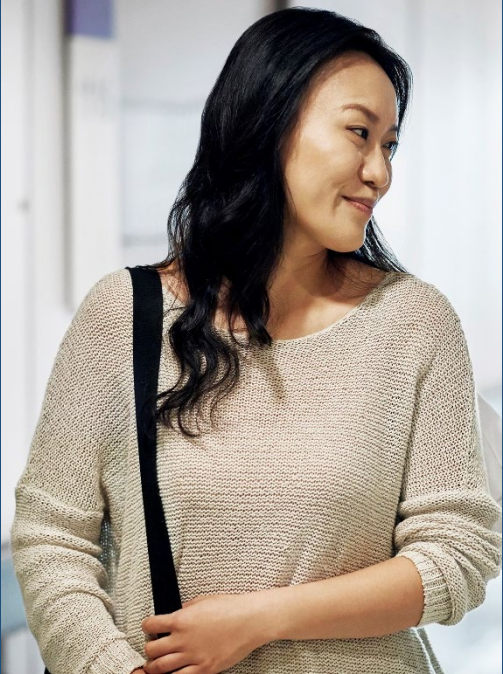


Medication



Referral

Healthcare Appointment



- Kate is the patient.
- Kate has been feeling sick lately.
- Kate has had the following symptoms:
 - Headaches
 - Dizziness
 - Fatigue



- Dr. Smith is Kate's practitioner.
- Dr. Smith is going to talk through Kate's symptoms.
- Dr. Smith is going to get Kate's vital signs & assess the situation.
- Dr. Smith is going to write a referral for Kate to visit a specialist.

Goes to visit her Primary Care Doctor.

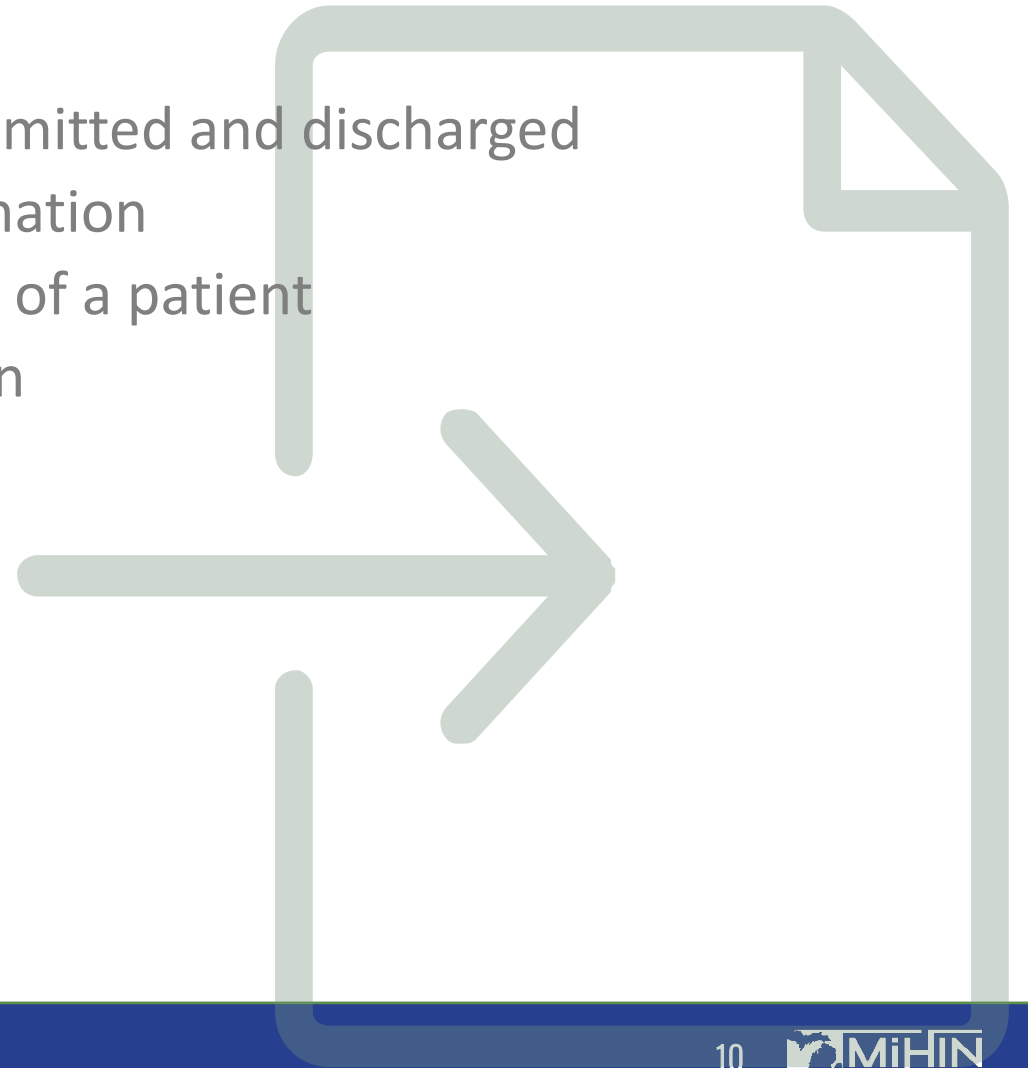
Think about all the things that will happen after and during Kate's appointment:

- Kate's medical records will need to be saved to an EHR
- Kate's insurance records need to be updated within the Payer systems
- Dr. Smith needs to update their personal records



All of the various activities will be catalogued in different ways:

- ADT messages alert that a patient was admitted and discharged
- ORU messages relay observational information
- CCDAs contain in-depth medical histories of a patient
- X12 messages relay insurance information



What is Interoperability?

- Interoperability in healthcare refers to timely and secure access, integration and use of electronic health data so that it can be used to optimize health outcomes for individuals and populations.



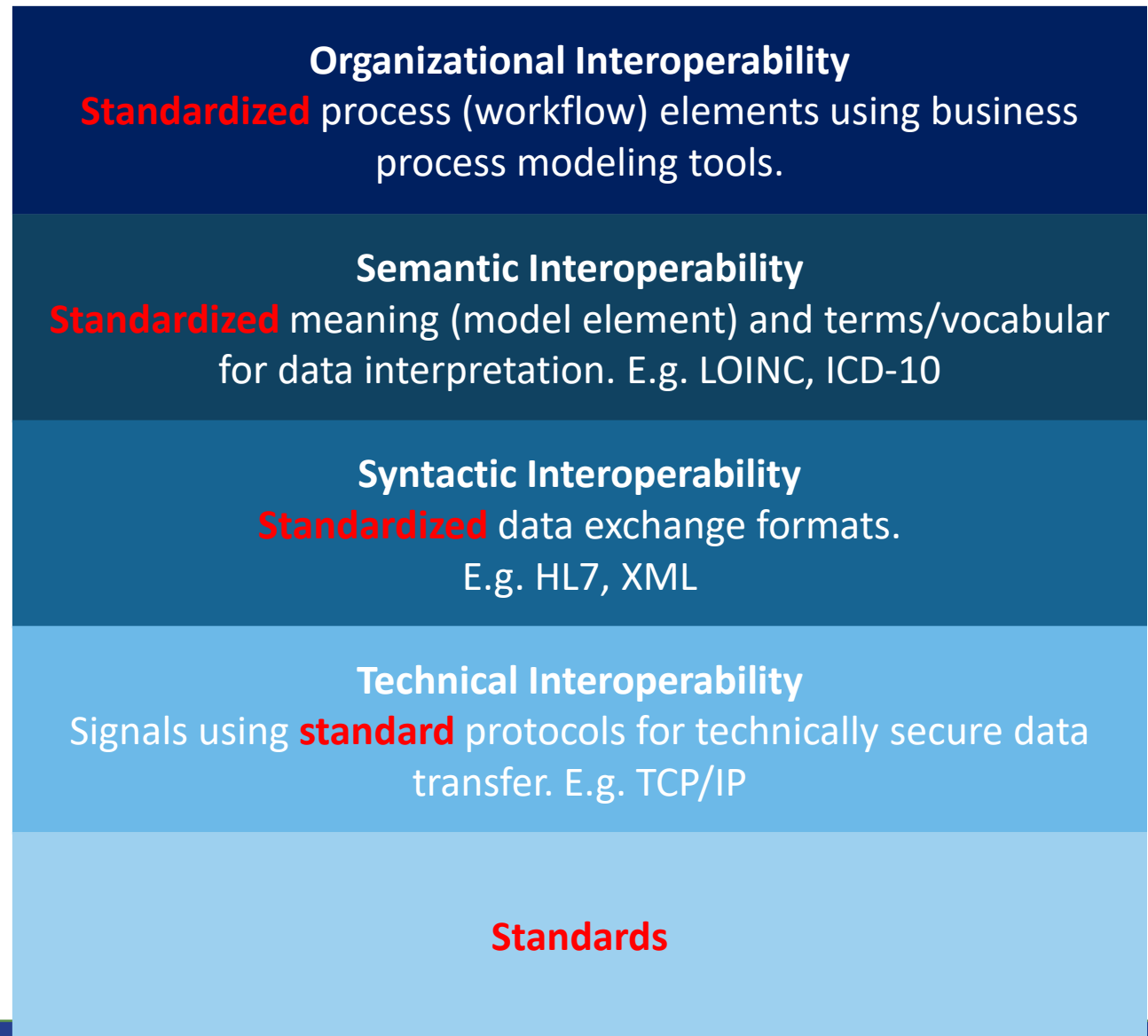
What might have changed with Kate's appointment if there had been true interoperability?

Interoperability Type Diagram

Interoperability is a very broad topic, when it comes to healthcare it can be broken down into four distinct areas.

high

automatic



THE DOWNLOAD

low

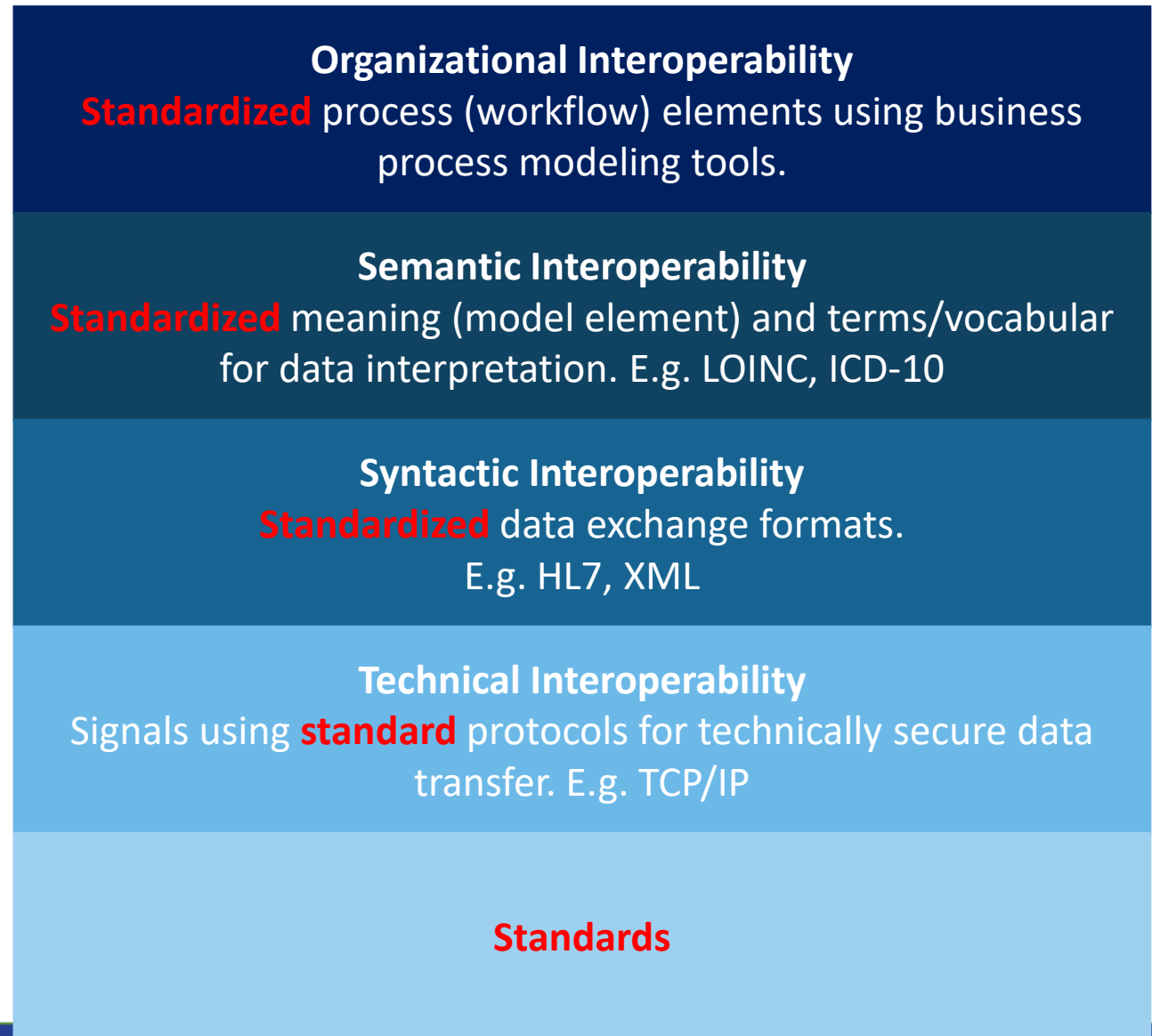
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Organizational Interoperability

- Organizational interoperability refers to the way in which public administrations align their business processes, responsibilities and expectations to achieve commonly agreed and mutually beneficial goals.
- Examples include secure access to individual-level data, identity and access management; centralized authentication; firewall integration; web and email security; and cloud orchestration and coordination (both private and public cloud infrastructure). Organizational indicators also address quality of service and experience for users.

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automatic



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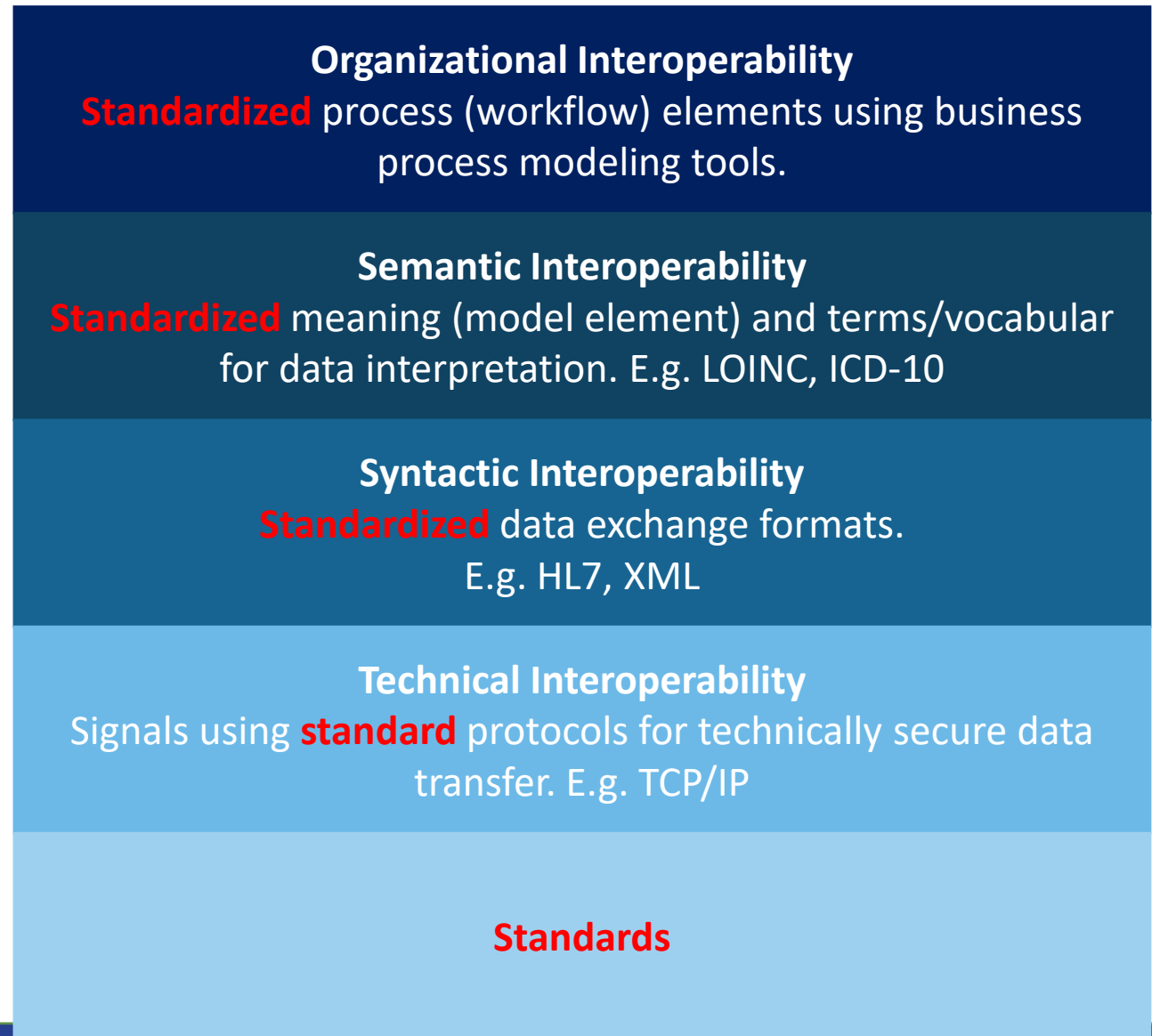
manual

Semantic Interoperability

- Semantic interoperability is the ability of computer systems to exchange data with unambiguous, shared meaning.
- A semantically integrated health system allows sharing data among organizations and their internal ecosystem without missing the meaning.

high

automatic



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low

15

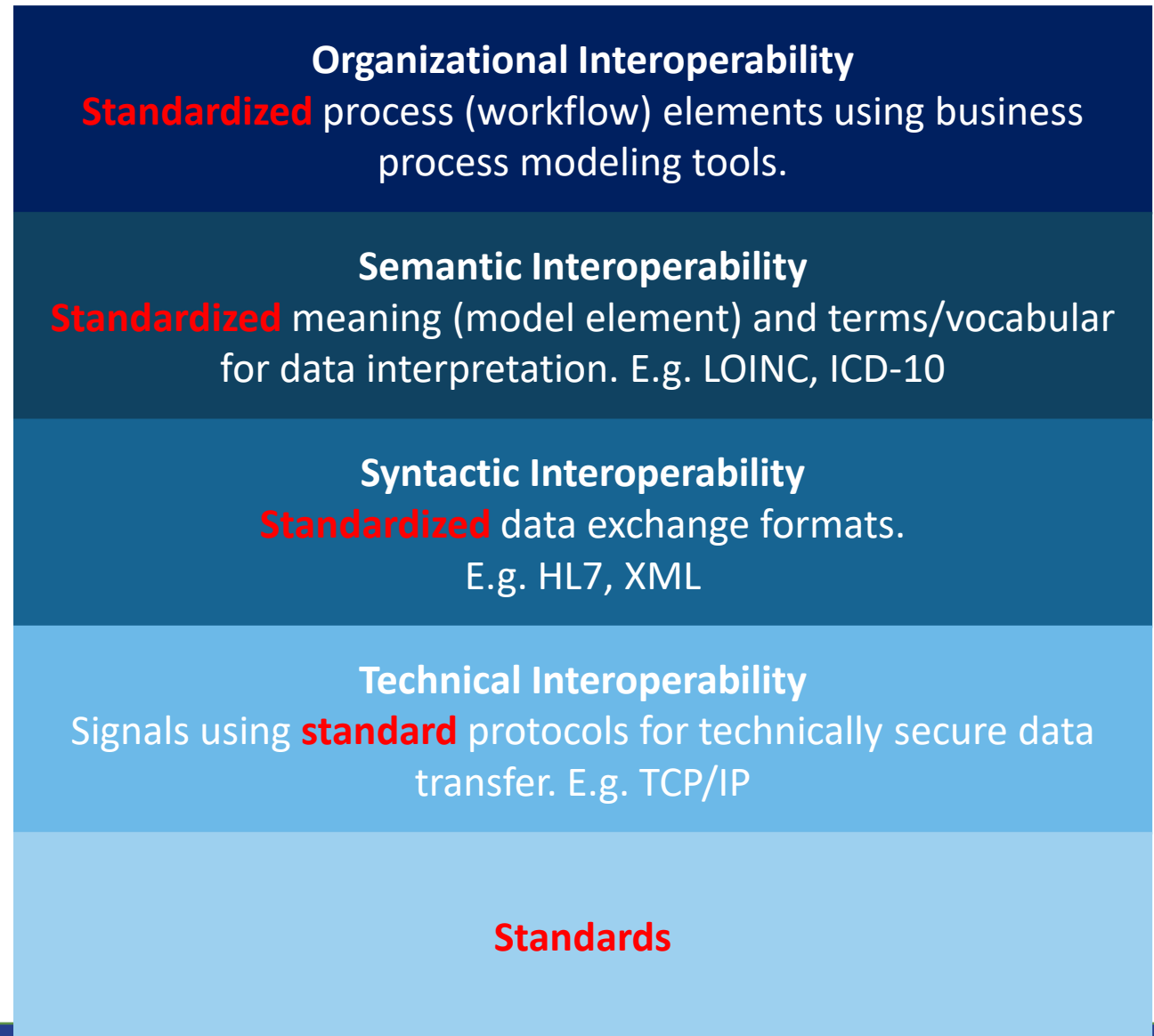
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Syntactic Interoperability

- Syntactic interoperability **allows two or more systems to communicate and exchange data**, however, the interface and programming languages can be different. To be effective, the design of any interoperability solution must consider and account for the granularity of data to be shared.
- Syntactic interoperability refers to the packaging and transmission mechanisms for data. It involves a common data format and common protocol to structure any data so that the manner of processing the information will be interpretable from the structure.

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automatic



low

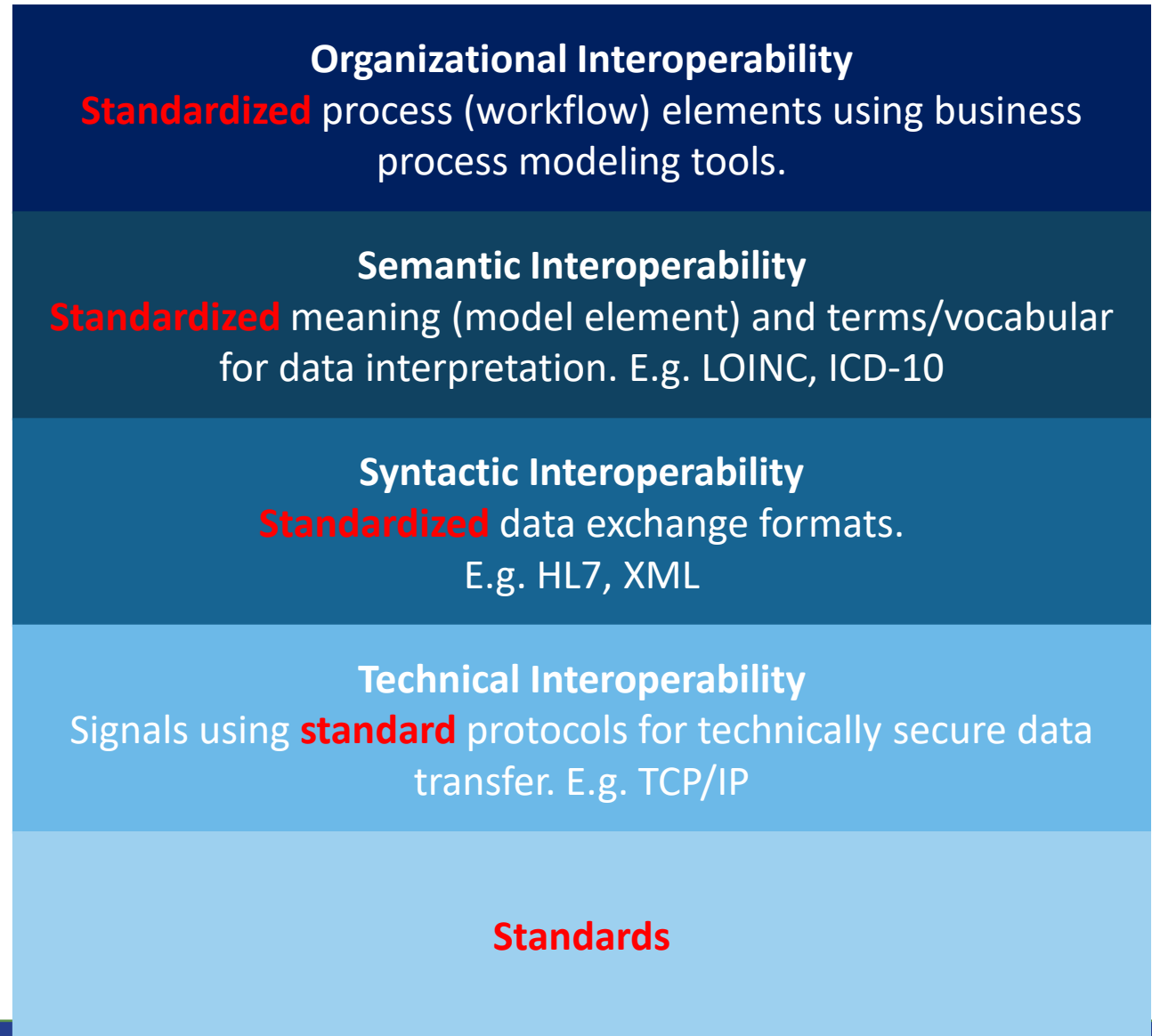
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Technical Interoperability

- Technical Interoperability is usually associated with hardware/software components, systems and platforms that enable machine-to-machine communication to take place. This kind of interoperability is often centered on (communication) protocols, and the infrastructure needed for those protocols to operate.
- Integration of systems like UDAP

high

automatic



low

manual

Goals of Interoperability

Everyone

Reduce medical errors and protect patient safety

Patient

- Ensure that patients and families are part of the care team
- Reduce cost, variation, and duplicated care

Practitioner

- Ready and full access to records on patient health, health care, and progress
- Identify and better manage patients' risks to achieve the best outcome possible
- Improve staff productivity and caregiver/clinician satisfaction
- Ensure continuous quality improvement and learning

Payers

- Facilitate compliance with relevant rules, regulations, and contractual mandates
- Link to new data exchange partners, (e.g., technology, analytics, and social services)
- Automate data entry and reduce administrative burden
- Streamline relevant administrative workflow, including billing and quality reporting

Steps to Achieve Interoperability (Generalized)

- Participate in industry groups and bodies to share your knowledge and be the driver for outcomes you need.
- Make use of collaborative architecture like HIEs to reduce incorrect diagnosis and decrease patient burden.
- Use NLP and other technologies to make data collection and retrieval more convenient.
- Integrate workflows with point-of-care images.
- Build a robust architecture that focuses on value add and moves time consuming activities like hardware ownership and maintenance to the cloud.

Benefits of Interoperability

Improve quality of patient care
and patient outcomes

Increase healthcare
efficiency

Reduce the
cost of care

Mitigating
physician
burnout

Protect patient
data security

Synchronization
of healthcare
data

Interoperability & Healthcare Standards

HIPAA

Led the way to be able to store and share health data electronically

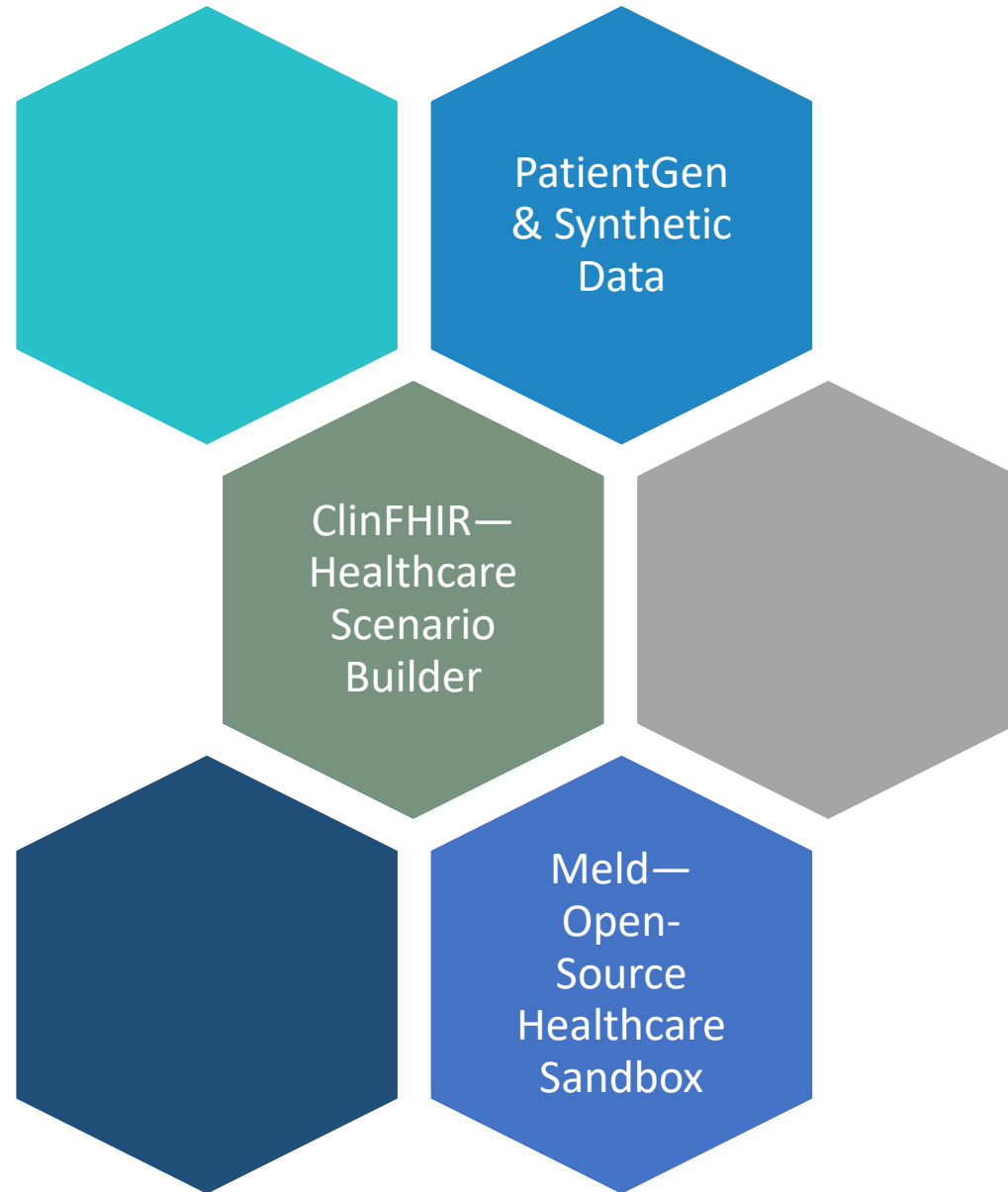
HITECH

Encouraged the healthcare community to focus on safety when sharing electronic health data

SMART on FHIR Applications

Gave patients and practitioners better access to vital healthcare data

Solutions & Software



What has IOI done to push Interoperability?

- Establish Interoperability Land™ and Meld Sandboxes
- Participate regularly in HL7 Connectathons with various Accelerator Groups—Davinci, CARIN, and Gravity
- Establish strong workforce program to help teach next generation of healthcare workers
- Establish Academic Partnerships program to help University HealthIT Programs learn more about Interoperability, FHIR, and technology
- Work to help establish the InterOp.Community



Thank you!

Kendrah Baker
Community Coordinator

**QUESTIONS?
FEEDBACK?
DYNAMIC DISCUSSION?**



Join us on Wednesday, May 11 from 2-3pm for **Bits & Bytes!**

The 21st Century Cures Act included a requirement for easy exchange of health data by the end of 2022. Since the end of 2022 is not that far away, how is the health care industry going to accomplish this mission?

Health care generates many types of data, ranging from simple to extremely complex, and needs a thick, detailed instruction manual. That manual is called Fast Healthcare Interoperability Resource (FHIR®, pronounced “fire”), and it’s the one that the 21st Century Cures Act specifies be used to accomplish the easy interoperability we described above by the end of this year.

Learn how the Interoperability Institute (IOI) supports Michigan stakeholders by **enabling advanced interoperability testing and development** across different organizations and systems **through a cloud-hosted, collaborative digital platform and test bed** that supports an HL7® FHIR®- based simulated healthcare ecosystem with highly realistic synthetic data.

THANK YOU!

