



Discovery Session: Unlocking the Future: Emerging Standards in Focus

July 28, 2025
4 p.m. ET



Today's Presenters

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- **Nathan Bunker**, Senior Technical Standards Architect, AIRA



Gathering and Starting FHIR and Other Emerging Standards in Immunization

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American Immunization Registry Association 2025 National Meeting, Spokane, WA, USA

Deep Dive Track A: FHIR - April 29, 2025, 11:15 AM - 12:00 PM PT

45-Minute Group Discussion

Disclosures

The findings and conclusions in this presentation
are those of the authors,
and do not necessarily represent the official positions
of their respective organizations.

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Public Health Working
Group Immunization
Discussion Calls
participants

Discovery Session
participants

National and International Meetings

AIRA 2023 National Meeting Group
Discussion participants

AIRA 2024 National Meeting Group
Discussion participants

HL7 International Working Group
Meeting Plus 2024 FHIR Connectathon

AIRA 2025 National Meeting Group
Discussion participants

Why gather and start these emerging standards in immunization?

What are the "whys"?

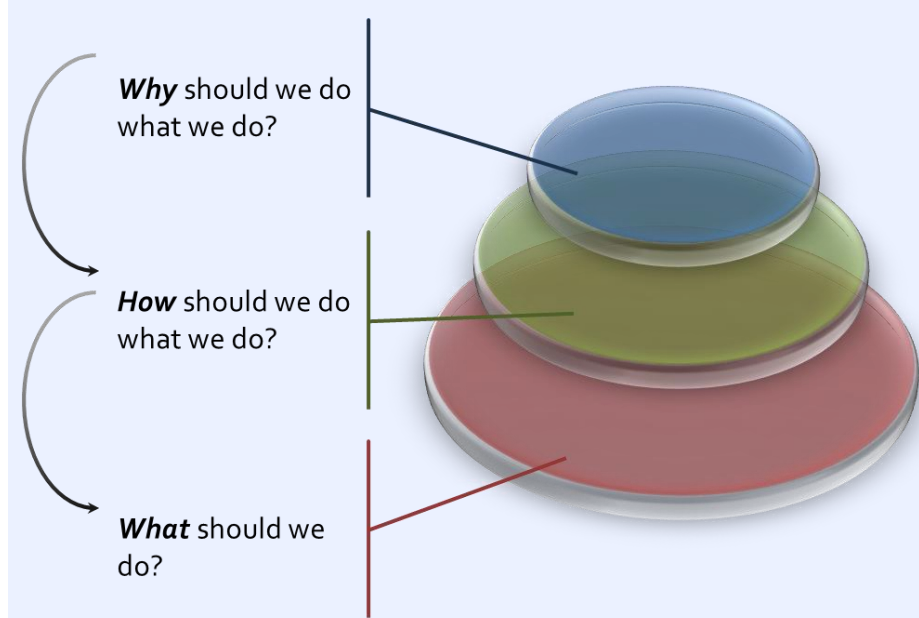
- **Communicating for action statements:**

The why (So that...),
the how (...we will apply {standard}...),
the what (...to {use case}.)

- **Examples:**

So that my patients are informed about their vaccine administrations, we will apply FHIR, to enable consumer access.

So that my staff can provide the right vaccine to the right member of a population at the right time, we will apply CDSi, to provide staff access to ACIP recommendations.

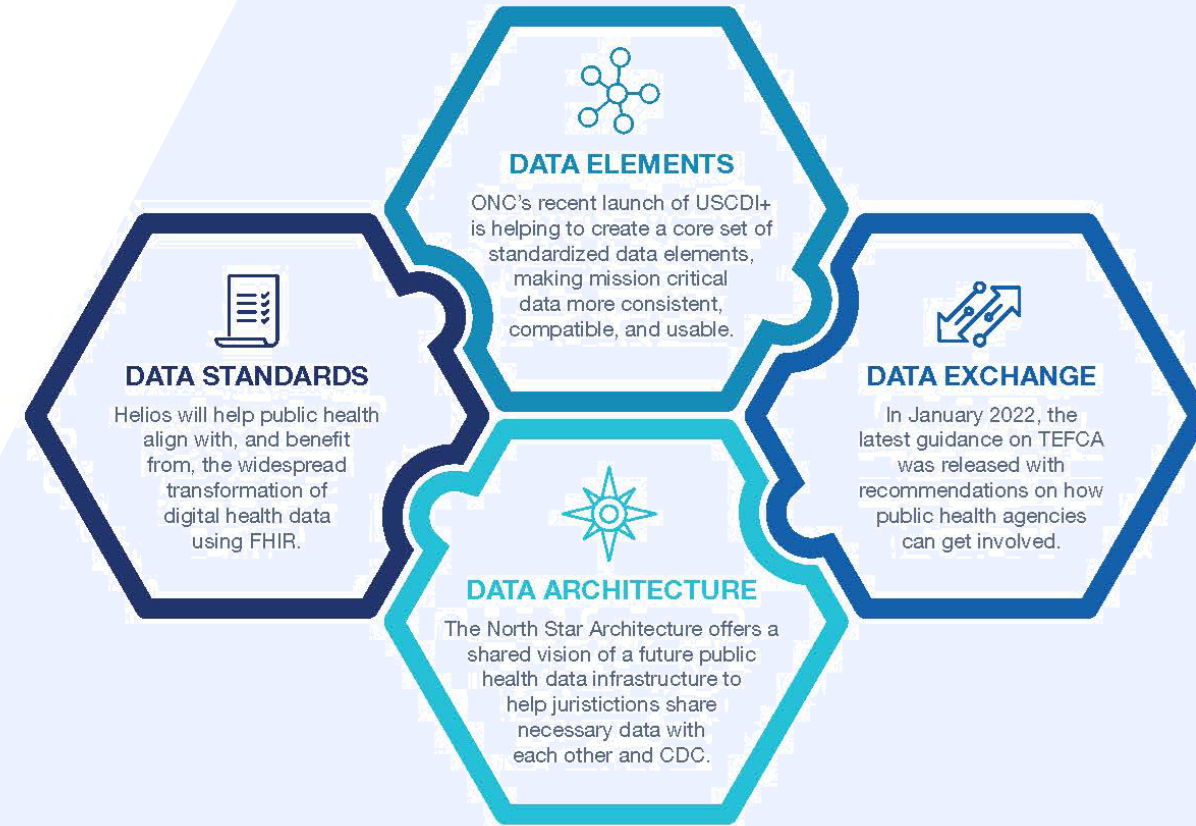


~~When are we moving to FHIR?~~

Why move to emerging standards like FHIR?

Emerging standards are in alignment with public health data modernization initiatives

- FHIR is an emerging standard for securely exchanging human- and machine-readable data from multiple sources, and across systems
- In CDC's Data Modernization Initiative, FHIR offers specifications to structure data and make information available for public health

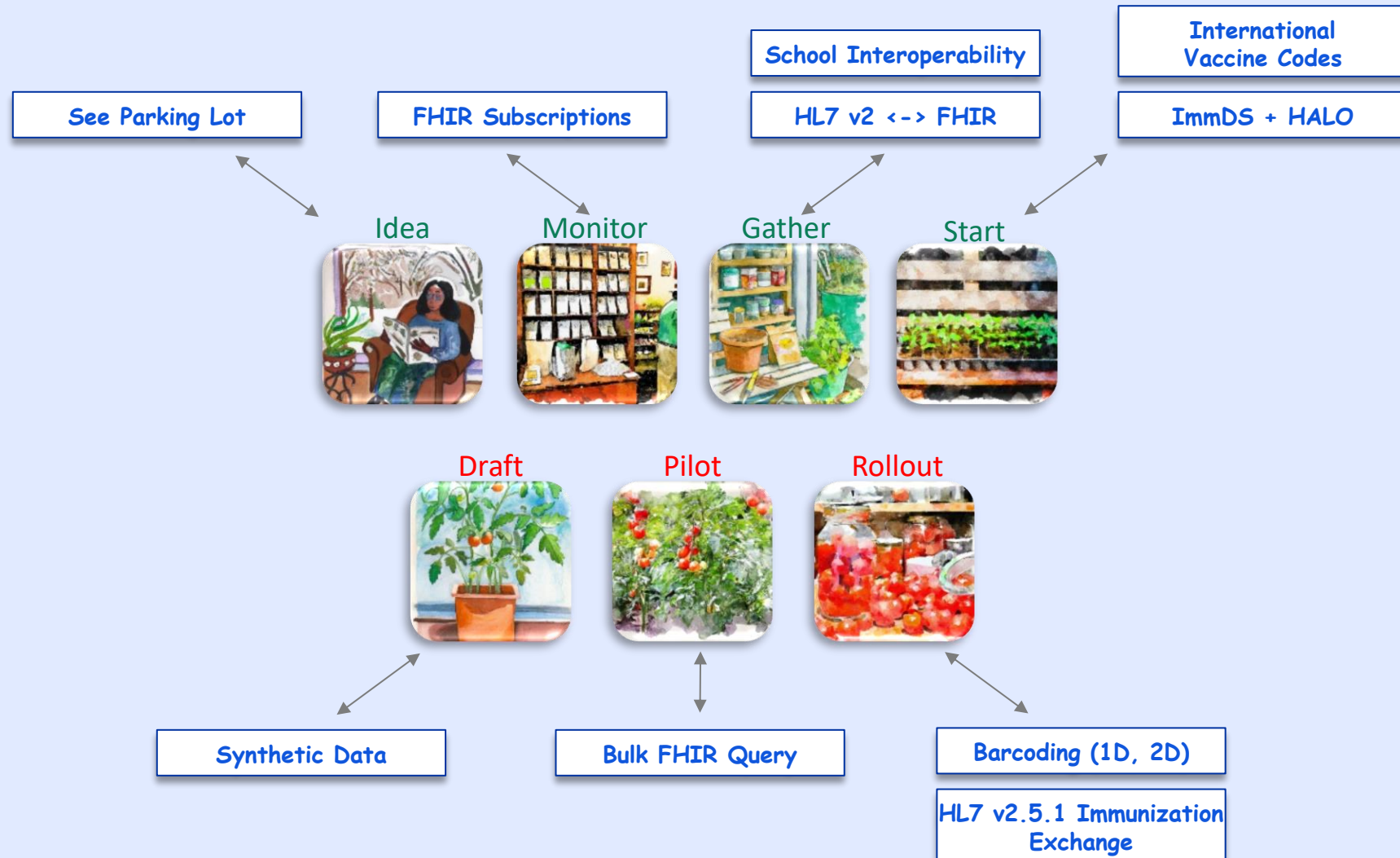


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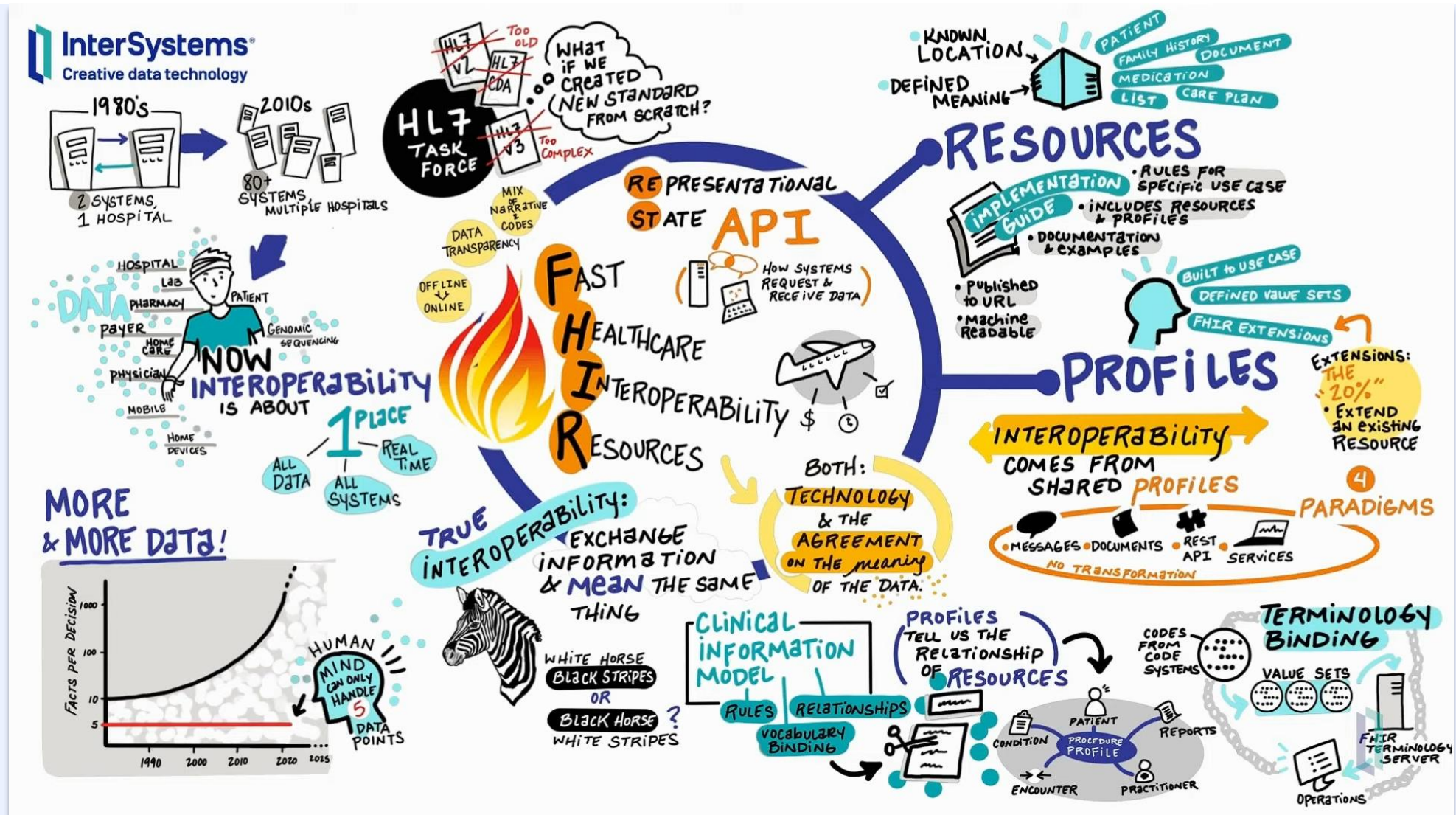
<https://www.cdc.gov/surveillance/data-modernization/snapshot/2022-snapshot/stories/interoperability-data-access-exchange.html>

How can we contribute to
advancing emerging standards in a
coordinated way?

A seven-stage framework for tracking and tracing emerging standards



Example: FHIR for immunization



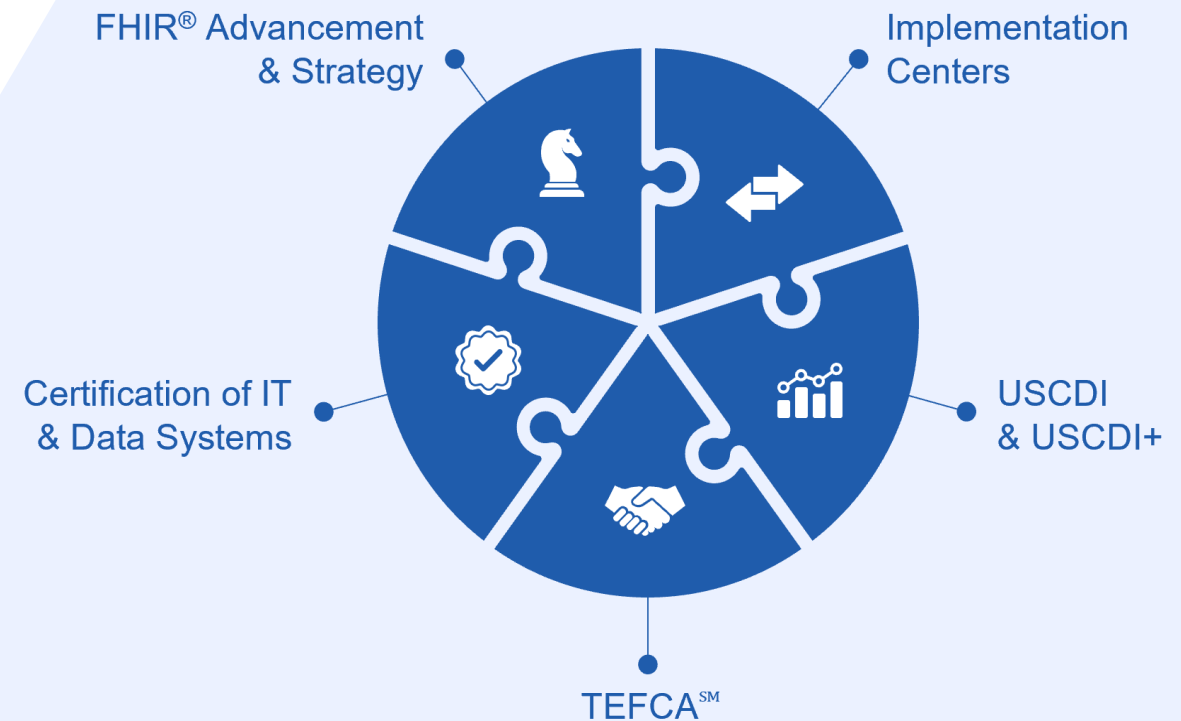
Using the seven-stage framework for tracking and tracing FHIR for immunization



The federal multi-pronged approach to public health interoperability

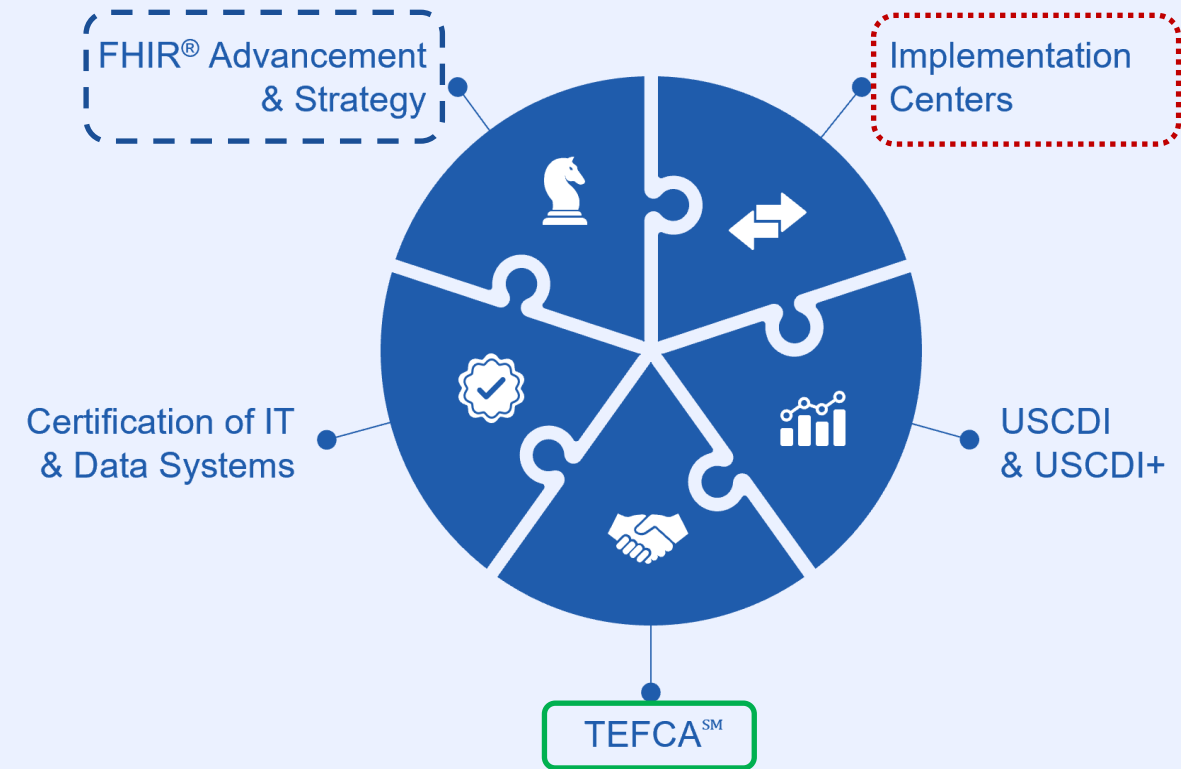
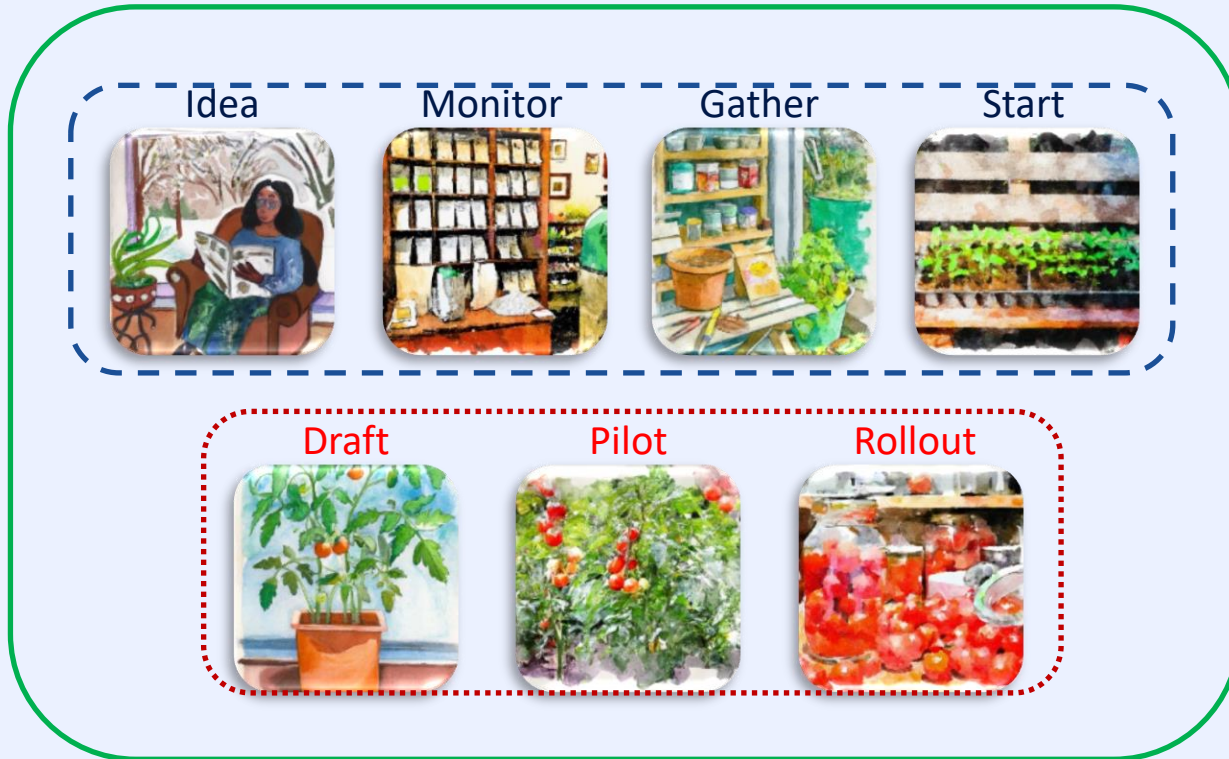
The seven-stage framework is in alignment with public health data standards efforts

- HL7 FHIR is a standard adopted for application programming interfaces (APIs) to advance interoperability "without special effort" on the part of the user



Source:
<https://www.cdc.gov/data-interoperability/php/public-health-strategy/index.html>

Emerging standards seven-stage framework in context of the federal multi-pronged interoperability approach



Which stages does this Emerging Standards effort focus on?

Idea



Monitor



Gather



Start



Which stages does this specific session focus on?

Gather



Start



What are the use cases for emerging standards at the gather and start stages?

Gather

- School Interoperability
- HL7 v2 <-> FHIR



Use cases that are actively being tracked, and for which there is a vision for how immunization information systems personnel might leverage this technology

School Interoperability

- **Definition:**
The exchange and use of immunization data between schools and public health databases such as IIS.
- **School Information Systems (SIS)**
- **Connecting SIS and Immunization Information Systems (IIS)**



HL7 v2 <-> FHIR

- **Definition:**
Mapping and translation of HL7 v2 data to FHIR data and vice versa for immunization data exchange.
- **Transitional bridge from HL7 v2 to FHIR (and back)**
- **Fallbacks and contingencies between established and emerging standards for immunization**



Start

- **International Vaccine Codes**
- **Immunization Decision Support + Health, Age, Lifeplans, and Occupation (ImmDS + HALO)**



Use cases with high level of interest that could become the core of an independent project

International Vaccine Codes

- **Definition:**
Interoperable exchange of codes for international vaccines as well as vaccine codes that are internationally adopted
- There are many different coding systems
- Limited coordination for mapping or understanding



Immunization Decision Support + Health, Age, Lifeplans, and Occupation (ImmDS + HALO)



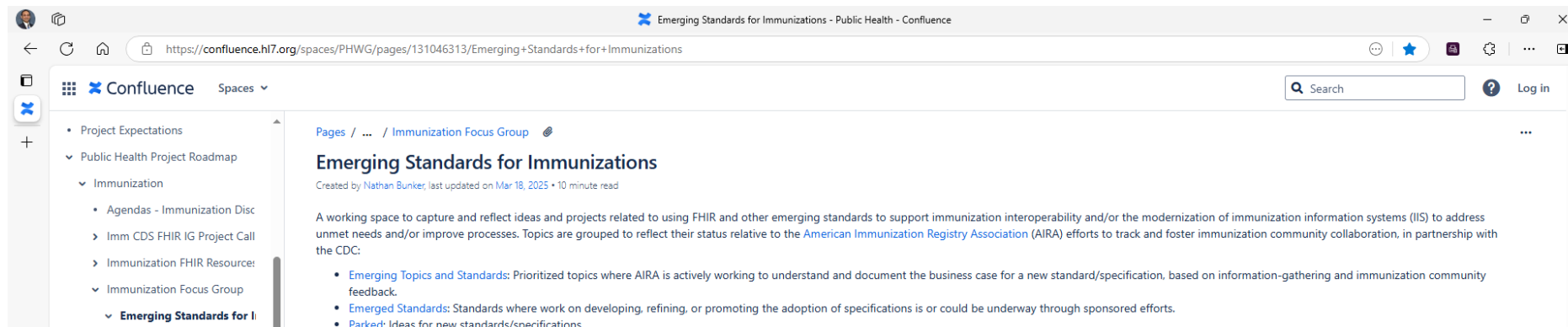
- **Definition:**
ImmDS = Immunization Decision Support
+
HALO = Health (existing conditions)
Age (pediatric / adult)
Lifeplans (travel / hobbies)
Occupation (healthcare /emergency responder)
- Clinical Decision Support for immunization (CDSi) supports
- Clinical Decision Support (CDS) engines support

Continue the conversation

Dive into the discussion

- On the Confluence Site

<https://confluence.hl7.org/spaces/PHWG/pages/131046313/Emerging+Standards+for+Immunizations>



- At the Immunization Focus Group Meetings

<https://confluence.hl7.org/spaces/PHWG/pages/324964611/2025-03-14+Immunization+Focus+Group>



Share your thoughts with us

Email “IISInfo@cdc.gov” with
Subject “Immunization Emerging Standards”
and with responses to:

- *Where are you joining the conversation from (location, affiliation)?*
- *What is your ‘why’ for navigating immunization emerging standards?*
- *How does the 7-stage framework relate to the standards you are using or are planning to use?*
- *What Use Cases would you like the field to consider in the Gather stage? In the Start stage?*



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For more information, contact CDC
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TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.





Thank you to our presenters, and thanks to all of you for joining us!

Please complete a brief evaluation survey.

There will not be a Discovery Session
in August.