Better data. Better decisions. Better health.

Frequently asked questions (FAQ)

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Learning community calls

WILL THE PRESENTATION AND RECORDING BE AVAILABLE AFTER THE LEARNING COMMUNITY CALLS?

The presentation and recording will be posted on Basecamp after the learning community calls, and the specific link will be sent in our follow-up email after each call. Feel free to share the presentations and recording with other staff in your organization.

To access resources, recordings and slides you can visit the PHII data modernization learning community website. Recordings and slides can be accessed by clicking the drop down for the specific date of the call.

Interoperability and standards

IS THERE A RESOURCE THAT WILL AUTOMATICALLY PROVIDE DATA STANDARDS AND PARAMETERS NEEDED FOR A SPECIFIC MESSAGE DEPENDING ON THE TYPE OF CONSUMER OF THE DATA?

The Interoperability Standards Advisory, (ISA) supported by the Office of the National Coordinator for Health Information Technology (ONC), provides a list of standards and implementation specifications for sharing information between entities. Erin Holt Coyne referred to ISA as the "one stop shop." ISA has a good resource for identifying vocabulary, code sets, terminology standards and implementation specifications that can be accessed here. While it may not have all the tools needed for creating messages, it is a great resource for identifying standards and terminologies for use in the exchange of data. Additionally, the United States Core Data for Interoperability (USCDI) is a standardized set of health data classes and constituent data that can be referenced for interoperable health information exchange. Lastly, there are specific standards related specifically to public health reporting and COVID-19 that provide everything you need to know about the standards for both of these categories.

The National Institute of Standards and Technology (NIST) created multiple tools for testing messages. The Implementation Guide Authoring and Management Tool (IGMAT) allows for creation of narrative text and messaging requirements and supports all messaging events for HL7v2. The Test Case Authoring and Management Tool (TCAMT) has machine-computable artifacts that are imported from IGMAT into TCAMT to be used for context-based testing. For context-free testing, they have created the General Validation Tool.

The Association of Public Health Laboratories' (APHL) AIMS platform offers an AIMS validator that authenticates eCR and flat-files against eICR release 1.1 of the CDA R2 implementation.

HOW DO ALL OF THE DIFFERENT DATA STANDARDS FIT AND RELATE TO EACH OTHER? FOR EXAMPLE, HOW DOES HL7V3 RELATE TO CDA, FHIR, XML, JSON, ETC.?

XML and JSON are programming languages used by different data standards to store and transmit data. Most often, HL7v3 and Clinical Data Architecture (CDA) are used interchangeably. However, they are not the same. CDA is one of the most well-known types of HL7v3 specifications; it creates a structure and semantics for exchange of clinical documents between healthcare providers and their patients or other

entities. CDA is based on the Reference Information Model (RIM).

Standards and their programming language:

Standard	Description	Programming language
HL7v2	Standard to support hospital workflows	non-XML codes based on segments (lines) with one-character delimiters
CDA	Creates secure messages for exchange of clinical documents	XML (eXtended Markup Language), loosely based on HTML
Fast Healthcare Interoperability Resources (FHIR)	Allows for transfer of non-clinical based encounters along with clinical documents	XHTML; data exchange programming formats of XML or JSON

Comparing standards:

HL7v2 and FHIR[1]

Similarities	• Event-based messaging paradigms • HL7v2 allows extensions to the message that are not standard elements through Z-segments, and FHIR is based on extensions • Both have similar degree of flexibility at the international standard level • Both have formal mechanisms to define a profile
Differences	• FHIR also allows for documents, REST and other service models • HL7v2 does not contain human readable content, whereas that is a requirement of FHIR

[1] https://www.hl7.org/fhir/comparison-v2.html

	• FHIR, unlike HL7v2, is extensible at any level • HL7v2 includes many elements, most of which are not used, whereas FHIR only includes the elements that a majority of systems support and uses extensions for those other circumstances • FHIR's profiles are an essential component to the methodology and tooling and, therefore, are widely used compared to the HL7v2 profiles • HL7v2 segments cannot be independently manipulated, whereas FHIR segments can

CDA AND FHIR[2]

Similarities	• Both require content to be human readable
Differences	• CDA is limited to clinical content, but FHIR doesn't have any limitation so it can include items such as financial information • CDA uses RIM modeling and templates, whereas FHIR references existing resource definitions or uses the basic resource for circumstances not yet defined in FHIR • CDA requires the templates to conceptualize the meaning of instances, whereas FHIR defines instances by the resource; profiles can be used to define extensions

[2] https://www.hl7.org/fhir/comparison-cda.html

For more in-depth information on the relationship between FHIR and other HL7 standards, you can view the comparison index on HL7's website.

IS THERE AN EASIER WAY FOR HEALTH DEPARTMENTS TO ONBOARD PROVIDERS?

There is a different process to onboard providers for electronic case reporting (eCR) and for electronic laboratory reporting (ELR). The Association of Public Health Laboratories (APHL) created the APHL Informatics Messaging Services platform (AIMS) which enables ELR and eCR data exchange between providers and jurisdictions. AIMS is a secure cloud based platform that provides shared services to aid in visualization, interoperability, security and hosting of electronic data applications.

ECR:

- APHL developed a great online resource for public health agencies that are onboarding providers for eCR. This includes a readiness and implementation checklist for providers, onboarding and implementation considerations, and test packages.
- Additionally, APHL created a new electronic initial case reporting (eICR) online validator that validates messages based on their compliance with the schematrons published by the HL7 eICR team. All you have to do is drop files into the validator and choose if you are using eCR validations or flat file validations.

ELR

AIMS also created AIMS+ Electronic Laboratory Reporting to maximize efficiency in connecting with multiple organizations for laboratory reports.

ARE THERE MORE TARGETED IMPLEMENTATION MATERIALS FOR C-CDA?

C-CDA stands for Consolidated Clinical Document Architecture. HL7 created an entire navigation website for C-CDA 2.1 that includes an introduction and companion guide.

WILL FHIR IMPROVE THE QUALITY OF DATA BEING SUBMITTED TO A PUBLIC HEALTH AGENCY?

According to John Loonsk, APHL and Johns Hopkins University, and Tim Morris, Scioinformatics, in the DMI Learning Community March 23, 2021 call, FHIR will not look vastly different. However, clinical data is complex, so the more effort you put into working with clinical data by mapping the data and working with it, the better overall your data will be. FHIR will be different, but the major item of effort from eCR to FHIR is that you are working with complex clinical data. They do not suggest waiting for FHIR but instead suggest working with CDA as CDA to FHIR will be similar. The only difference is the payload or package you will process. As you onboard providers to your public health agency's system, ask them to take an active role in monitoring the data quality and data completeness as your implementation goes along. As COVID-19 has progressed, many agencies are now testing ELRs and providers before they gain access to the production system to make sure they receive quality data.

Partner engagement

HOW DO STAFF IDENTIFY THE PARTNERS NECESSARY IN THE DECISION-MAKING PROCESS FOR DMI?

Think broadly. Who will be doing the work for this project? Who will be impacted by the outcomes of this project? Who is your project sponsor? Who will influence this project positively or negatively?

> Some examples include: informatics manager; informatics staff implementing parts of the data modernization project; program staff who will use the new or recently reinvented technology; local health department staff; an individual from the administration office (and potentially someone from the governor's office).

Once you identify all of the partners, a partner engagement analysis matrix will help to identify how much communication and involvement should be expected from each stakeholder depending on their interest and level of influence with the project.

The Public Health Informatics Institute (PHII) has created a partner engagement analysis matrix in the *Forming Partnerships* section of their EHR Toolkit. You can adapt content from this toolkit to fit the DMI project you are working on.

Governance

WHAT ARE THE DIFFERENT TYPES OF GOVERNANCE?

According to Emily Kraus, PhD, MPH, PHII Consultant, during the July learning community call, there are four governance categories pertinent to the health department: data, information, partnership and software.

Data governance: The set of policies and procedures that determine the who, how, and why of data management within the organization to support compliance and legal requirements.[3]

Information governance: An organization-wide framework for managing information throughout its life cycle and supporting the organization's strategy, operations, and regulatory, legal and environmental requirements.[4]

Partnership governance: Determines who will participate, the decision-making process, how changes will be communicated to the different organizations, and the roles and responsibilities of each partner.

Software governance: Determines who will have access to and maintain the software and the type of security needed.

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[3] Driving Compliance through Data Governance. http://library.ahima.org/doc?oid=89117#.YOc50OhKiUl

[4] Information Governance Offers a Strategic Approach for Healthcare (2015 Update) - Retired https://bok.ahima.org/doc?oid=107796#.YOc6puhKiUl

WHAT IS THE DIFFERENCE BETWEEN PROJECT, PROGRAM AND ORGANIZATION GOVERNANCE?

Project governance: Specific to a project or sending and receiving data one time. Once the project is over, the governance is also over.

Program governance: Relates to issues or programs that will exist in perpetuity. Examples include jurisdictions wanting to share lab data and figure out the process to send data to one another. Another example of program governance would be governance needed for a data asset such as a data warehouse. This specific solution to an issue or data asset will exist over time.

Organization governance: This is the type of governance most people know about. It is a systematic way a group of people makes decisions on what projects the organization should participate in and how to handle data requests over time. Most often, organization governance takes the form of a data governance board within a health department.

WHO SHOULD BE INVOLVED IN GOVERNANCE AT THE HEALTH DEPARTMENT?

1. Staff in leadership positions.
2. Staff who work directly with the data.
3. Staff who are knowledgeable about informatics work and the organization's structure.
4. Staff who can make a decision or who can work directly with leadership to get a decision.
5. Staff from the compliance or legal department.
6. Staff from information technology (IT).
7. Staff who work in programs that have large datasets and receive a majority of the data requests, like vital statistics.
8. Staff from all agencies, if it is a project that uses multiple data sources.
    a. Note: it is important to make the voting equitable, so try to minimize the number of staff from each agency to one. This will make sure smaller agencies get the same input as larger ones.