

Data Usability Work Group

September 23, 2021



Agenda

- Welcome, Introductions, Membership, Agenda Bill Gregg
- Website, Meeting and Workgroup Logistics & Collaboration Forum David Camitta
- Topic Focus: Data Provenance and Traceability of changes Didi, John, Russell, Dr. Camitta & Dr. Gregg
 - Implementation Guide Review
 - Use Case/Scenario Summaries: Provider to Provider, Provider to Public Health Agency, Heathcare Entity to Consumer
- Questions/Next Steps



David Camitta, Co-chair Anthem, Inc.



Bill Gregg, Co-chair HCA Healthcare



Didi Davis, VP The Sequoia Project



The Sequoia Project's Members



The Sequoia Project's Members





















- Audacious Inquiry
- CA Emergency Medical Services Association
- ConSensys Health
- Cureous Innovations
- CVS Health
- Hawaii HIE

- Health InfoNet
- Innovaccer
- Lyniate
- Mayo Clinic
- Virginia HIE

Interoperability MATTERS

Website, Meeting and Workgroup Logistics

Register for the Workgroup

Data Usability Worl group

- Calendar Downloads
- Meeting Notes

WEBINAR

Workgroup Meetings, Second and Fourth Thursday of Each Month at 3:00 p.m. ET

As phase 2 efforts continue, the workgroup will begin meeting the second <u>and</u> fourth Thursday of each month at 3:00 p.m. EDT August through December 2021. We will strive to post the meeting materials for each meeting the day before, and upload meeting recordings within 24 hours.

EGISTER ADD TO CALE?

Meeting Materials and Recordings

Phase 2

September 9: Meeting Notes	0
August 26: Meeting Notes	•
August 12: Meeting Notes	•
July 8: Meeting Notes	•
June 10: Meeting Notes	•
May 13: Meeting Notes	•
Apr 8: Meeting Notes	•
Apr 1: Meeting Notes	0
Apr 15: Meeting Notes	0
Phase 1	
Mar 25: Meeting Notes	

https://sequoiaproject.org/interoperability-matters/data-usability-workgroup/

PHASE 1

(Current)

Administration an

October 2020-March 2021

Prioritization

View Meeting Notes

Four Work Phases
The Interoperability Matters Leadership Council chartered the Data Usability
Workgroup to work in the following phases:

PHASE 3

Steps

Public Comment Period/

TBD, based on end of

Recommended Next

Phase 2-60 days after start

PHASE 4

Guides

start]

Finalizing

Implementation

[TBD, based on end of

Phase 3]-[3 months after

PHASE 2

Drafts

2021

Developing Initial

April 2021-November

View Meeting Notes

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Phase 2 Implementation Guide Development Process

- Co-chairs and staff have started to organize and gather the content for the 8 topic areas developed in phase 1 activities – the following tasks will be completed monthly for each topic area by staff to review
- Topics will be addressed in priority order with one two topics reviewed each month
 - This will be documented in the existing Google docs and/or the draft IG for the work items
 - Priority Work Items Spreadsheet:
 - https://docs.google.com/spreadsheets/d/1eRbgoStsfhYzIK-wj4TIU9Wr4MEkxfF3syOxsHWIPdg/edit#gid=0
 - Staff will take a high level pass of existing recommendations from Commonwell IG
 - Integrate feedback from workshop(s) to the draft IG
 - Incorporate feedback from Data Usability Collaboration space / forum
 - <u>https://sequoiaproject.org/interoperability-matters/data-usability-workgroup/</u>
 - Go over problem statements from a more technical perspective
 - Document other aspects to be considered for the solution
 - Identify questions that still require clarification for all topics
 - Update the Draft IG for each topic category and use case

Data Provenance and Traceability of changes

- Draft Implementation Guide Review
 - Guidance for Data Provenance
 - Consequential Data Update
- USCDI references

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Provenance
The metadata, or extra information about data, that can help answer questions such as when and who created the data.
Author Organization
Author Time Stamp
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- Scope will cover allergies, immunizations and problems
- Clinicians expectation is for "Where the data originated (Author Organization), with what type of clinician and a date (Author Time Stamp) of when it originated are most important

- What vocabularies can be leveraged for "type of clinician"?

• Appendix of slides from July 8, 2021 Meeting for reference



Data Provenance and Traceability of changes

Appendix

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Topic Provenance – Clinician Workshop Recap

Current state: No changes to the Provenance data class is proposed in version two of the USCDI

Provenance The metadata, or extra information about data, that can help answer questions such as when and who created the data.
Author Organization Author Time Stamp

- Clinicians expectation is for "Where the data originated (Author Organization), with what type of clinician and a date (Author Time Stamp) of when it originated are most important
- Provenance of "context for how it was captured" and "last touch" are also nice to have
- The following were outlined as being really helpful for provider to provider exchange:
 - Was the data captured by the patient, a nurse, a physician, home health, or device, etc?
 - What vocabularies can be leveraged for "type of clinician"?
 - Was the lab result generated with a home test, by an over the counter test, or in a CLIA Certified Lab, etc?
 - Was the data modified by some system in the chain? (PHR, EHR, HIE, etc.)
 - It is not as important to know who has reviewed it over time in most cases
 - There is a risk of putting too much provenance data that may slow down clinicians and makes it harder to get the important information
 - Labs data elements will not likely change over time moving from system to system
 - Problem data elements may change over time, so people may refine the problem as it traverses and that may be useful information
 - There is hope that Provenance will help with de-duplication efforts
 - Clinicians would like to see whether an order, radiology report, document, medication or medication orders are signed by a credentialed provider
 - There are certain data elements that do tend to get modified over time (i.e., problems, allergies, medical history, etc.)
 - Important that metadata not be distracting and not get in the way of the core data and really only be made available if somebody goes looking for it and wants to drill down into the history

Topic Focus: Data Provenance and Traceability of changes

- Guidance for Data Provenance
- <u>Consequential Data Update</u>
- The HL7 "Basic Provenance" Implementation Guide addresses these use cases:
 - Basic Exchange
 - Health Information Exchange (HIE) Redistribution
 - HIE Transformation
 - Clinical Information Reconciliation and Incorporation (CIRI)
- Definitions for Human, Machine, and Inter-organization Useability to be defined:
 - Human Useability
 - How can we structure data to make it more useful, readable, and interpretable, for end user
 - Which situations are the most important for receiving an updated piece of clinical data?
 - Machine Useability
 - How can we make data we send out easier for machines to display, parse, sort, index, etc.
 - Inter-organization Useability
 - How can we send data in a way that is easy for the receiving party to accurately interpret and derive value from
 - 1. Is it important for you to know all users who have touched/reconciled the information, only the originator or only the most recent?
 - a. Does this requirement change for different types of data -- e.g. labs vs. Problems/diagnosis
 - b. What do you consider important provenance information: the clinician's name, credentials, specialty, the name of the hospital or clinic?
 - 2. Which situations are the most important for receiving an updated piece of clinical data?

Use Case: Provider to Provider

- HIE Transformation
 - Scenario: Patient has a medication that originally came from data ingested from an external system, listed in their treatment plan, and the physician treating the patient wants to know if the prescriber was a specialist or the patient's prior PCP
- EHR/HIE Transformation
 - Scenario: An HIE creates a Patient Summary document by incorporating content from multiple encounters and authors
 - Leverage provenance attributes to help with rendering a deduplicated longitudinal view of a patient (see <u>Guidance</u> <u>for Longitudinal View</u>)
 - Scenario: An EHR creates a Patient Summary document by incorporating content from multiple encounters and authors
- Clinical Information Reconciliation and Incorporation (CIRI)
 - Scenario: Provider reconciles a medication list within an HIE or across HIEs
 - Scenario: Provider within an EHR reconciles a medication list
- Scenario: Individual item correction
 - Scenario: Provider corrects an entry that was entered in error
 - Scenario: Retain original prescriber
 - Original prescriber of a medication was a specialist quite some time ago, but the PCP has been prescribing the medication once the original prescription ran out
 - The desire is to identify both the original and most recent prescribers

Use Case: Provider to Public Health Agency

- Provenance data for Immunizations
 - Section guidance will be documented as a good place to start
 - Scenario: Distinguish administered vaccines from "historical" vaccines
 - Scenario: Patient history of vaccinations is sometimes recorded in the official vaccination section of the EHR to satisfy gaps in care/CDS, but can be done inconsistently or inaccurately
 - The original administration is the most valuable
- Provenance Data for Electronic Case Reporting (ECR)
 - Should consideration be made for other eCR types of transactions?

Use Case: Healthcare Entity to Consumer

- Scenario: Digitally sign data supplied to patient so it can be re-disclosed to other providers while ensuring it hasn't been modified
 - As consumer-directed health information exchange becomes more prevalent, verifying the integrity of patient-supplied medical information will become an imperative
 - When EHI obtained by a patient that is digitally signed is provided to a third party along with the chain of trust from its origin, that third party can have confidence in the integrity of that EHI
- Scenario: Consumer apps facilitating the submission of sports physicals and immunization records to schools, for travel, concerts and other events are inevitable—as are apps driving patient-driven care coordination
 - Consumers will demand this access to their data, and providers receiving that data will need to know it is unaltered
- Scenario: Enable a patient to request corrections to errors in their data
 - The HL7 Patient Empowerment Workgroup (PEWG) is addressing the Patient Correction use case - the patient is the initial trigger of the request to fix bad data; the system then takes over fixing it
 - The PEWG has not yet considered propagation of corrections so this is currently out of scope

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Collaboration Space Input Discussion

Back to Data Usability	Workgroup Forum	J	une 24, 2021 at 4:11 pm	#33686
Data Usabil Data Provenau Tagged: Data Prov	ity Workgroup And the example of th	PLY	Andrea Pitkus, PhD, MLS(ASCP) CM	Reg CLI Ead add dou ded Iab
	specialty, the name of the hospital or clinic?2. Which situations are the most important for receiving an updated piece of clinical data?			See

Regarding laboratory data, there are specific CLIA requirements by law which overlap with the questions. CLIA is more specific than HL7/ONC data provenance requirements too.

Each laboratory accrediting body (i.e. The College of American Pathologists, Joint Commission) may have additional requirements such as interface checks ensuring what the performing lab sent to the first downstream entity (i.e. EHR, HIE, another lab, public health) doesn't have any truncation or data issues, decimal points are in the right place, etc. There required data elements such as the performing laboratory address, etc. When data are updated there are also requirements to retain the original and updated information, communicate the change, etc.

See CLIA §493.1291 Standard: Test report. https://www.ecfr.gov/cgi-bin/text-idx? SID=1248e3189da5e5f936e55315402bc38b&node=pt42.5.493&rgn=div5#se42.5.493 12

June 30, 2021 at 10:33 pm #34592



In additon to Andrea's points:

What data is important depends on the use case and what the data will be used for, but at minimum you

would need to know who changed the data and when and in some cases why. WHat elements to us to identify the who (could be an id like the NPI, but if it's not something unique we probably would need name (last and first) and associated organization at a minimum.) I would look at the provenance resource and check with the owning WG at HL7 for input.

obviously any time a change in data affect clincial treatment or impacts public health that change needs to be communicated.

https://sequoiaproject.org/groups/data-usability-workgroup/forum/topic/data-provenance-and-traceability-of-changes/

REPLY

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Data Usability Work Group

For more information:

www.sequoiaproject.org/interoperability-matters/data-usability-workgroup/

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Convene Collaborate Interoperate

Thank You for your support of Interoperability Matters!