Interoperability MATTERS

an initiative of The Sequoia Project

Data Usability Work Group

August 26, 2021

the sequoia project

Agenda

- Welcome, Introductions, Membership, Agenda - Dr. Bill Gregg– 5 minutes
- Website, Meeting and Workgroup Logistics & Collaboration Forum – Dr. David Camitta- 5 Minutes
- Topic Focus: Data Integrity and Trust - Didi, Bill, David, John, Russell – 20 minutes
- Topic Focus: Data Tagging and Searchability - Didi, Bill, David, John, Russell – 20 minutes
- Phase 2 Implementation Guide Structure and Development Process – Didi - 5 minutes
- Questions/Next Steps – 5 minutes

David Camitta, Co-chair
Anthem, Inc.

Bill Gregg, Co-chair
HCA Healthcare

Didi Davis, VP
The Sequoia Project

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Workgroup Members

217 Organizations | **310 Participants**

- Healthcare Providers: 20%
- Health IT Developers: 18%
- Other: 15%
- HIN/HIEs: 13%
- Federal, State, Local Government: 13%
- Health Plan/Payer: 10%
- Consumer/Patient: 5%
- Standards Developer: 4%
- Public Health: 2%

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The Sequoia Project's Members

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- Audacious Inquiry
- CA Emergency Medical Services Association
- ConSensys Health
- Cureous Innovations
- Hawaii HIE
- Health InfoNet
- Innovaccer
- CVS Health
- Mayo Clinic
- Virginia HIE

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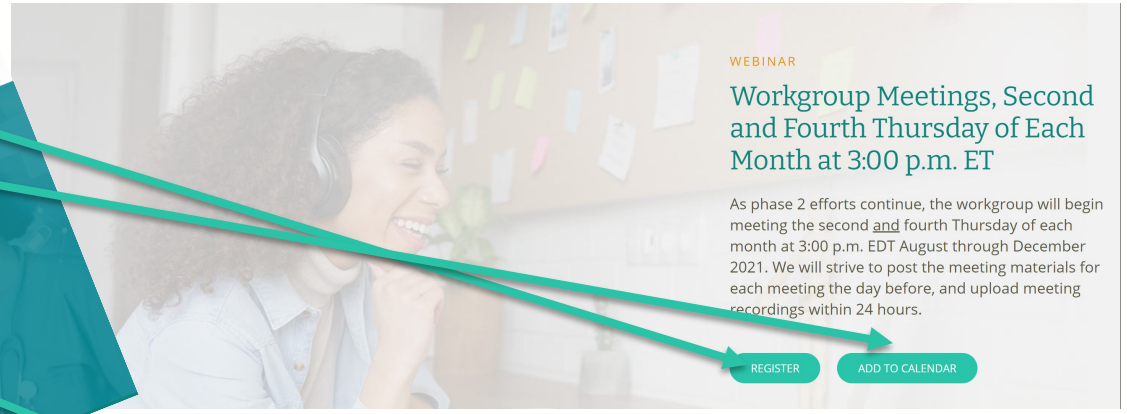
Website, Meeting and Workgroup Logistics

- Register for the Workgroup
- Calendar Downloads
- Meeting Notes



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

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Data Usability Workgroup Forum – Please Respond

Data Usability Workgroup Forum

Let's keep the discussion going! After each workgroup meeting, the co-chairs will suggestion discussion topics to keep the conversation going. Please contribute your thoughts in the below message forum.

Topic	Posts	Last Post
Effective Use of Codes	4	3 weeks, 6 days ago
Specific Domain Guidance for Usability	3	3 weeks, 6 days ago
Data Integrity and Trust	4	3 weeks, 6 days ago
Reduce the Impact of Duplicates	4	3 weeks, 6 days ago
Effective Use of Narrative for Usability	3	3 weeks, 6 days ago
How does your organization exchange data today with consumers?	5	4 weeks ago
How does your organization exchange data today with providers?	3	4 weeks ago
Data Provenance and Traceability of Changes	3	1 month ago
How does your organization exchange data today with public health ?	3	1 month ago
Data Tagging/Searchability	3	1 month ago

Data Integrity and Trust

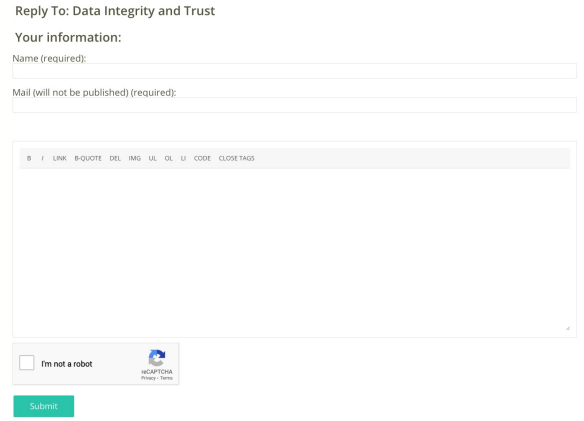
Tagged: data integrity and trust

June 9, 2021 at 7:14 pm #33464 REPLY

Hera Ashraf

Differences in quality and interpretation of data coming from different sources lower the level of trust in data. For example, differences in lab methodology can make interpreting values and reference ranges from external sources difficult. Even for values received with codes, different organizations might interpret codes differently or context may be lost in mapping to concepts internal to an organization.

Reply to this post with your answers to these questions:
1. What factors cause you to mistrust data?
2. Are there scenarios where you have strong trust for external data?
3. How do you weigh the value and trust of data from different sources? Payers / Clinical? HIEs? Registries?
4. Does trust vary by data type?
5. Would it be helpful to know that data had been previously reviewed by a clinician at another org?



Data Tagging/Searchability

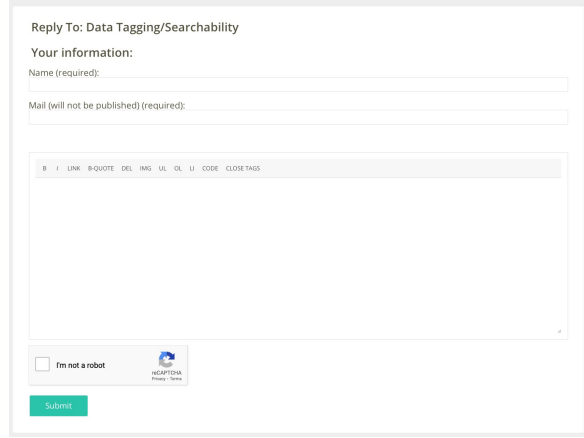
Tagged: Data Tagging/Searchability

June 9, 2021 at 7:19 pm #33467 REPLY

Hera Ashraf

The Longitudinal Record, defined as a patient summary and one encounter summary per encounter, is a valuable artifact for understanding the chronology of a patient's care journey. The default content, however, can contain more information than is applicable to the clinical goals of the requestor. The quantity and quality of content can make it difficult to understand the context around particular pieces of data that are of interest and the connection between pieces of information in different sections of the document.

Reply to this post with your answers to these questions:
1. What important types of information are easily available, searchable and filterable in your current EMR but you find hard to find or understand when looking at data from other systems?
2. Is there data that you would like to be able to temporarily filter out when looking at Patient Summaries or Encounter Documents?
3. How would you envision optimal filtering and searching of external summary data to incorporate and improve clinical usability at the point of care?



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

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Carequality/Commonwell Joint Document Content Guide

- Carequality has dusted off the original guide created in September 2020 but not published due to outstanding comments
- The September 2020 guide will be
- Tiger Team was formed and first meeting was held August 6, 2021
- Carequality's expectation is to publish final guide with comments resolved September 2021
- Carequality will require content testing with a timeline TBD
- Commonwell will also require content testing with a timeline TBD

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Data Integrity and Trust

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Topic: Data Integrity and Trust – Clinician Workshop Recap

- Data is most trusted when it comes from the data producer directly
- Unparsed narrative data is most trustworthy because the author is identified with context and other relationships between diverse data
- Allergy data is least trustworthy because it is based on what the untrained patient provides
- Medication data is often out-of-date and requires confirmation by the patient
- Lab data trust depends on the source (i.e. patient reported/performed, health professional, CLIA lab or pop-up site)
  - Suggest SHIELD initiative work to make lab data more usable and interoperable be considered
  - Specimen type and/or source impacts the trust of many test results
    - COVID consumer collected → sent to CLIA lab or self collected at home

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Topic: Data Integrity and Trust – Summary

- Data Accountability/Binding Content and Authorship
- Data Integration or Data Insulation
- Problems with name formats between XDS/CDA
- Data Transformation from Source
- Definitions for Human, Machine, and Inter-organization Useability to be defined:
  - Human Useability
    - What factors cause you to mistrust external data?
    - Are there scenarios where you have strong trust for external data?
    - Does trust vary by type of data?
  - Machine Useability
    - How can we make data we send out more trusted?
  - Inter-organization Useability
    - How do you weigh data from different sources (Payers/Clinical/HIEs/Registries?
    - Would it be helpful to know that data had been previously reviewed by a clinician at another organization?

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Data Integrity and Trust : Provider to Provider

- Use Cases:
  - Provide guidance to ensure consistency between person names as expressed in CDA payload vs. in XCPD transaction request/responses vs. XCA transport metadata
    - Include guidance for dealing with special characters in names used for rendering or matching from the DRAFT v1.0 of the Project US@ Technical Specification?
      - Public Comment closed 7/31
  - Provide guidance for intermediaries who may transform data from the original source value
    - Representation in an alternate value set (LOINC)
    - Transformation of HL7 v2 message, CDA document
  - Reference SHIELD initiative work???

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Data Integrity and Trust: Provider to Public Health Agency

No Use Cases in scope at this time

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Data Integrity and Trust : Healthcare Entity to Consumer

No Use Cases in scope at this time

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Data Integrity and Trust : Collaboration Space Discussion

June 30, 2021 at 10:48 pm #34597 REPLY

Riki Merrick

Please don't use the term "data type" in this manner – use type of data, or data element.

SHIELD (Systemic Harmonization and Interoperability Enhancement for Laboratory Data) is a public private partnership that is working on a strategic plan with the goal to "Name the same test the same way across the healthcare continuum" – this group is tackling the difficult problem of making sure lab results from differnt performers / vendors / instruments can be compared without the risk to patient safety.
For some lab tests the methodology is important as is the clinical context, so depending on how many transformations the data has seen that an be lost; so I usually trust the data the most, when it comes from the data producer directly.

July 8, 2021 at 12:46 pm #36024 REPLY

Tom Bronken

Trust in the data varies by type. Generally, I find un-parsed narrative data most trustworthy because the author is identified, it has self-contained context, it emphasizes what is most important, and it explains the temporal and other relationships between diverse data that are included within it. I find allergy data least trustworthy because the allergy is usually not observed by a clinician and documentation is based on what the untrained patient says. Medication data is often out-of-date, so I only trust it if confirmed with the patient. I worry less about lab data because I use past lab values only as an indication of what's going on—not something with which to make decisions.

July 8, 2021 at 6:01 pm #36072 REPLY

Andrea Pitkus

Dr. Bronken, do you use previous lab result deltas for clinical decision making (i.e. pre/post transfusion hgb)?

For lab data, it depends on the source (i.e. patient reported/performed, health professional, CLIA lab/pop up site). Concur with Dr. Bronken that it depends on the type of data.

Working on SHIELD initiatives with riki on making lab data more useable and interoperable. Specimen type and/or source also has a huge impact on many test results.

I'm less likely to fully trust a lab result performed by a non health professional. With COVID consumer collected (and sent to CLIA lab) or self collected and performed at home testing, how do we know the dog wasn't swabbed or the patient's ear?

CLIA regs help ensure quality testing as they are actionable by health team members and need to be perfect/accurate given decisions made upon them (diagnosis, prognosis, treatment, etc.) Even methods with higher false positives/false negatives, screening tests, etc may be trusted less given the differences in their predictive values.

https://sequoiaproject.org/groups/data-usability-workgroup/forum/topic/data-integrity-and-trust/

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Data Tagging and Searchability

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Topic: Data Tagging and Searchability – Clinician Workshop Recap

- Clinicians desire to understand the chronology of a patient's journey (care continuum) as opposed to a summary of many disparate encounters
  - Clinicians enjoy the ability to search by document titles and further note titles
    - Desire the ability to filter out progress notes from an inpatient stay when they are documented daily
    - Desire the ability to filter by type such as cardiology or respiratory therapy notes
  - Clinicians also desire the ability to search by date and type of discrete data (i.e. labs, medications and vital signs)
  - One pain point is the inability to have one place to search for historical ICDs mixed with current SNOMED across data
  - Searchability should also apply within large blobs of data such as a CCD documents
  - Advanced directive data and updates should be easily searchable

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Topic: Data Tagging and Searchability

- Data linked to Action
  - Many of the pain points/problems are solvable with guidance to be provided for other topic categories (Provenance, longitudinal view, data tagging, reduce impact of duplicates)
- Data Tense – Past, Present, Future
- Data in Context
- Improve readability of documents through standardized tagging
- Guidance for Longitudinal View
  - The JDCWG has already provided some guidance requiring at least one patient summary and one encounter summary per encounter with guidance for generating, populating and querying these
  - **In Scope:** Common guidance for how to narrow the information by common filters (i.e. dates, problems, diagnosis and procedures)
    - Server-side (filter in the query) and client-side (filter what to retrieve based on query response) filtering
    - Focus on tagging improvements within CDA documents for this version
- Definitions for Human, Machine, and Inter-organization Useability to be defined:
  - Human Useability
    - Is there data that you would like to be able to temporarily filter out when looking at Patient Summaries or Encounter Documents?
  - Machine Useability
    - How would you envision optimal filtering and searching of external summary data to incorporate and improve clinical usability at the point of care?
  - Inter-organization Useability
    - What important types of information are easily available, searchable and filterable in your current EMR but you find hard to find or understand when looking at data from other systems?

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Data Tagging and Searchability : Provider to Provider

- Scenario: Ability to search/query by document titles and further note titles
  - Ability to filter by type such as radiology, cardiology or respiratory therapy notes
  - Ability to filter “Lifetime” tests (i.e. blood type, genetic tests, etc.)
- Scenario: Ability to search/query documents and narratives on specific codes/data related to problems, diagnosis, procedures (i.e. Cancer, Diabetes, Dementia)
  - Clinicians also desire the ability to search by date and type of discrete data (i.e. labs, medications and vital signs)
  - Searchability should also apply within large blobs of data such as a CCD documents or Patient Summaries
  - Advanced directive data and updates should be easily searchable
  - Tag a document with a dx code to enable the ability to find the COVID ER visit, the COVID admission, COVID ICU d/c, the COVID hospital d/c, and the disposition for the COVID patient
    - Consider 3 types of tags:
      - Setting (ER, hospital, ICU, SNF, outpatient)
      - Transitions (ER visit, hospital admission, hospital discharge, ICU admission, ICU discharge, death, SNF or Rehab admission, SNF or Rehab discharge, outpatient/ambulatory encounter)
      - Problem or Diagnosis

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Data Tagging and Searchability : Provider to Public Health Agency

- Scenario: Ability to narrow queries for a document or data set by diagnosis/ICD-10
  - Show data related to TB, HIV, Syphilis, HepC
  - Tag a document with a dx code to enable the ability to find the COVID ER visit, the COVID admission, COVID ICU d/c, the COVID hospital d/c, and the disposition for the COVID patient
    - Consider 3 types of tags:
      - Setting (ER, hospital, ICU, SNF, outpatient)
      - Transitions (ER visit, hospital admission, hospital discharge, ICU admission, ICU discharge, death, SNF or Rehab admission, SNF or Rehab discharge, outpatient/ambulatory encounter)
      - Problem or Diagnosis

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Data Tagging and Searchability: Healthcare Entity to Consumer

- Same abilities as provider to provider Use Case
  - Scenario: Ability to search/query as documented for Provider tagging and searchability
    - Ability to filter by type such as radiology, cardiology or respiratory therapy notes
    - Ability to filter “Lifetime” tests (i.e. blood type, genetic tests, etc.)
    - Advanced directive data and updates should be easily searchable
  - Scenario: Ability to search/query documents and narratives on specific codes/data related to problems, diagnosis, procedures (i.e. Cancer, Diabetes, Dementia)

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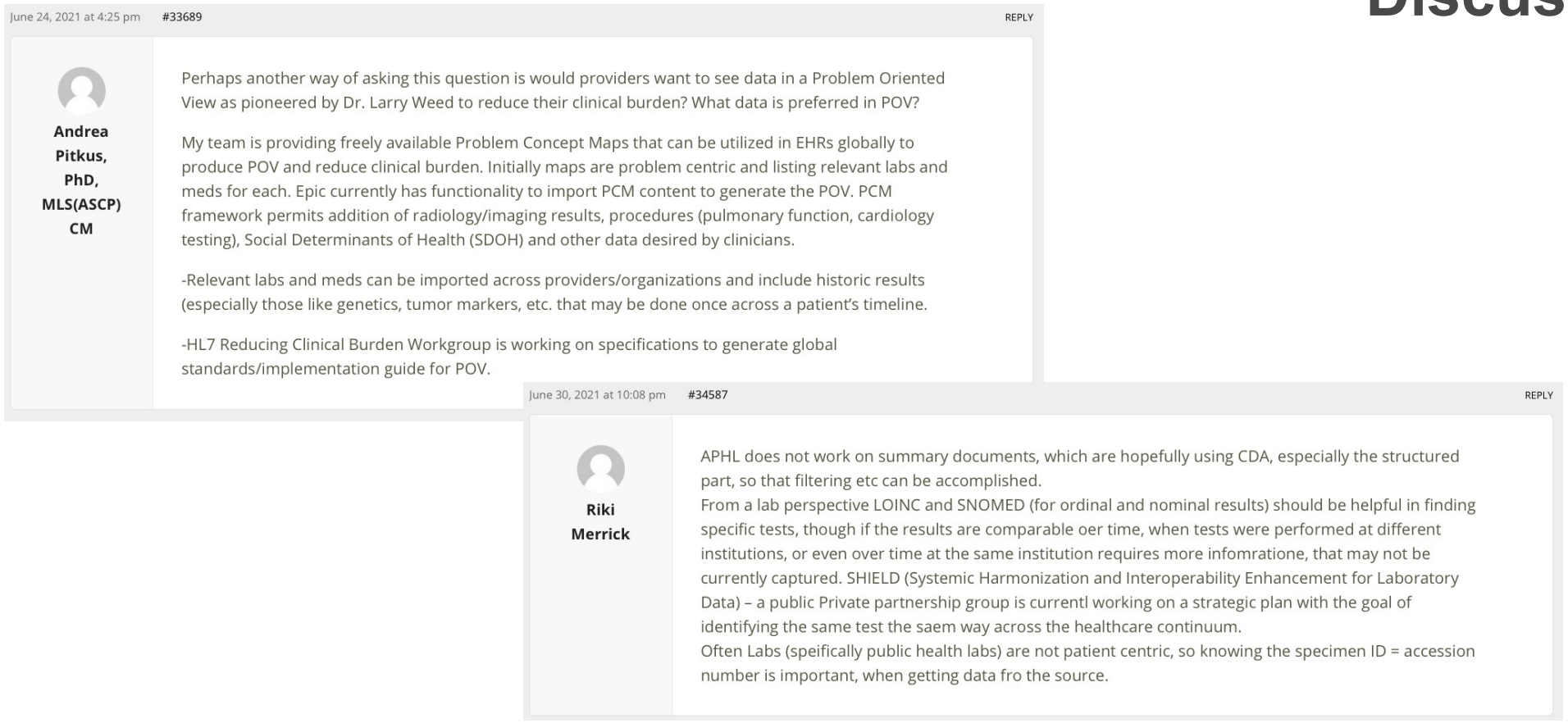
Data Tagging and Searchability Collaboration Space Input Discussion



June 24, 2021 at 4:25 pm #33689 REPLY

Andrea Pitkus, PhD, MLS(ASCP) CM

Perhaps another way of asking this question is would providers want to see data in a Problem Oriented View as pioneered by Dr. Larry Weed to reduce their clinical burden? What data is preferred in POV?

My team is providing freely available Problem Concept Maps that can be utilized in EHRs globally to produce POV and reduce clinical burden. Initially maps are problem centric and listing relevant labs and meds for each. Epic currently has functionality to import PCM content to generate the POV. PCM framework permits addition of radiology/imaging results, procedures (pulmonary function, cardiology testing), Social Determinants of Health (SDOH) and other data desired by clinicians.

-Relevant labs and meds can be imported across providers/organizations and include historic results (especially those like genetics, tumor markers, etc. that may be done once across a patient's timeline.

-HL7 Reducing Clinical Burden Workgroup is working on specifications to generate global standards/implementation guide for POV.

June 30, 2021 at 10:08 pm #34587 REPLY

Riki Merrick

APHL does not work on summary documents, which are hopefully using CDA, especially the structured part, so that filtering etc can be accomplished.
From a lab perspective LOINC and SNOMED (for ordinal and nominal results) should be helpful in finding specific tests, though if the results are comparable oer time, when tests were performed at different institutions, or even over time at the same institution requires more infomratione, that may not be currently captured. SHIELD (Systemic Harmonization and Interoperability Enhancement for Laboratory Data) – a public Private partnership group is currentl working on a strategic plan with the goal of identifying the same test the saem way across the healthcare continuum.
Often Labs (speifically public health labs) are not patient centric, so knowing the specimen ID = accession number is important, when getting data fro the source.

https://sequoiaproject.org/groups/data-usability-workgroup/forum/topic/data-tagging-searchability/

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Phase 2 Implementation Guide Development Process

- Co-chairs and continue to organize and gather the content for the 8 topic areas developed in phase 1 activities – the following tasks will be completed bi-monthly for each topic area by staff to review
- Topics will be addressed in priority order with one – two topics reviewed each meeting
  - 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 the Carequality/Commonwell IG version 2.0 to be published in September 2021
  - Integrate feedback from vendor discussions and workshop(s) to the draft IG
  - Incorporate feedback from Data Usability Collaboration space / forum
    - https://sequoiaproject.org/interoperability-matters/data-usability-workgroup/
  - 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

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Data Usability Work Group

For more information:
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