Interoperability MATTERS

an initiative of The Sequoia Project

Data Usability Work Group

September 9, 2021

the sequoia project

Agenda

- Welcome, Introductions, Membership, Agenda - Dr. David Camitta – 5 minutes
- Website, Meeting and Workgroup Logistics & Collaboration Forum – Dr. Bill Gregg - 5 Minutes
- Topic Focus: Specific Domain Guidance for Usability - Didi, Bill, David, John, Russell – 20 minutes
- Topic Focus: Effective Use of Narrative for Usability - Didi, Bill, David, John, Russell – 20 minutes
- Phase 2 Implementation Guide Structure and Development Process – Didi - 5 minutes
- Questions/Next Steps – 5 minutes

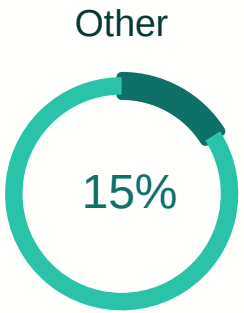
David Camitta, Co-chair
Anthem, Inc.

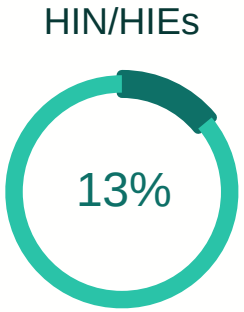
Bill Gregg, Co-chair
HCA Healthcare

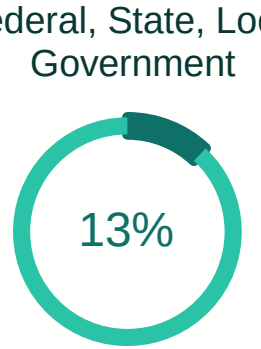
Didi Davis, VP
The Sequoia Project

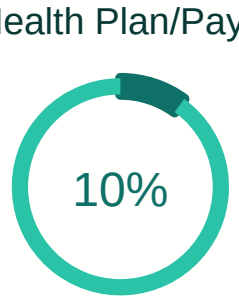
Workgroup Members

217 Organizations | **310 Participants**









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

Website, Meeting and Workgroup Logistics

- Register for the Workgroup
- Calendar Downloads
- Meeting Notes

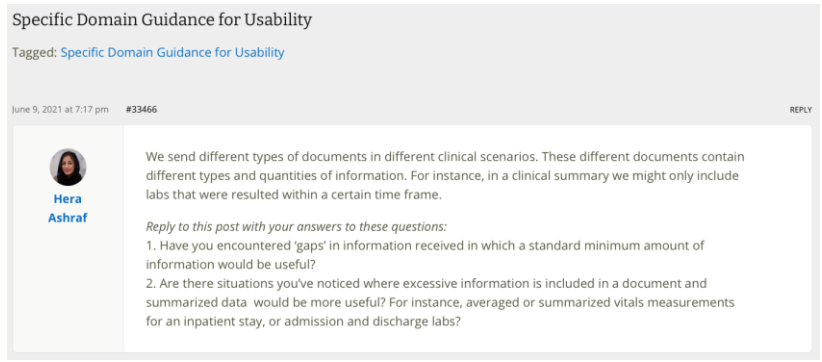
https://sequoiaproject.org/interoperability-matters/data-usability-workgroup/

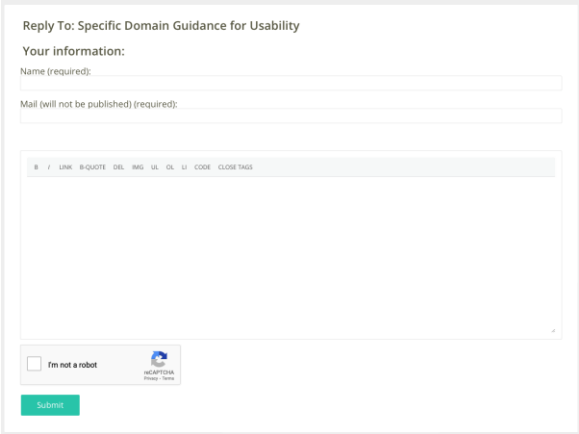
Data Usability Workgroup Forum – Please Respond

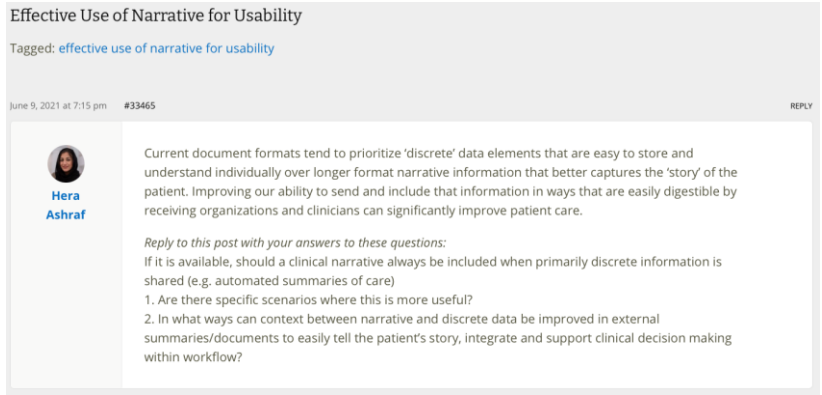
Data Usability Workgroup Forum

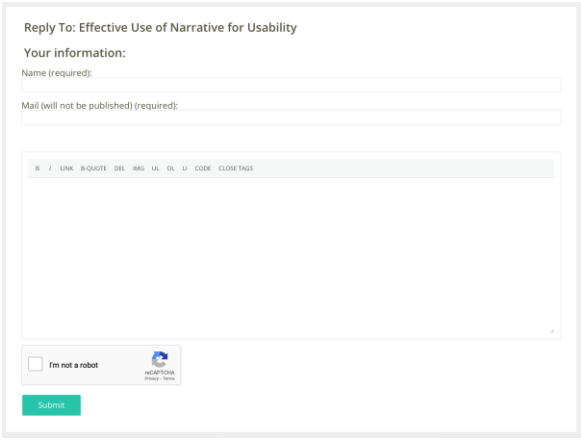
Let's keep the discussion going! After each workgroup meeting, the co-chairs will suggestion discussion topics to keep the conversation going. Please contribute your thoughts in the below message forum.

Topic	Posts	Last Post
Effective Use of Codes	4	2 months ago
Specific Domain Guidance for Usability	3	2 months ago
Data Integrity and Trust	4	2 months ago
Reduce the Impact of Duplicates	4	2 months ago
Effective Use of Narrative for Usability	3	2 months ago
How does your organization exchange data today with consumers?	5	2 months ago
How does your organization exchange data today with providers?	3	2 months ago
Data Provenance and Traceability of Changes	3	2 months, 1 week ago
How does your organization exchange data today with public health ?	3	2 months, 1 week ago
Data Tagging/Searchability	3	2 months, 1 week ago









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

Interoperability MATTERS
an initiative of The Sequoia Project

Specific Domain Guidance for Usability

Topic: Specific Domain Guidance for Usability – Clinician Workshop Recap

- Assessment plans of what happened during an encounter and what care coordination needed should be included at the beginning of a document rather than the end of documents exchanged
- Clinicians want the ability to document **ALL** medications including OTC, mail order, homeopathic supplements, meds they receive from other sources such as clinics (VA calls this an NBA medication) – i.e. they may be taking medications that are expired because they have 40 bottles still

Topic: Specific Domain Guidance for Usability – Summary

- Best practices for rendering documents
- Guidance for documents vs. clinical scenarios
- Guidance for patient summaries
- Guidance for Referral Notes and Consultation Notes
- Usability of Vital Signs Data
- Proposed Data Usability Characteristics
- Data needs to be both granular and groupable
- Data Definition Consistency
- Definitions for Human, Machine, and Inter-organization Useability to be defined:
  - Human Useability
    - Have you encountered ‘gaps’ in information received in which a standard minimum amount of information would be useful?
    - Are there situations you’ve noticed where excessive information is included in a document and summarized data would be more useful? For instance, averaged or summarized vitals measurements for an inpatient stay, or admission and discharge labs?
  - Machine Useability
  - Inter-organization Useability

Specific Domain Guidance for Usability: Provider to Provider

- Use Cases: Focus on compatibility with general formatting variations to ensure readability and usability
  - Build on guidance provided within JDCWG in section 4
    - Use of C-CDA CCD document type (section 4.1)
    - Generating a current Patient Summary (section 4.2)
    - Reducing clutter of generated patient summaries (section 4.3)
  - Consider additional temporal parameters to improve C-CDA
  - Consider how to improve data granularity in a groupable hierarchy
  - Consider referencing 360X Project – Closed Loop Referral IG
  - Consider derived work from HL7 EHR Reducing Clinician Burden Project referenced in Proposed Data Usability Characteristics
    - Data Definition Consistency

Specific Domain Guidance for Usability: Provider to Public Health Agency

No Use Cases in scope at this time

Specific Domain Guidance for Usability: Healthcare Entity to Consumer

No Use Cases in scope at this time

Specific Domain Guidance for Usability : Collaboration Space Discussion

June 30, 2021 at 10:44 pm #34596 REPLY

Riki Merrick

When discussing summarizing data it is important to know that you are comparing apples to apples – so SHIELD (Systemic Harmonization and Interoperability Enhancement for Laboratory Data) is a public provate 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.

July 8, 2021 at 6:13 pm #36073 REPLY

Andrea Pitkus

One of the challenges SHIELD faces is naming conventions. One cannot tell the full meaning of the lab test by it's name alone. Other info like specimen, units, method, etc are needed for the full meaning of a test.

As delineated in the Sequoia lab google sheets, the same test name may be used by different labs and EHRs (i.e. CBC) and mean different things if one has a platelet count and another doesn't. To riki's point these would be comparing a full apple to one with a slice removed.

Another aspect in your use of document, it appears this may include paper records. Is that correct? If so, paper/fax/phone results lack coding providing additional clarification on meaning.

Lastly, and one of the most important, is most all EHRs do not preserve the performing laboratory's naming conventions. Rather, they use a more generic version of the test as preferred by clinicians in their EHR use. See Sequoia lab examples in google sheets. When the exact same test from a laboratory is named differently across EHR vendors, physician practices, etc due to their build preferences, and then shared across HIEs, with public health and other providers, how will the receiver know it's the exact same test they received and they are the same, when they are named differently? This contributes greatly to usability issues with the variety seen nationally.

That said, I understand many providers have a notion in their mind of what each test "is" meaning-wise. They may not be interested in differences of methodology, specimen, etc that can impact result values or may not be aware of said impacts to their clinical decision making.

It's also an informatics build issue. Some lab results are built once (i.e. Wound Culture) with the specimen source indicated in another field. No physician wants to scroll through 200+ precoordinated culture terms such as Wound Culture left big toe, Wound culture right pinky finger to find the site on the body they are culturing. No laboratory would want to build and maintain 200+ more tests in their lab menus either. So there are practicality issues too.

https://sequoiaproject.org/groups/data-usability-workgroup/forum/topic/specific-domain-guidance-for-usability/

Interoperability MATTERS
an initiative of The Sequoia Project

Effective Use of Narrative for Usability

Topic: Effective Use of Narrative for Usability – Clinician Workshop Recap

This topic was not covered during the workshop due to time availability

Topic: Effective Use of Narrative for Usability

- Guidance for populating meaningful narratives
- Promoting the use of narrative in exchanged documents
- Definitions for Human, Machine, and Inter-organization Useability to be defined:
  - Human Useability
    - In what ways can context between narrative and discrete data be improved in external summaries/documents to easily tell the patient's story, integrate and support clinical decision making within workflow?
  - Machine Useability
    - Should a clinical narrative always be included when primarily discrete information is shared (e.g. automated summaries of care)?
      1. Are there specific scenarios where this is more useful?
  - Inter-organization Useability

Effective Use of Narrative for Usability: Provider to Provider

- Use Case: Patient Discharge from Hospital, attending physician dictates a discharge summary including who should receive copies and electronically signs.
  - Dictated narrative needs to be linked to appropriate metadata to enable searchability when published after discharge summary
    - Consider ability to link narrative to a discharge summary with discrete data
  - Consider rendering improvements (which narratives to focus on? – should we focus on USCDI V1 or expand to include USCDI V2?)
    - https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi#uscdi-v1
    - https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi#uscdi-v2
    - When querying: should notes be grouped or have index for all available notes across sections?
  - Provide guidance to **NOT** display HL7 RIM specific data that provides no meaning
- Consider referencing HL7 CDA R2 Implementation Guide: Clinical Summary Relevant and Pertinent Data
- Reference CDA Examples illustrating C-CDA best practices created by the HL7 Examples Task Force and approved by the HL7 Structured Documents Workgroup

USCDI V1 vs. USCDI V2

Clinical Notes

Represents narrative patient data relevant to the respective note types.

USCDI V1 | USCDI V2 | Comment

Data Element	Applicable Vocabulary Standard(s)
Consultation Note Contains the response to request from a clinician for an opinion or advice from another clinician.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Consult Note (LOINC® code 11488-4)
Discharge Summary Note A synopsis of a patient's admission and course in a hospital or post-acute care setting.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Discharge Summary (LOINC® code 18842-5)
History & Physical Documents the current and past conditions and observations of the patient.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Discharge Summary (LOINC® code 34117-2)
Imaging Narrative Contains a consulting specialist's interpretation of diagnostic imaging data.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Diagnostic Imaging Study (LOINC® code 18748-4
Laboratory Report Narrative Contains a consulting specialist's interpretation of the laboratory report.	
Pathology Report Narrative Contains a consulting specialist's interpretation of the pathology report.	
Procedure Note Encompasses non-operative procedures including interventional cardiology, gastrointestinal endoscopy, osteopathic manipulation, and other specialty's procedures.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Procedure Note (LOINC® code 28570-0)
Progress Note Represents a patient's interval status during a hospitalization, outpatient visit, treatment with a post-acute care provider, or other healthcare encounter.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.67 Progress Note (LOINC® code 11506-3)

https://www.healthit.gov/isa/sites/isa/files/2020-10/USCDI-Version-1-July-2020-Errata-Final_0.pdf

Clinical Notes

Represents narrative patient data relevant to the respective note types.

USCDI V1 | USCDI V2 | Comment

Data Element	Applicable Vocabulary Standard(s)
Consultation Note Contains the response to request from a clinician for an opinion or advice from another clinician.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.70 Consult Note (LOINC® code 11488-4)
Discharge Summary Note A synopsis of a patient's admission and course in a hospital or post-acute care setting.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.70 Discharge Summary (LOINC® code 18842-5)
History & Physical Documents the current and past conditions and observations of the patient.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.70 Discharge Summary (LOINC® code 34117-2)
Procedure Note Encompasses non-operative procedures including interventional cardiology, gastrointestinal endoscopy, osteopathic manipulation, and other specialty's procedures.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.70 Procedure Note (LOINC® code 28570-0)
Progress Note Represents a patient's interval status during a hospitalization, outpatient visit, treatment with a post-acute care provider, or other healthcare encounter.	Logical Observation Identifiers Names and Codes (LOINC®) version 2.70 Progress Note (LOINC® code 11506-3)

https://www.healthit.gov/isa/sites/isa/files/2021-07/USCDI-Version-2-July-2021-Final.pdf

Consider guidance for usability improvementrs for the consumer of data and not just source/creator of data

Effective Use of Narrative for Usability: Provider to Public Health Agency

- Scenario: Ability to narrow queries for a document or data set by diagnosis/ICD-10 (should there be narrative tagging in addition to document tagging previously proposed?)
  - 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

Effective Use of Narrative for Usability: Healthcare Entity to Consumer

- Same abilities as provider to provider Use Case
- Consider reference to article about #OpenNotes in support of Patients and their relationships from Dr. Steven Lane
  - https://link.springer.com/article/10.1007/s11606-020-06432-7

Effective Use of Narrative for Usability Collaboration Space Input Discussion

July 8, 2021 at 1:32 pm #36035 REPLY

Tom Bronken

The USCDI has the right idea in promoting summary documents–the discharge summary for inpatient care and "progress note" for outpatient care. These two documents best convey the patient story. I will again point out that "progress note" is a terrible label for the outpatient note–very few people in the clinical arena consider "progress note" and "outpatient note" to be synonymous, and this will cause confusion. That aside, these two summary notes are probably the most useful, and the ones in which an un-parsed narrative would be most useful. Discrete data can be sprinkled in the narrative where appropriate, lending it useful context.

One barrier in creating C-CDA compliant notes, however, is that most EHRs are not capable of putting them in the fully-compliant state. Another problem is that attempts to do so may distort the relationships between parts of the narrative. LOINC coding of the documents at a granular level is vital, but attempts to parse narrative and make it more "discrete" (along with LOINC coding the parts) beyond that may cause more problems than they solve.

July 8, 2021 at 5:37 pm #36068 REPLY

Andrea Pitkus

Dr. Bronken, can you elucidate more on EHRs non compliant notes? Also why are you trying to parse notes to make them more discrete? Are the discrete data elements used to create the C-CDAs not available with appropriate coding (i.e. lab results LOINC, meds, RxNorm, ICD/SCT Problems)? For labs that send discrete results encoded with LOINC (and SCT for specimen, organism, qualitative values), is this information being lost/translated, etc. resulting in errors of omission and commission you are seeing on the EHR side? (Some of us are working on national lab interoperability initiatives and understanding these barriers would be helpful as we work on solutions.)

https://sequoiaproject.org/groups/data-usability-workgroup/forum/topic/effective-use-of-narrative-for-usability/

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

Interoperability MATTERS
an initiative of The Sequoia Project

the sequoia project

Data Usability Work Group

For more information:
www.sequoiaproject.org/interoperability-matters/data-usability-workgroup/

(571) 327-3640

Interopmatters@sequoiaproject.org

Convene

Collaborate

Interoperate

Thank You for your support of Interoperability Matters!