Professional Associations that bring together competing entities, such as HL7, are subject to strict scrutiny under applicable antitrust laws. HL7 recognizes that the antitrust laws were enacted to promote fairness in competition and, as such, supports laws against monopoly and restraints of trade and their enforcement. Each individual participating in HL7 activities, regardless of venue, is responsible for knowing the contents of and adhering to the HL7 Antitrust policy as stated in §05.01 of the Governance and Operations Manual (GOM).
Contributing to the Priority Areas

- Introduce yourself in the chat (name, affiliation, interest area/skills)
- All interested groups are encouraged to participate
  - Use the chat
  - Raise your hand
  - Discuss on Zulip
- This meeting will be recorded
- We are all working towards the same goal
Desired Outcomes

**Desirability**: Serves an immediate and pressing public health need.

**Feasibility**: Initial scope can be accomplished within a year.

**Compatibility**: Prioritize and address deviations in public health implementations of FHIR.
Agenda

• Review 90-day Goals review
• Use Case Discussions
90-Day Goals

- Define use cases for the bulk data area
  - Include possible approaches with the advantages/disadvantages of each
  - Will build off the products of the IIP bulk exchange project
  - Work will happen on the Monday project team calls
- Describe architecture necessary to make IIS data available in bulk
  - A focused team will discuss options and report back on the Monday calls
- Perform an analysis of the existing FHIR bulk IG to assess possible gaps for public health usage and alignments with existing work
  - A focused team will discuss options and report back on the Monday calls
- Review the existing US Core Immunization profile for suitability and to identify gaps
  - A focused team will discuss options and report back on the Monday calls
- Continued recruitment of participants for hands-on testing
Use Case

• Documenting the uses of the data returned by a bulk query will be important context for users to understand how a query can be used and to encourage implementers to adopt the technology
• Review of the use cases will highlight where the requirements for different use cases necessitate a different solution in terms of technology or data payload
Use cases for queries for identified patient immunization histories

Assess immunization coverage for groups or entire known populations
• Result in a report / aggregate data generated by the requester
• Examples: Report performance metrics (HEDIS), manage licensing/operational requirements (schools and health care), evaluate vaccination status of specific and known population, post-market surveillance

Plan and carry out vaccination activities
• Use cases of ways to prepare to and actually vaccinate whole groups. These query responses may help with supply orders, staffing, and appointment availability.
• These are the next level in granularity – a line listing of patients is likely the output
• Examples: Perform targeted population outreach and reminder/recall, perform case investigation

Provide routine health care using complete and accurate immunization records
• IIS are queried in bulk, but the information returned is used individually, either by the provider or patient.
• These use cases result in the most granular data – an individual patient’s record is viewed.
• Examples: Prepare pre-visit, provide vaccination history or credentials
Use cases for queries for de-identified patient immunization histories

- Examples
  - CDC reporting – alternative to data extracts like CVRS
  - Research

- The technical aspects of the query are likely to be different than for identified data

- Out of scope (at least for now) for first phase
Initial Scoping Thoughts

- Patient list (but not parameter-based search)
- History (but not forecast)
- Total history (all vaccines) (but not targeted history (e.g. only COVID vaccines))
- Query and response (but not usage/reconciliation of data, subsequent submission of data to close gaps in history, or matching algorithms and confidence levels)
Homework

• What other use cases are there?
• How might the technical aspects and data requirements of the query be the same or different for the use cases we have?
  • Do any of these uses of the data impact the data that needs to be available?
  • Does the nature of the requesting organization (healthcare provider, payor, schools) impact how the query is performed or the data that is returned?
  • Does the frequency of query impact how the query is performed or the data that is returned?
• Are there use cases with a higher ROI?
ROI Questions

- Stakeholder expertise and capabilities to implement
- Level of effort to implement
  - IIS
  - Requesters
  - Both
- Beneficiary (It might be helpful to learn how much time is devoted to these efforts now)
  - IIS (less strain/load)
  - Requesters (volume, speed, accuracy, completeness)
  - Both
- Frequency of query (e.g., schools may only bulk query once or twice per year, provider organizations may bulk query daily, and payers may query weekly)
- Volume of query (e.g., 2,000 v. 2 million)
- Query limiters – “as of [data] / since [date]”, vaccine type
- Response payload – patient information, vaccine dose history, relevant clinical history (history of disease/serology), forecast, dose validity, provider information
- Reconciliation challenges – data provenance, inexact/multiple matches, match confidence, duplicate vaccinations
Thank you for joining today!

Next Call: Sept 12, 2022 at 12PM Eastern
Deliverables and Goals Ideas

- Standards gap analysis
  - How well does the Bulk FHIR standard work with our immunization use cases?
  - Are there enhancements or changes that are necessary to support public health?
- Guidance to IIS when implementing
  - What are the infrastructural considerations? What needs to be built by PH to ensure that data is accessible without impacting the Production system?
  - How does data need to be prepared so that it can be exposed by Bulk API?
- Support for authorized users and their vendors
  - Are there tools which can be developed and reused?
- Best practices
  - Creating patient rosters
  - Consuming, deduplicating and reconciling data
Deliverables and Goals Ideas (Paula)

- **Scope Use Cases Based on IIP Recommendations**: It sounds like we agreed today that the use cases for this priority area will be directly derived from the set of recommendations coming out of the IIP. Do we know when those recommendations will be made available to Helios?

- **Identify 2-3 Initial Implementation Partners**: In the meantime, we’ll want to start lining up the “dyads” and “triads” of State immunization programs + Querying partner(s). Two-three states with their IIS vendor and querying partner(s) would be the way to go.

- **Review of Existing Bulk FHIR Standard**: Discussions with Ken & Team next week would be a good place to start since they helped to create the standard and have the lions share of testing and development up to this point.

- **Guidance to Initial Implementation Partners**: CMS’s data at the point of care team provided one of the earliest examples of bulk FHIR implementation. We can learn a lot from them about how they approached it. Perhaps during our “bye week” discussions, we could pull out components of the Data at the Point of Care (cms.gov) website which we agree could serve as useful building blocks/starting points for this priority area. As examples, we’d want to makes sure our work reflects:
  - Value propositions for organizations involved
  - Sandbox & instructions for joining
  - Etc.
Priority Areas for 2022

Make Data in Public Health Systems Accessible in Bulk

Align and Optimize Public Health Data Sharing

Deliver Aggregate Information to Public Health
**Summary**

How might we make data stored in public health information systems, such as IIS, more accessible to authorized “B2B” users beyond public health (e.g., State Medicaid programs, healthcare partners, private insurers, etc.)?

---

**Public Health Goals That Could Be Achieved**

- Ensure authorized “B2B” users of IIS data can access information (in bulk) on immunizations to help address gaps in care (or prevent redundancies) while lowering burden on state public health agencies.
- Help health providers and payers to proactively support their patient populations.
- Lower burden on state public health agencies and on data requestors.

---

**How Helios Members Will Engage**

- Create a uniform process for querying immunization data in IIS, leveraging BulkFHIR
- Develop implementation guidance and open-source code samples
- Engage “early adopters” as pilots to “work out the kinks” and develop a “readymade” standard, so that the rest of the community can come on as they’re able

---

**Initial Project Team Composition**

- **Co-Leads**
  - STLT Public Health & Medicaid
  - Healthcare Systems, Payers & Other Users
- **Federal Champions**
- **Vendors (IIS + EHR, MMIS, etc.) & Developers**
The Bulk Query From IIS Topic: Brief Context

**Spring 2021**
- IIS Community voices need for bulk query approach
  - Two meetings set up to discuss current activities to hear about solutions from 6-8 IIS

**Summer 2021**
- IIP begins prioritizing topics for upcoming year
  - 42 topics prioritized
  - Bulk Query was prioritized in top 4

**2021–2022**
- Helios FHIR Accelerator requests input on use cases
  - 29 use cases were evaluated
  - Bulk Query was prioritized in top 3
2022 IIP Collaborative Priorities

1. Access Bulk Query Data from IIS
   Large provider organizations and health payers would benefit from a standardized way to access large amounts of IIS data for their patients/members.

2. Data Validation, Reasons for IIS Rejections
   Inconsistency in how data is entered such as dates entered in the future, birth date discrepancies, or missing fields can cause IIS to reject immunization messages.

3. Capture of Race & Ethnicity
   The capture of race and ethnicity is uneven across the immunization information ecosystem.

4. Regular Updates of Code Sets
   When one data exchange partner has implemented new codes (e.g., NDCs for annual flu vaccine) and the other partner has not, it can impede data interoperability including preventing patients’ vaccinations from being recorded properly.
Access Bulk Query Data from IIS

• **Issue Overview**
  • Provider organizations, health payers and local public health would benefit from a standardized way to access large amounts of IIS data for their patients/members

• **Proposed Solution**
  • Develop best practice guidance for bulk query options

• **Activities**
  • Develop a landscape analysis
  • Synthesize current knowledge and efforts
  • Scope IIP work to ensure feasibility and impact
  • Convene workgroup
**Summary**

How might we make data stored in public health information systems, such as IIS, more accessible to authorized “B2B” users beyond public health (e.g., State Medicaid programs, healthcare partners, private insurers, etc.)?

**Project Team Goals**

- Develop guidance for bulk FHIR query from an IIS that can eventually grow into a balloted Implementation Guide (this is a longer-term goal, but unlikely to be attainable within the 12-month time period)
- Leverage current tools, guidance, and reference implementations
- Recruit a small number of IIS partners to participate in a proof-of-concept implementation

**Building Blocks**

- Bulk FHIR IG
- IIP landscape survey
- AART Sandbox
- Existing pilots and reference implementations (both IIS and querying systems)
- Experience of IIS currently responding to bulk queries (non FHIR)

**Approaches**

- Collaborate with the AIRA/HIMSS Immunization Integration Program (IIP) to clearly define scope
  - Current draft scope includes focus on consolidated record (not forecast), all immunizations (not solely COVID), roster query (not query by parameter), asynchronous query and response (not subscription service)
- Socialize guidance and build investment across the IIS and immunization data exchange community (leveraging IIP and EHRA)
Discussion Topics

- What is an appropriate set of scopes for the project?
  - Patient list versus parameter-based search
  - History versus forecast
  - Total history (all vaccines) versus targeted history (e.g. only COVID vaccines)
  - Reconciliation of data and submission of data to close gaps in history
  - Matching algorithms and confidence levels
- What partners and use cases might be considered?
  - State Medicaid interactions with the state IIS
- What are appropriate code sets to be returned (CVX/NDC)
- What is our deliverable?
Priority Area Next Steps

- Further discuss, refine and approve the goals and deliverables for their Priority Area
  - Scope
  - Building Blocks
  - Deliverables
  - Schedule
- The Operating Committee helps ensure that goals and deliverables are scoped appropriately and are aligned across Priority Areas
- Identify appropriate and accessible meeting times
- Education will be an important aspect of all Priority Areas so that implementers will be able to better understand how to use the Helios findings and deliverables