HL7 FHIR Connectathon
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Bulk Data – Quality Measure Queries
Track Kick Off Call

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Track Leads

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Track Description

• Test Bulk Data Export and Bulk Data Import with various group size and parameter combinations
• Use Quality Measure data requirements to optimize Bulk Export queries to collect data for quality measurement
• System roles
  • Bulk Data Export/Import Server
  • Bulk Data Export/Import Client
Data Queries

Data not referenced by measure

Data needed to determine inclusion in Numerator and exclusions

Data needed to determine inclusion in Denominator

Data needed to determine inclusion in Initial Population

Necessary Data

Irrelevant Data

More Data

More Patients
**Challenges**

**Example:** Colorectal Cancer Screening (CMS130) entities required for calculation include:

- **(Denominator Exclusion)**
  - Exclude patients who are in hospice care for any part of the measurement period.
  - Exclude patients with a diagnosis or past history of total colectomy or colorectal cancer.
  - Exclude patients 66 and older by the end of the measurement period with an indication of frailty or in long term nursing care.
  - Exclude patients receiving palliative care for any part of the measurement period.

**Challenge:** Patients may have many Condition, Assessment and/or Encounter instances that are not relevant to the measure.
Track Goals

• Discuss approaches to query parameter implementation and assess impacts of parameters on performance
  • _since, _type, and _typeFilter
• Discuss approaches to Bulk Import
Track Resources

- Track leads
  - Sam Sayer (ssayer@mitre.org)
  - Keith Carlson (keith.carlson@hhs.gov)
- Implementation Guides
  - FHIR Bulk Data Access (Flat FHIR) v2.0.0, v1.0.1
  - Draft Bulk Import Proposal
  - Measure Data Requirements and Test patients for CMS130 will be shared prior to the Connectathon
- Track Confluence Page
  - https://confluence.hl7.org/display/FHIR/2023+-+09+Bulk+Data+-+Quality+Measure+Queries
Scenario: Bulk Data Export

• **System roles**: Bulk Export Server, Bulk Export Client
• **Precondition**: Server provides patient groups with data relevant to measure; client registration and authorization (if needed)
• **Action**: Client performs Bulk Data Patient export against server.
  • Bonus points: client uses filter parameters, client uses Measure data requirements to build filters, client/server collects performance data
• **Success criteria**: Server successfully returns patient group conforming to the specified parameters
Test Systems

- Open-source test clients
  - [https://docs.smarthealthit.org/bulk-data-client/](https://docs.smarthealthit.org/bulk-data-client/)
- Open-source test server
  - [https://bulk-data.smarthealthit.org/](https://bulk-data.smarthealthit.org/)
Possible Breakouts

• Reducing the need for Quality specific data that doesn’t align with US-Core/USCDI
• Assessing feasibility of named queries in Bulk Data
• Determining a roadmap for Bulk Import and moving towards a single specification
Questions?

• Zulip (chat.fhir.org)
  • https://chat.fhir.org/#narrow/stream/179250-bulk-data/topic/September.202023.20Connectathon

• Track Page
  • https://confluence.hl7.org/display/FHIR/2023+-+09+Bulk+Data+-+Quality+Measure+Queries