Incremental and Snapshot Updates Draft text for FHIR-26092,FHIR-26076

Add These Definitions for the Data Exchange Interactions:

Incremental Update
In contrast to the Snapshot Update, the FHIR Parameters resource used in a Submit Data or the Collect Data scenario contains only the new and updated DEQM and QI Core Profiles since the last transaction. If the Consumer supports incremental updates, the contents of the updated payload updates the previous payload data.

Snapshot Update
In contrast to the Incremental Update, the FHIR Parameters resource used in a Submit Data or the Collect Data scenario contains all the DEQM and QI Core Profiles for each transaction. If the Consumer supports snapshot updates, the contents of the updated payload entirely replaces the previous payload.

Data Exchange interactions

For Submit Data:

When the Producer submits updates to the measure data within the data submission period, the Producer can use snapshot **or** incremental updates for submitting data based on Producer and Consumer agreement. Note that neither method is preferred or a default and has to be agreed upon out of band.

Examples of patient 'events' that could trigger the submission of an update:

1. A visit, including telemedicine, to a physician's office.
2. Being discharged from a hospital.

- Discovery:
  - It is the responsibility of the Consumer to advertise whether it supports snapshot or incremental data exchange via the CapabilityStatement. Specifically by clearly stating "support for snapshot/incremental data exchange" in the `CapabiltityStatement.rest.resource.operation.documentation` element.

- - - Suggestion make this a extension on CapStatement - code for snapshot vs incremental so is computable (not Both)

    - It is the responsibility of the Producer to discover whether snapshot or incremental data exchange is supported by the inspection of the Consumer's CapabilityStatement.

    - Add a *required* modifier extension on MeasureReport to indicate whether the payload is a snapshot or incremental update for the initial transaction and all subsequent updates. (update examples to show this)
      - Consumer SHALL reject if mismatch between its stated capabilities and the extension value returns a `400 Bad Request` http error code. An OperationOutcome SHOULD be returned stating that the [snapshot/incremental] update is not supported.
        (add an inline snippet to show and error response)

- Incremental Update Requirements and Expectations:
  - For incremental data exchange, stable logical (**resource) ids and meta.source elements** are required for **ALL** transacted resources across **ALL** transactions.

    - For example `MeasureReport.id + MeasureReport.meta.source, Patient.id + Patient.meta.souce, etc ...` must be the same for all data exchange interactions for a patient and measure during the submission period.
  - Note that versions are of the resource can be accessed using the FHIR RESTful history transaction

- Snapshot Update Requirements and Expectations:
  - Snapshot data exchange overwrites previous data (i.e. The Producer resubmit all data for multiple patients even for a single error)

  - Snapshot data exchange is appropriate when Consumer system is stateless (doesn't persist data)
    - Otherwise Consumer may have to save previous snapshots
  - Snapshot data exchange is appropriate when Producer can't support stable logical (resource) ids

For Collect Data:

Unlike the Submit Data interaction, the collect data exchange is typically incremental. The Consumer uses a Collect Data operation to request any available relevant data for the

evaluation of a particular measure from a Producer. This would typically be done on a periodic basis to support incremental collection of quality data. The Collect Data operation **lastReceivedOn parameter** is used to indicate when the last Collect Data operation was performed, allowing the Producer to limit the response to only data that has been entered.

Guidance:

- Unlike the Submit Data interaction, there is no need for out of band discovery.
- Consumer uses the Collect Data operation's **lastReceivedOn** for incremental data exchange - in other words incremental if parameter present, snapshot if not.
- Same Snapshot and Incremental Requirements and Expectations as above.
- If Producer cannot support the **lastReceivedOn parameter then SHALL return an error. (see above 400 error and edit for this use case)**

Measure Reporting Interactions:

For reporting scenarios, posting Individual Measure/Summary Measure Reports is typically a one time event, although there may be a need to amend or update a report or to report periodically based on the reporting program. The FHIR transaction bundle used in the reporting scenarios SHALL contains only the new and updated DEQM and QI Core Profiles since the last transaction or those that need to be deleted. (method = PUT vs POST or DELETE).

Also

Update the CapabilityStatements and add snippets to section on incremental reporting

Update figures to indicate repeating transactions during the submission period

[Side note - update measurement period FHIR reference to accomodate the EQCM extensions. See FHIR-27751]