Hybrid/Intermediary Exchange (Exchange with or without Intermediaries)

Committee Approval Date:

FHIR Infrastructure Workgroup approval - February 8, 2021

Publishing Lead:

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Contributing or Reviewing Work Groups:

FHIR Infrastructure Workgroup

Suggested Reviewers:

- FHIR Conformance Workgroup
- Security Workgroup
- Payer/Provider Information Exchange (PIE) Workgroup

FHIR Development Project Insight ID:

1653

Scope of coverage:

This IG will define the standard for routing information (FHIR and complimentary models) to facilitate interoperable exchange both in point to point models and models in which include healthcare exchange intermediaries. The model is predicated on the actors not needing to have knowledge of whether intermediaries are participating and, if so, the number of intermediaries. As such, the IG will provide implementation details for reliable routing in a hybrid model (dynamic point to point and intermediary facilitated).

This IG focuses solely on the routing information required to ensure reliable routing in a hybrid exchange model. This IG defers to other IGs for security (authentication and authorization), identity, directory lookups, and any other capability needed to support interoperability. This IG is targeted at implementers including vendors, EHRs, payers, all types of intermediaries, public health, and any other participants using contemporary interoperability.

Content location:

https://build.fhir.org/ig/HL7/fhir-exchange-routing-ig

Proposed IG realm and code:
**FHIR Core version(s):**

FHIR R4, although the solution is planned to be version agnostic.

**Maintenance Plan:**

The IG will be maintained by HL7 as part of the standard HL7 operating model.

**Short Description:**

This IG is meant to define the standard for how providers, payers, intermediaries, and other actors will use routing information about the transaction originator and destination to support a hybrid model of point-to-point interaction as well as intermediary brokered interactions without the actors in either side needing detailed knowledge of how intermediary routing works.

**Long Description:**

As the need for interoperability between actors in healthcare has grown, the aspect of transactions routings across one or more intermediaries such as clearinghouses, HIEs, national networks, and other exchanges is recognized. This intermediary model co-exists with the point-to-point approach resulting in an overall hybrid model supporting both. An example of this intermediary scenario is the situation in which a payer actor uses a clearinghouse intermediary as their 'gateway' for transactions. There are both technical and business operational value adds in the intermediary model. Other networks including HIEs and national networks, have emerged as brokering intermediaries (document access/exchange, e-prescribing, etc.), that may also engage in FHIR and complimentary types of interoperability.

This IG defines how providers, payers, intermediaries, and other actors will use routing information about the transaction originator and destination to support a hybrid model of point-to-point interaction as well as intermediary brokered interactions without the actors in either side needing detailed knowledge of how intermediary routing works. The sole focus of the IG is the use of originator and destination for routing purposes. Security, identity, directory look-up, and other closely associated capabilities will be defined and documented in respective IG outside of this document. This IG is intended for use by implementers.

This IG defines the use of routing information. This routing information can be used with or without an intermediary (or intermediaries). This model ensures that actors do not need to have knowledge that an intermediary is being uses or not or if there are more than one intermediary in the transaction lifecycle.

As part of the discovery and research in developing the IG, approaches were considered including FHIR headers, URL based routing (in which the URL includes the x-Destination), and HTTP headers.

**Involved parties:**

FHIR at Scale Taskforce (FAST)

**Expected implementations:**

Humana, HCSC, and eHealth Exchange have already preliminarily tested the solution being defined in this IG during the January 2021 Connectathon, and the team plans to continue testing in the May 2021 Connectathon.

The team has also reached out to other intermediaries and members of FHIR Accelerators who have expressed interest in the solution, but as yet have not made a commitment to implement/test.

**Content sources:**

Requirements for this IG have initially been drawn from the work done by the FHIR at Scale Taskforce (FAST) Exchange Tiger Team, and will be further specified based upon input from the FHIR Infrastructure Workgroup and broader HL7 community.

**Example Scenarios:**

**Scenario 1:** The interaction originator will know the final destination but is agnostic to intermediaries involved in the message routing.
For example, if provider A needs to request information from payer B and payer B uses a payer agnostic intermediary, provider A will initiate the interaction with a known endpoint representing payer B, which in this case is an intermediary, and the intermediary will handle routing of the transaction and provide any value-add services. The intermediary, or intermediaries, will need to have origination and routing information available during the life cycle of the transaction to ensure appropriate delivery.

**Scenario 2:** The interaction originator provides the request to their intermediary for messaging routing.

For example, the requester, provider A, simply provides the request to their intermediary who then provides routing information so that the transaction can move across additional intermediaries before getting to payer B.

**Scenario 3:** No intermediary involved in the exchange.

There are cases in which there are no intermediaries involved and the routing information is not explicitly needed, but there is no harm with it being available.

**IG Relationships:**

This IG depends upon other IG(s) related to security (authentication and authorization). This IG is strongly complimented by other IGs related to identity, directory, and intermediary scaling.

**FHIR Security**

**Timelines:**

May 2021 Ballot - STU

**FMG Notes**