‹ Home

Exported Sep 09, 2020 at 12:58 PM

HL7 FHIR eReferral Workstream

MJ LB DP JM SP FB CW ST JS TJ PC RP BD +103 others

Messages | Campfire | To-dos | Docs & Files | Check-ins | Schedule | Forwards

Added by Tim Berezny • Updated Jun 11, 2018 at 10:03 PM

/Appointment

60% Pilot Ready

Links:

- /Appointment - Canadian eReferral Profile
- /Appointment - FHIR 3.3 Standard

Relevant chat.fhir.org Threads

- Where to send updates about a ServiceRequest?

ValueSets

- **appointment.status** - Appointment Status Valueset (required)
- **participant.status** - ParticipationStatus Valueset (required)

Change Request Submissions

- [#17353] Summary: HL7 Version 2 Table 0276 - Add Assessment and/or intake
- Submit a change request for "location" to appointment to have it's own element.
- Submit a change request for actor to point to PractitionerRole

Notes:

- Usage of the appointment resource is designed so that it can *also* compliment commonly used calendar systems such as MS Outlook.
  - MS Outlook Appointment Subject = appointment.description
  - MS Outlook Location = appointment.participant.actor > Location.text
  - MS Outlook Duration = appointment.duration
  - MS Outlook Starts = appointment.start
  - MS Outlook Ends = appointment.end
  - MS Outlook Appointment Body = appointment.comment

Proposed Decisions:

1. **appointmentType** could be useful, but preferred value set is too limited. Missing intake and assessment, which is the most common appointment type for eReferrals. Change request [#17353] submitted.
   Proposed decision: exclude this element.

Key Decisions & Rationale:

- Participant.actor: Should we "duplicate" referencing resources that are already in the original "ServiceRequest"? Make it as "complete as possible", due to the potential for use cases where somebody sees the "Appointment" process, but may not have access to the original ServiceRequest (e.g., sending an appointment to a patient-oriented system. e.g. #2, when a referral is sent to a "service" but a practitioner is not attached to it until the appointment is made).
  - **HealthcareService** - include for completeness
  - **Practitioner** - Include for completeness
  - **Patient** - Include for completeness
  - **Location** - Could be different from the healthcareSservice
  - DO NOT SUPPORT (yet) - **RelatedPerson** - Commonly needed in MH&A, geriatric and other social services - put on the "Future List"
  - DO NOT SUPPORT (yet) - **Device** - include because a) device management is typically only of interest on the receiver of the process not to the send and b) most sender related device information is typically included in patient appointment instructions (e.g., bring your wheelchair and fast for 6 hours)
- Exclude "appointmentType", because it is insufficiently useful

Comments:

Use the comments on this page to discuss the development of this resource profile. Conclusions made from the discussion will be added into this document, and the profile where applicable.

Comments & Events

FB

Fariba Behzadi, Standards specialist

This is my comment on `AppointmentType`
eHealth Standards Comments:
By `Style of appointment` do we mean Type? Does this value set Cover all values needed?

eHealth Standards Recommendation:
Map the values to Terminology Standard coding system SNOMED CT.
Jun 22, 2018 at 3:10 PM · Notified 1 person

Yaron Derman
Question: if the Appointment resource is being sent back to the requestor (based on a ServiceRequest and/or following up on a Communication resource), which Appointment attribute should be used to specify the requestor (which is the destination endpoint for the Appointment resource)?

would it be: Appointment.basedOn = reference(ServiceRequest) where the sender of the Appointment would need to use the endpoint that is referenced by ServiceRequest.Requester, which would in turn rely on the PractitionerRole.endpoint?

To illustrate: Dr. Jane refers a patient to Dr. Bob. Dr. Bob accepts.   Dr. Bob's receptionist selects a date/time and sends this appointment information to Dr. Jane.   How does Dr. Bob's system know where to route the appointment info to based on previous communication without requiring the receptionist to (re)enter this info?
Jul 25, 2018 at 12:03 PM · Notified 93 people

Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
A very good question... some thoughts:

Scenario 1) the sender has an account with the receiving eReferral system, and "registers" their endpoint that they want to receive notifications on. This is straightforward and can happen without any addition relay information included in the eReferral payloads.

Scenario 2) The sender is not known or trusted by the receiving eReferral system (kind of like when you get a fax in current processes). My thoughts are that the receiving eReferral system should NOT send any API notifications back to the sender other than the return message from the initial ServiceRequest. The information that the sender is allowed to GET later on regarding updates to the service request should also be extremely limited if any.

Scenario 3) The sender not registered with the receiving eReferral system, but through some mechanism is TRUSTED (e.g., because they are a ONE ID user, it comes through the HIAL, or from another eReferral sending system which has authentication procedures in place, etc...).
My thoughts are that in this case, the initial ServiceRequest could include the Endpoint to which will be subscribed to updates to this ServiceRequest (e.g., when an appointment is attached. I can think of 4 ways to specify this:
1) the endpoint on of the ServiceRequest.requester > PractionerRole Endpoint
2) the endpoint on the ServiceRequestRequester, PractitionerRole > Practitioner endpoint
3) A subscription resource attached to the .supportingInfo of the original ServiceRequest

4) An extension on the ServiceRequest.

I feel like #3 is probably the most robust approach, but would like some feedback from FHIR experts who know more about subscriptions than myself. My second choice would be #1 (the referrer's PractitionerRole endpoint.)
Jul 25, 2018 at 4:18 PM · Notified 93 people

Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
Note: this concept applies beyond Appointments, to ANY update send about a ServiceRequest.
Jul 25, 2018 at 4:18 PM · Notified 93 people

Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
I have just submitted a regarding how to specify what endpoint to send UPDATES about a serviceRequest to (when the sender isn't registered with the receiver)...
[Where to send updates about serviceRequest]

...and how to handle intermediary relays for endpoints (like the HIAL).
[How to specify a target endpoint via Relay]

These discussions are worth following to see what the FHIR community has to say on the topic.
Jul 26, 2018 at 11:40 AM · Notified 93 people

JW

John Wills
Interesting initital responses.
I was wondering if it would be possible/feasible to look at the HIAL as some kind of FHIR proxy server for all the "registered" services in the PSC.
This would be quite a different approach from the HIAL having to un-pack each bundle to see where to forward the ServiceRequest. Might be very flexible, scalable, strategic, and also get very close to the ideal of the HIAL API's being as "transparent" and close to FHIR as possible. It would also tend to provide some level of automatic validation, with real-time use of the PSC also enabling future centralized functionality.
Jul 26, 2018 at 1:27 PM · Notified 92 people

Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
Another method, which i'm now leaning on, is to switch to a messaging for some data flows. The final endpoint would be stored in MessageHeader.destination.target.

Using a messaging paradigm has the added benefit of allowing us to specify WHY a payload is being sent (via MessageHeader.event), instead of creating some contorted method to communicate the following events:

- New ServiceRequest
- updated ServiceRequest
- Revoked Consent to Service Request
- new Appointments
- Updated Appointment

There could be other events to like "Complete ServiceRequest" or "Request for Information".

Note that we could continue to maintain a RESTfor paradigm for certain actions like GET ServiceRequest.

Jul 30, 2018 at 2:12 PM · Notified 92 people

AW

Alfred Wong, VP of Engineering, Think Research

Hey Tim,

I really like that idea as it was something I brought up to you a while ago when we first started this conversation of Hubly and using Message / MessageHeader resources for passing information around.

Maybe I wasn't making my idea clear but I'm glad you got to this point! =)

Jul 30, 2018 at 4:33 PM · Notified 92 people

TJ

Ted Jin, Architect 2, Integration and Solutions Architecture

I like this option better too. The HIAL can only expose one single/generic interface and use the message header to understand the referral context without looking into the payload. If we go down this path, I would assume that the eReferral iGuide will be updated as it currently has destination.receiver crossed, which can be used to enforce endpoint validation logics.

Aug 07, 2018 at 4:05 PM · Notified 92 people

SK

Smita Kachroo

What would be the potential code for 'appointment.status' while sending the updated appointment?Below are the value sets defined for appointment.status :

Code | Display | Definition

proposed | Proposed | None of the participant(s) have finalized their acceptance of the appointment request, and the start/end time may not be set yet.

pending | Pending | Some or all of the participant(s) have not finalized their acceptance

of the appointment request.
booked | Booked | All participant(s) have been considered and the appointment is confirmed to go ahead at the date/times specified.
arrived | Arrived | Some of the patients have arrived.
fulfilled | Fulfilled | This appointment has completed and may have resulted in an encounter.
cancelled | Cancelled | The appointment has been cancelled.
noshow | No Show | Some or all of the participant(s) have not/did not appear for the appointment (usually the patient).
entered-in-error | Entered in error | This instance should not have been part of this patient's medical record.
Sep 17, 2018 at 9:31 AM · Notified 91 people

James Downham, Engagement & Adoption Lead
Greetings:

Just looking at the options for Appointment Status you refer to, and I'm not sure they align with how appointment booking and confirmation actually occur in a real referral scenario.

Typically the status of an appointment might be:
- not yet booked - the booking is pending (meaning it hasn't been booked yet, but will be). This is essentially the same state as the Referral being accepted, so perhaps this is the status that is the appointment status that is assigned by default once the referral status is marked as Accepted. As it's described below, Pending seems to mean Pending Confirmation, which is really just the same as Proposed...
- Proposed - an appointment has been provided, but has not yet been confirmed by any party
- Confirmed - the proposed appointment has been marked as confirmed by one party. In eReferral, this could be marked as confirmed by any party - usually the one who has directly confirmed this with the patient (this could be the sender, the receiver, or the patient themselves). Once it is marked as confirmed by any one party (not required to be done by all or multiple parties), the appointment status should change to Confirmed
Sep 17, 2018 at 10:29 AM · Notified 91 people

Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
When submitting the initial service request, if it comes without a booking there will simply be no appointment resource attached to the submitted ServiceRequest.

If the appointment gets booked and we want to inform the submitted, then we'll send an appointment resource back with the status = booked.

From James' notes, I think that the fhir status of "booked" is equivalent to your "confirmed".

If the appointment were to get cancelled, then the status can get set to cancelled.

The status field is required, and the valueSet is required, so we don't have the option to change them. The rest of the statuses realistically won't be used in initial workflows, but are fine to leave as available options, for potential future workflows.
Sep 18, 2018 at 9:40 AM · Notified 91 people