FHIR Workflow
Speaker

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FHIR Workflow

Workflow is an essential part of healthcare - orders, care protocols, referrals are the drivers of most activity within in-patient settings and a great deal of activity in community care as well.

FHIR is concerned with workflow when there's a need to share information about workflow state or relationships, when there's a need to coordinate or drive the execution of workflow across systems and when there's a need to define allowed actions, dependencies and conditions on behavior.

http://build.fhir.org/workflow.html
### FHIR Workflow Resources

<table>
<thead>
<tr>
<th>Definitions</th>
<th>Resources that define something that can potentially happen in a patient and time-independent manner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ActivityDefinition</td>
<td>• OperationDefinition</td>
</tr>
<tr>
<td>• Measure</td>
<td>• PlanDefinition</td>
</tr>
<tr>
<td>• Questionnaire</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Requests</th>
<th>Resources that ask for or express a desire/intention for something to be done</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Appointment</td>
<td>• Contract</td>
</tr>
<tr>
<td>• AppointmentResponse</td>
<td>• CoverageEligibilityRequest</td>
</tr>
<tr>
<td>• CarePlan</td>
<td>• DeviceRequest</td>
</tr>
<tr>
<td>• Claim</td>
<td>• EnrollmentRequest</td>
</tr>
<tr>
<td>• CommunicationRequest</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Events</th>
<th>Resources that express that something has been done and which can potentially be done because of a request</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ChargeItem</td>
<td>• DiagnosticReport</td>
</tr>
<tr>
<td>• ClaimResponse</td>
<td>• DocumentManifest</td>
</tr>
<tr>
<td>• ClinicalImpression</td>
<td>• DocumentReference</td>
</tr>
<tr>
<td>• Communication</td>
<td>• Encounter</td>
</tr>
<tr>
<td>• Composition</td>
<td>• EnrollmentResponse</td>
</tr>
<tr>
<td>• Condition (aka Problem)</td>
<td>• EpisodeOfCare</td>
</tr>
<tr>
<td>• Consent</td>
<td>• ExplanationOfBenefit</td>
</tr>
<tr>
<td>• Coverage</td>
<td>• FamilyMemberHistory</td>
</tr>
<tr>
<td>• CoverageEligibilityResponse</td>
<td>• DeviceUseStatement</td>
</tr>
</tbody>
</table>

[http://build.fhir.org/workflow.html#list](http://build.fhir.org/workflow.html#list)
FHIR Workflow Development

- Bi-weekly calls for over two years
- Final results – new section in specification for “Workflow”
  - Resource Patterns of Definition/Request/Event
  ....
Opportunities for Referrals and FHIR

**Argonaut Scheduling Implementation Guide**
- Supports both patient and provider scheduling
- Fetch and book available appointments
- Locate providers using the [Argonaut Provider Directory](#)

**CDS Hooks**
- Standard method for invoking clinical decision support in a clinician work flow
- Many possible EHR triggers (hooks): patient-view, medication-prescribe, etc.

**Argonaut Questionnaire Implementation Guide**
- Capture additional information required for referral
- Focused on simple questionnaires
Referral Initiator Requirements

Initiate a referral request to an external system
  • Include patient identifiers, referral identifiers, and clinical information (C-CDA or FHIR resources)

Receive update messages from an external system
  • Decline, Accept, In progress, Complete

Initiate a cancellation message

Process completion of referral and corresponding clinical information

Initiation system must notify a provider if:
  • No response to a referral request
  • No referral outcome in a timely manner
Referral Receiver Requirements

Receive a referral request from an external system
  • Store imitator provided patient identifier and referral identifier
Receive cancel messages from an external system
Support sending a cancel confirmation
  • Accept/Decline/Complete
Support sending an Accept/Decline/Complete statuses
Create and send referral outcome and corresponding clinical information

Bonus: Provide available schedule, and allow external scheduling
Industry Today

360x support still minimal
- Infrastructure and constituent parts (Direct, XDM, C-CDA, HL7 v2) are mostly available today
- Comprehensive specification that covers the base referral requirements

FHIR workflow, even less
- Infrastructure and constituent parts (FHIR Task Resource, FHIR Subscription, FHIR messaging, possible FHIR workflow-specific services or operations) are not currently widely available
- Missing Implementation Guides to cover the base requirements
Opportunity

Define base initiator and receiver requirements and encourage pilots, 360x or otherwise.