FAST Update & Consent Discovery Findings

September 2023 HL7 Annual & WGM
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The FHIR at Scale Taskforce (FAST) is a representative community of motivated healthcare industry stakeholders and health information technology experts who have identified HL7® Fast Healthcare Interoperability Resources (FHIR®) scalability gaps and are actively working on solutions to address current barriers to enable scalable data exchange using FHIR APIs.
What is the Problem?

**TODAY - Exchange**

Exchange characterized by point-to-point interfaces

Adoption trajectory is slow, expensive, and fragmented

**FUTURE - Interoperability**

A common & consistent infrastructure approach to API implementation

Consensus on implementation guides for key enablers, such as directory, security, patient matching, exchange and testing

**DESIRED RESULT:**

A national interoperability approach that enables consistent data exchange via API. We have this for administrative transactions (X12, clearinghouses, WEDI) and pharmacy transactions (NCPDP, Surescripts). We do not have this for HL7-FHIR.
FAST 2023 Members

AEGIS
Availity
avaneer HEALTH
BlueCross BlueShield Association
CMS
Department of Veterans Affairs
Humana
edifecs
EVERNORTH
HCSC
Kaiser Permanente
MEDITECH
Optum
Providence
salesforce
smile
surescripts
The Office of the National Coordinator for Health Information Technology

Founding Member
Conceptual Architecture

FAST CAPABILITIES

Identity
- Digital Identity/Patient Matching

Global Extensibility

National Directory
- Endpoints – Profiles – Versioning
- Trust - Conformance

Future Capabilities

Security
- (Authenticate/Authorize)
  - UDAP Trusted Dynamic Client Registration
  - UDAP Token OAuth User Authentication
  - UDAP JWT-Based Client Authentication
  - UDAP JWT-Based Authorization Assertions

Hybrid/Intermediary Exchange

REQUESTING SYSTEM
- Patients
- Providers
- Payers
- IT Vendors
- Research
- Networks
- Intermediaries
- EHRs
- Population Health
- Public Health
- Social Services

RECEIVING SYSTEM
- Payers
- Providers
- Patients
- Intermediaries
- Networks
- Research
- IT Vendors
- Social Services
- Public Health
- Population Health
- EHRs

VERSIONING

TESTING
## FAST Implementation Guide Dashboard

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<thead>
<tr>
<th>Implementation Guide</th>
<th>Project Page</th>
<th>Scenarios Included</th>
<th>IG Status</th>
<th>Reference Implementation</th>
<th>Number of Connectathons</th>
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<tr>
<td><strong>Hybrid/ Intermediary Exchange</strong></td>
<td>FHIR at Scale (FAST): Exchange with or without Intermediaries</td>
<td>Passive intermediaries</td>
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<td>FHIR-I WorkGroup Home</td>
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<td>PSS for FAST Exchange Metadata Using RESTful Headers</td>
<td>FHIR at Scale (FAST): Exchange with/without intermediaries</td>
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https://confluence.hl7.org/display/FAST/FAST+Implementation+Guide+Dashboard
**Identity**

- Prioritized updates for STU2 with the team members
- Gathering additional SME feedback to refine the Identity Proofing
- Participated in HL7 Connectathon
- Requests:
  - Join workgroup discussions to provide input into STU 2 - 1st and 3rd Thursdays at 2pm ET (HL7 Conference Call Center)

**Security**

- Participated in recent HL7 Security Event
- Participated in HL7 Connectathon
  - Demonstrated adoption of Security IG outside of FAST (Da Vinci, CARIN and TEFCA)
- Collaboration with NDH, Da Vinci and CARIN on Provider Access
- Weighing whether a new STU or an un-balloted update is needed
Testing and Versioning

• Completed discovery process which included gathering community feedback on needs
• Assuming SC approval, will move forward as a FAST project
• Requests:
  – Join workgroup discussions to provide input
    – next call Thursday, September 21st at 10am ET (HL7 Conference Call Center)

Directory

• IG in HL7 ballot process to refine the single IG format and structural changes
• Driving the provider access discussion at the WGM
• Requests:
  – Join workgroup discussions to provide input on the IG - Mondays at 3pm and Thursdays at 11am ET (HL7 Conference Call Center)
• *FAST* develops Implementation Guides to address common implementation challenges but that’s just step one!

• *FAST* is dedicated to supporting & encouraging the implementation community to ensure *FAST* IGs are being widely adopted and provide clarification or address confusion where any exists.

• *FAST* also encourages testing early and often

• *FAST* is working collaboratively with governing bodies to build alignment with their mandates
Connectathon Recap

• [PLEASE UPDATE WITH KEY TAKEAWAYS FROM THE CONNECTATHON]
FAST Consent
Discovery Project
Business:

- The outcome of this sprint will be a matrix matching use case requirements vis-a-vis existing efforts and thereby identifying the gaps. The question of whether FAST gets involved should also encompass FAST’s position in the current landscape and its suitability as the appropriate venue for leading and engaging this work -- aside from 'whether or not other entities have worked/are working on this'.

Technical:

- Refine the scope of “electronic consent for data sharing” and the use of eConsents to automate disclosures of protected information. It’s both a narrower scope for consent and more expansive meaning for “management” to include “apply the consent to info exchange.”

- Refine the scope of the “scalable consent solution for US Realm” to ensure this project can be applied to use cases of immediate need to US implementers.

- Engage with FAST members in requirements gathering.

- Set a broad scope for scalability and defining it as a vector.
# FAST Consent Discovery Team Members

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<td>Carter St. Clair</td>
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<td>Brett Stringham</td>
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<td>Dave Pyke</td>
<td>Audacious Inquiry, FAST PMO</td>
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<td>Joe Lamy</td>
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<td>Alix Goss</td>
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• Aspects of Scalability
  – Unpacking what scaling means for consent management and enforcement

• Abstract Use Cases
  – What areas in consent management and enforcement need to be scaled

• Gap Analysis
  – What existing initiatives cover and exposing the gaps

• Proposing a set of recommendations
  – Where FAST can contribute
FAST Consent Technical Scope

- Consent Management
- Consent Decision and Enforcement
- Excluding authentication
- Excluding broader scope of authorization beyond consent enforcement

Authorization service determines if the consumer should have access to the data. This includes determining legally who is required to have given consent, if anyone, and evaluating any patient criteria, such as age, that might have an effect on authorization. Conditions and special situations, such as "break glass," would be evaluated here.

The Consent Decision Service is only responsible for calculating the result of the consent record, or records, that have been filed in association with the identities specified in by the Authorization Service. This includes considerations such as, has the consent expired.
• Provider-Initiated Request to Consent
• Patient-Initiated Consent
• Review Consent
• File/Sign Consent
• Delegate Consent
  – Substitute decision maker
  – Healthcare proxy
  – Legal guardian for a minor or adolescent
FAST Consent Abstract Use Cases

- Revoke Consent
- Propagation of Revocation
- Disclosure Audit
- Query Consent Decision
- Enforce Consent Decision
FAST Consent Aspects of Scalability

• Transaction Volume
  – More patients
    • More consent management transactions
  – More applications and workflows that depend on consent
    • More consent decisions transactions

• Complexity of Consent
  – More decision factors and more granularity

• Cross-Organizational/Jurisdictional Support

• More Application Areas
  – Treatment, advance health directives, social services, etc.
FAST Consent Gap Analysis Matrix

• Scaling Each Use Case
  – crossing each of the major consent use cases against aspects of scalability
  – Coverage of existing initiatives for each are

• Type/Maturity of Coverage
  – Regulatory/use case/requirements analysis: ■
  – Technical model/architecture: ■
  – Detailed implementation guidance: ■
  – Reference implementation: ■
**US Core Consent Profile**

Attributes and value sets necessary for supporting common privacy (and perhaps social services and clinical trial) use cases

- Meaningful basis for implementation of FHIR Consent
- Reliable ground for regulatory adoption
- Based on:
  - Existing initiatives such as IHE.ITI PCF
  - FAST membership and community input
Consent Management Implementation Guide

Adopt and/or develop an Implementation Guide to cover:

• **Consent ceremony:**
  – interactions between patient, provider, and consent management system
  – to collect and record patient’s consent
  – record a computable consent

• **Consent management API**
  – System-to-system interactions between consent management system and other entities
Consent Management Implementation Guide

Example use cases

• record and track a request for consent from a provider to a patient
  – for example, using FHIR resources such as Task

• record and track patient’s input as they navigates and review a consent
  – for example, using Questionnaire and QuestionnaireResponse resources

• extract a computable Consent resource from the raw responses provided by a patient
  – for example, using Structured Data Capture (SDC) extensions and corresponding operations.

• record and track multi-party approval workflows
  – for example, using Task resource.

• record consent revocation memos
  – for example, using the QuestionnaireResponse resource
• Record the provenance linking a computable Consent and other record material (for example, the initial QuestionnaireResponse resources or consent revocation memos).

• A notification infrastructure to communicate consent lifecycle events (such as creation, revocation, or expiry)
  – for example, using FHIR Subscription.

• Modeling delegation of consent

• Minor and adolescent use cases using FHIR resources.
• Integrating patient matching with consent discovery
  – finding the applicable consent for a given patient from a network of FHIR consent stores.
• Bulk consent management operations such as bulk invites to consent for a group or cohort.
• Disclosure audit infrastructure
  – for example, using AuditEvent
  – subscription patterns for delivering audit logs
Engaging with FAST
# Simple Ways to Join FAST’s Work

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Want to learn more about becoming a member of the HL7 FAST FHIR Accelerator? Contact fast@hl7.org

Join the FAST Community to stay up to date – receive updates about FAST presentations & events, provide additional input and follow our progress.

VISIT FAST PROJECT PAGE
JOIN FAST LISTSERV
JOIN THE LINKEDIN GROUP
Thank you!

For more information on the FAST Initiative, visit the FAST Project Page

Have any further questions/suggestions?

Please contact fast@hl7.org
Appendix
# Gap Analysis Matrix

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<th>Transaction Volume</th>
<th>Consent Complexity</th>
<th>Cross-Organization/Jurisdiction</th>
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| **Provider-Initiated Request to Consent** | Bulk Invite  
  - *Not Covered* | Multi-Party Consent Management Workflows  
  - *Not Covered* | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ |
| Consent Management API | *Not Covered* | *Not Covered* | *Not Covered* |
| Decentralized Consent Management | *Not Covered* | *Not Covered* | *Not Covered* |

| **Patient-Initiated Consent** | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ | Multi-Party Consent Management Workflows  
  - *Not Covered* | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ |
| Consent Management API | *Not Covered* | *Not Covered* | *Not Covered* |

| **Review Consent** | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ | Consent Management UI/UX  
  - *Not Covered* | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ |
|                      |                      | Decentralized Consent Management  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ |                      |
|                      |                      | Granular Consent  
  - FHIR Core Consent: ☐  
  - IHE ITLPCF: ☐  
  - FHIR DS4P: ☐  
  - LEAP Consent: ☐  
  - Stewards of Change: ☐ |                      |
| Cross-Organization Patient Identity | *FAST Identity IG: ☐  
  - Stewards of Change: ☐ | *FAST Identity IG: ☐  
  - Stewards of Change: ☐ |                      |
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