Consent Management, Decision, Enforcement Services, and Computable Consent

Following the previous Consent Management tracks in the three most recent Connectathons, this track is focused on consent management, consent decision services, and consent enforcement services, with a special emphasis on computable consents—i.e., consents that record patient preferences in the form of machine-readable rules.

A broad set of use-cases are covered by this track including privacy consent (or consent to share information), consent for treatment, consent for research, and advance directives.

Participants

FHIR Resources:
Consent, Questionnaire, QuestionnaireResponse, AuditEvent, Provenance, and informed consent through interactions with MedicationRequest, ResearchSubject, and ResearchStudy

Services:

- **FHIR Consent Store**: FHIR server dedicated to serving FHIR Consent resources—and related resources such a Patient and Organization.
- **Consent Management Services (UI)**: any consent management service (e.g., graphical user-interface) capable of generating FHIR Consent resources.
- **Consent Decision Service**: any component capable of consuming FHIR consent resources and making decisions about whether activities in a workflow (e.g., access, sharing, treatment, enrollment in a research project) are permitted based on the consent rules.
- **Consent Enforcement Service**: any component capable of enforcing the patient consent decision in a particular workflow (e.g., exchange, treatment, or research).
- **Security Labeling Service (SLS)** which can be used for labeling FHIR resources based on patient consent preferences.
Privacy Protective Services (PPS) which can be used for modifying FHIR resources for privacy purposes based on consent rules and assigned labels, for example, redaction of confidential resources from an outgoing FHIR bundle.

Audit Service which can be used for recording events of permitted or denied activities based on a consent decision.

Provenance Services which can be used to maintain the link between different consent artifacts such as human readable consent documents, FHIR Consent resources, and FHIR QuestionnaireResponse.

Test Artifacts:

Example FHIR Consents (Computable):


Authorization Requests:


Postman Test Collection:


Notable Achievements:

Demonstrated 5 Uses Cases, Patient-Privacy, Advance Care Directives, DNR, POLST, and Informed Consent for Treatment and Research. Each of which created computable consent that was exercised against 23 test conditions.

Analyze My Data was demonstrated to the DS4P and Security Labeling track, where the integration of the LEAP SLS provides the Patient/User visibility into possible privacy concerns within their clinical record.
Abigail Watson of Mitre gave an overview of the MeHI Consent Engine evaluation of PACIO, Gravity, and LEAP projects. Where all shared some level of interoperability. The analysis, diagram below, of LEAP is incomplete, as MedicationRequest, ResearchSubject, and ResearchStudy resources demonstrated in LEAP’s informed consent workflows were omitted.
Issues/Recommendations:

- Revisit if LEAP Questionnaires has structure issues as identified by MeHI tooling
- MedicationRequest, ServiceRequest, and ResearchSubject status codes are still limiting factors in moving informed consent for Treatment and Research forward.
- Continue to investigate interoperability with PACIO and Gravity projects.

Moving Forward:

- The work continues....

Session Recordings:

Session playlist is available on YouTube at:

https://www.youtube.com/playlist?list=PLkBLKvxgUvucYr61xoCSleMxAlj8w6iWr