S&I Initiative Update
Data Access Framework (DAF)

HITSC Meeting
May 20, 2015
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ONC Sponsor- Mera Choi
Agenda

• Background and Overview
• Collaboration with SDOs and Current Activities
• Relationship to Other Projects
• DAF Future Phases
• Questions
Background and Overview
Data Access Framework:  

Background

• DAF primarily focuses on enabling *providers* to access their patient’s clinical information using *modular and substitutable standards and profiles*
  
  – Within their own Local Organization (Local DAF)
  – From a single Targeted external Organization (Targeted DAF)
  – From multiple external Organizations (Federated DAF – future phases)
Data Access Framework: Overview

Data Access Framework

Local Access via Intra-Organization Query
- Create and disseminate queries internal to organization
  - Query Structure Layer
  - API’s for Data Access
  - Authentication/Authorization Layer
- Receive standardized responses
  - Query Results Layer

Targeted Access via Inter-Organization Query
- Create and disseminate queries to single external Organization
  - Query Structure Layer
  - Transport Layer
  - Authentication/Authorization Layer
- Receive standardized responses from external orgs
  - Query Results Layer

Federated (Distributed) Access across multiple organizations
- Create and disseminate queries to multiple orgs
  - governed by a network
- Receive aggregated or de-identified responses
- Focus on Information Model for the network and
- Leverage standards from earlier phases.

Standards based approach to enable information access at all levels: Local, Targeted, and Federated (Distributed)
Data Access Framework: Building Blocks and Scope

Data Access Framework Building Blocks

- **Data Model to support queries**
  - Information Models

- **Query Results**
  - Result Vocabularies and Value Sets
  - Result Structure

- **Query Structure**
  - Query Vocabularies and Value Sets
  - Query Structure

- **Security Layer**
  - Authentication/Authorization

- **Transport Layer**
  - Application Transport Protocols
  - Basic Transport Protocols

**DAF Scope:** Develop Implementation Guide using standards/profiles for specific use cases
- Local (Intra-Organization) access of clinical information from one or more systems
- Targeted access of clinical information from a single known external organization
- Use cases deal with accessing both data elements (e.g. problems, medications, procedures) and documents (e.g. C-CDA, C32)

**DAF Out Of Scope**
- Trust establishment between organizations for Targeted Query
- Discovery of End Points for Targeted Query
- Patient Matching rules and algorithms that organizations may implement
- Policies that allow/dis-allow disclosure of patient data
# Data Access Framework: Query Stacks

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<td>Basic Transport Protocols</td>
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- Security Layer Authentication/Authorization:
  - OAuth2 profiles* - OAuth2 profiles still evolving

- Transport Layer Application Transport Protocols:
  - Basic Transport Protocols
  - HTTP

- Transport Layer Transport Protocols:
  - Basic Transport Protocols
  - HTTP

- SOAP 1.2
Collaboration with SDOs and Current Activities
Data Access Framework:
Collaboration with SDOs

**DAF S&I Initiative – IHE PCC collaboration published**
**DAF IHE White Paper** in Fall 2014
- Identified existing IHE profiles that can be leveraged for Document Access
- Identified emerging FHIR based profiles for Document Access
- Identified gaps for discrete data element access

**DAF S&I Initiative – HL7 Collaboration**
- Developed an Implementation Guide using the FHIR standard for data element access
- HL7 PSS approved in Fall 2014 and published for DSTU2 in May 2015. (Currently under Ballot Reconciliation)
- Data Element list based on MU2 + Community Input
- Publish IG in Summer/Fall 2015 (based on FHIR DSTU 2 publication timeline)

**DAF S&I Initiative – IHE USA / IHE PCC Collaboration**
- Developed an Implementation Guide using the MHD v2 (FHIR based) profile for Document Access
- Developed implementation guidance for existing SOAP stack based on XCA
- Implementation Guide submitted to IHE for balloting
- IG expected for final publication Fall 2015 (following IHE processes)
Relationship to Other Projects
Other DAF Related Projects

• **Argonaut**
  – Project led by industry in collaboration with HL7, with goals that include the following:
    • Development of CCDA to FHIR Mappings
    • Security Guidance for FHIR
    • Accelerate FHIR Implementation and DSTU publication
    • [http://www.hl7.org/fhir/2015May/argonauts.html](http://www.hl7.org/fhir/2015May/argonauts.html)
    • **Relationship: DAF Data Element IG based on FHIR profiles is being reused by Argonaut**

• **HEART**
  – An MIT project supported by ONC as a Committed Member
  – The goal is to harmonize and develop set of privacy and security specifications/profiles to enable individuals to control access to RESTful health related resources using Oauth, OpenId, UMA
  – Develop open source reference implementations for the developed specifications/profiles
  – [http://openid.net/wg/heart/charter/](http://openid.net/wg/heart/charter/)
    • **Relationship: DAF Security layer could potentially reuse profiles/specifications developed by HEART**
DAF Future Phases – Federated (Distributed) Access
Data Access Framework:
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Questions
Useful Links

• DAF Homepage

• DAF Initiative Signup

• DAF Charter

• DAF Standards, Harmonization and Implementation Activities

• DAF HL7 FHIR IG

• DAF IHE White Paper
For questions, please feel free to contact your support leads:

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