

The Office of the National Coordinator for
Health Information Technology



Data Access Framework (DAF)

S&I Initiative Update

January 27th, 2014

Leadership Team

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ONC Sponsor: Mera Choi

Technical Lead: Nagesh Bashyam

Putting the **I** in Health **IT**
www.HealthIT.gov

- Background and Overview
- Collaboration with SDOs, Current Activities and Timelines
- Relationship to Other Projects
- Questions

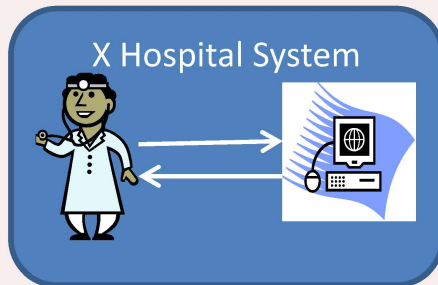
Background and Overview

- BlueButton initiatives are enabling patients to access to their own data
- DAF is similar, except it is focused 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

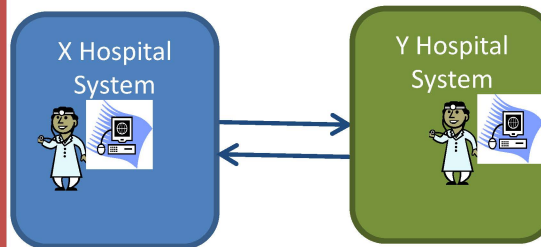
Local Access via Intra-Organization Query

- Create and disseminate queries internal to organization
 - Query Structure Layer
 - API's for Data Access
 - Authentication/Authorization Layer
- Receive standardized responses
 - Query Results Layer



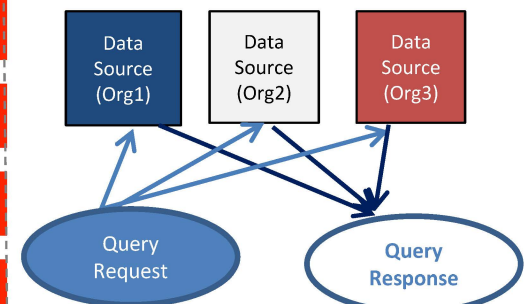
Targeted Access via Inter-Organization Query

- 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



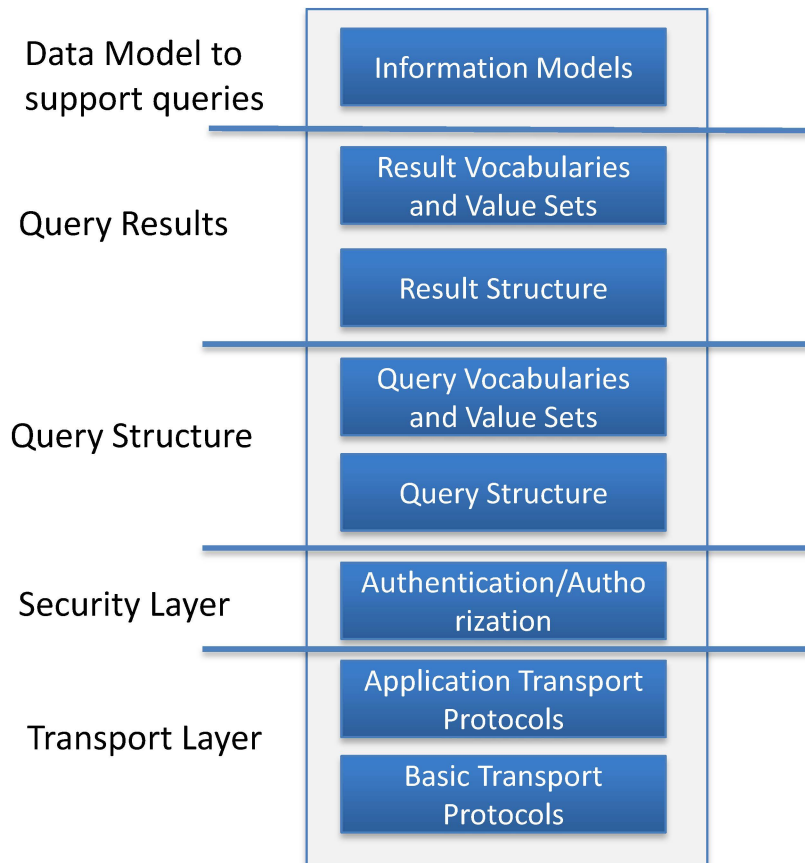
Federated (Distributed) Access across multiple organizations

- 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)

DAF Building Blocks and Scope



Data Access Framework
Building Blocks

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 **both** accessing data elements (MU2) and documents

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

Collaboration with SDOs, Current Activities and Timelines

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

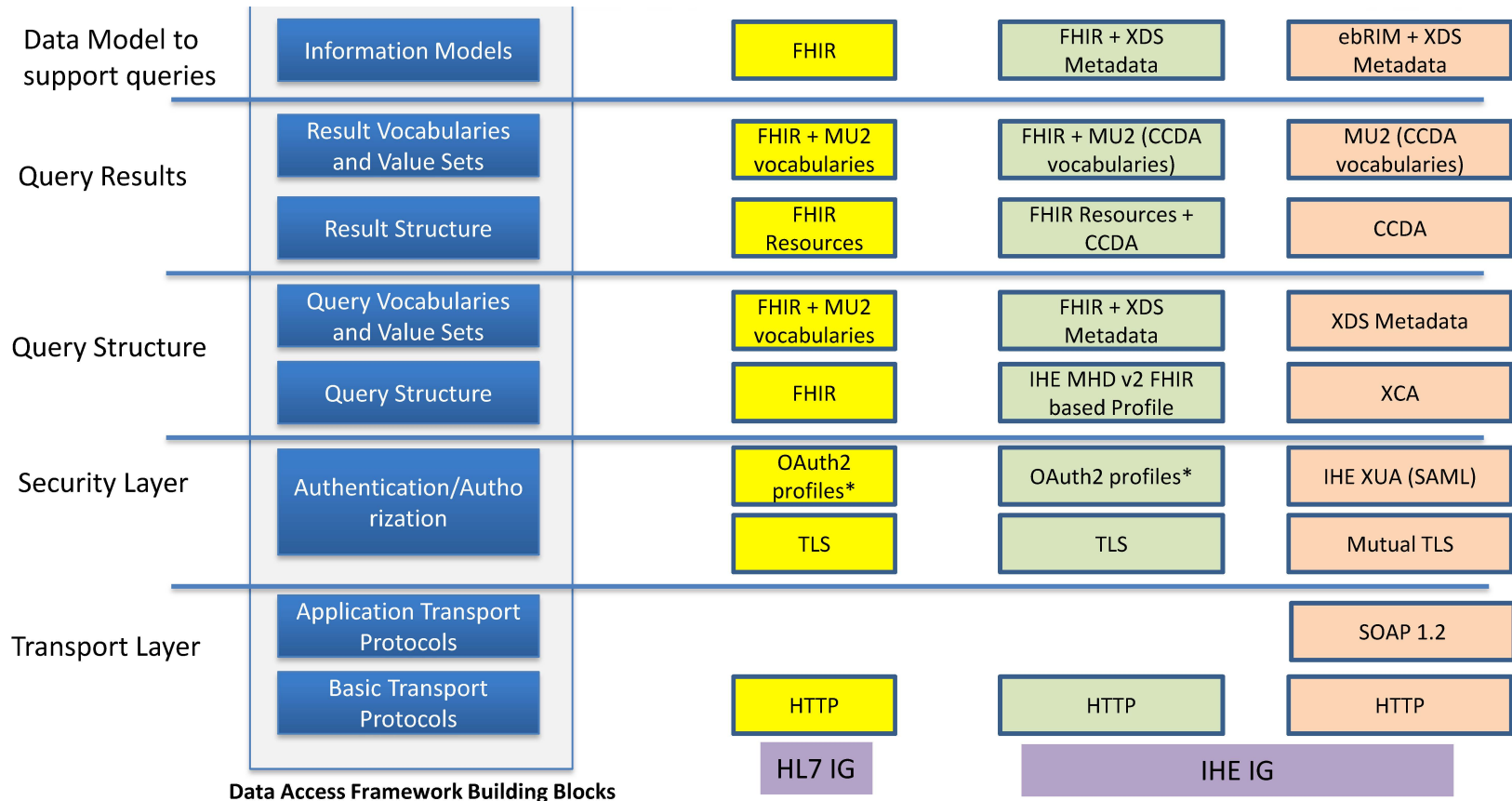
DAF S&I Initiative – HL7 Collaboration

- Develop an Implementation Guide using the FHIR standard for data element access
- HL7 PSS approved in Fall 2014
- Data Element list based on MU2 + Community Input

DAF S&I Initiative – IHE USA / IHE PCC Collaboration

- Develop an Implementation Guide using the MHD v2 (FHIR based) profile for Document Access
- Develop implementation guidance for existing SOAP stack based on XCA

DAF Query Stacks



RESTful FHIR based Query Stack for Data Element based access

RESTful FHIR based Query Stack for Document Metadata based access

SOAP Query Stack for Document Metadata based access

* - OAuth2 profiles still evolving

DAF HL7 Collaboration – Current Activities and Timeline

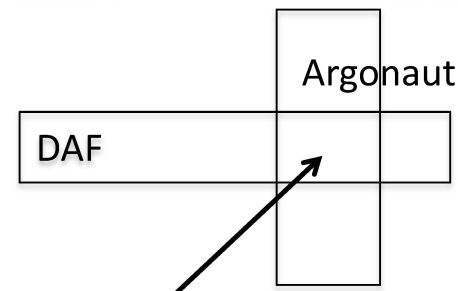
- **DAF Data Element based access IG**
 - DAF Data Element Implementation Guide published for Comment Only ballot in Dec 2014
 - Total Votes – 166
 - Total Comments - 291
 - HL7 FHIR Connectathon in January @ SanAntonio
 - Track 2 dedicated to data access using DAF/Argonaut
 - 15 people performed queries for Track 2
 - Good discussion around server testing, test data and conformance
 - Next Steps
 - Complete Ballot Reconciliation (3/22/2015)
 - Publish for DSTU Ballot as part of FHIR DSTU 2
 - Reconcile comments from DSTU ballot and publish in Fall/Winter 2015

DAF IHE Collaboration – Current Activities and Timeline

- **DAF Document Metadata based access IG**
 - DAF Document Metadata based access IG being developed currently for publication later in the year
 - SOAP Query Stack implementation guidance developed
 - RESTful Query stack implementation guidance started
 - IHE NA Connectathon 2015 in January @ Cleveland
 - New Directions Track dedicated to IHE MHD v2 testing
 - Participating to observe/learn and obtain feedback on IHE MHD v2 and its alignment with FHIR
 - Next Steps
 - Complete IG development for Document Metadata based access for both RESTful and SOAP Query stacks
 - Test the implementation guidance at Connectathons
 - Ballot IG, Publish in Fall/Winter of 2015

Relationship to Other Projects

- Argonaut
 - Is a project led by industry in collaboration with HL7
 - Goals include:
 - Development of CCDAs to FHIR Mappings DAF
 - Security Guidance for FHIR
 - Accelerate FHIR Implementation and DSTU publication
 - <http://hl7.org/implement/standards/FHIR-Develop/argonauts.html>
 - Relationship: DAF Data Element based IG based on FHIR profiles could be reused by Argonaut
- CCDAs on FHIR
 - HL7 project
 - Develop FHIR profiles that enable mapping of CCDAs templates to FHIR resources
 - Relationship : Where appropriate DAF and CCDAs on FHIR should harmonize to a single profile for a given resource
- HEART
 - MIT project supported by ONC as a Committed Member
 - 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/>
 - Relationship: DAF Security layer could potentially reuse profiles/specifications developed by HEART



Questions



- **DAF Homepage**
 - <http://wiki.siframework.org/Data+Access+Framework+Homepage>
- **DAF Initiative Signup**
 - <http://wiki.siframework.org/Data+Access+Framework+Join+the+Initiative>
- **DAF Charter**
 - <http://wiki.siframework.org/Data+Access+Framework+Charter+and+Members>
- **DAF Standards, Harmonization and Implementation Activities**
 - <http://wiki.siframework.org/DAF+Standards+Harmonization+and+Implementation>
- **DAF HL7 IG**
 - <http://hl7.org/implement/standards/FHIR-Develop/daf.html>
- **DAF IHE White Paper**
 - [DAF IHE White Paper](#)

Initiative Support Leads

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