On the Road to Interoperability

Facilitating Innovative Data Exchange and Re-Usability

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Conflict of Interest

Richard Elmore is Senior Vice President of Allscripts, Vice Chair of CommonWell Health Alliance, member of ONC’s Health Information Technology Standards Committee and on the Boards of Directors for VITL and several private Health IT companies.

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Agenda

- Towards a learning health system
- Consumers rule
- Benefits of APIs
- The need for innovation
- Why FHIR?
- Why Argonaut?
- What and when?
- FHIR Innovators
Learning Objectives

• Describe how public API approaches can address barriers to health information exchange.
• Explain the core elements of FHIR.
• Compare alternative approaches for implementing API solutions.
• Discuss the potential of C-CDAs on FHIR.
• Identify business and use cases for API approaches.

This session examines new solutions to solving key barriers to interoperability. Solutions such as FHIR (Fast Healthcare Interoperability Resources) and public API approaches enabling SMART (Substitutable Medical Applications & Reusable Technologies) applications are potential game-changers. Health Level Seven International (HL7) has released specifications and an implementation guide for FHIR, and trials are underway. This session focuses on the application of open standard web service technologies that enable exchange and care coordination that are relevant to Meaningful Use.
Towards a learning health system

• Background
  • 2013 JASON scientists report calls for a robust health data infrastructure using application programming interfaces (APIs)
  • 2014 ONC’s JASON task force calls for APIs as a basic conduit of interoperability
  • 2015 Edition ONC Standards include APIs that respond to data requests for any one category or all of the Common Clinical Data Set
  • API’s are an important tool for interop and learning health system
  • Also needed:
    • Distributed population queries for public health, comparative effectiveness research and other situations where de-identified population intelligence is required
    • Better defined/constrained documents along with directed exchange
    • Policies and incentives for exchange
Consumers rule

• Interoperability can be achieved through use of current rules and regulations

• OCR Guidance calls for consumers to be able to connect their preferred app for their own health care information, subject to feasibility and security considerations

• Health care providers will prefer that consumer’s have easy access to their information in their preferred app

• APIs are the enabling technology

• HIPAA or FTC privacy and security rules will be apply - depending on whether the app operates inside or outside of HIPAA
Benefits of APIs

Checks all the boxes for satisfaction, treatment, electronic secure data, patient engagement and population management and savings.

http://www.himss.org/ValueSuite
The need for innovation

- While interoperability is growing rapidly, there are structural impediments that inhibit both the scale and scope of growth
  - Standards are unique to health care
  - Standards are too complex
  - Many standards have too much optionality
  - Scope of data exchanged is either too broad (CCDA) or too narrow (labs only, medications only, etc)

- Interoperability is not just about standards
  - Policy alignment
  - Standards alignment at multiple levels (format, semantic)
  - Business/workflow alignment

- The challenge of innovation is to know how and when to channel creative activity and “freeze” and instantiate output into market-ready products
Why FHIR?

• As a standard, FHIR breaks through many of the structural barriers of legacy standards
  – RESTful API which is in browser-based same style as standards used in the rest of the internet economy
  – Based on same principles as modern internet standards
  – Allows users to create detailed profiles that can plug into FHIR resources
  – Allows data-level and document-level queries

• As a standard, FHIR alone can’t solve all of the barriers to interoperability
  – Flexibility of standard opens up wider variety of use cases, and importantly, to a broader set of users than just provider-to-provider
  – By lowering the barriers to participation by a broader set of users inside and outside of health care, FHIR holds the prospect of having a strong “democratizing” affect on interoperability
  – Broader and deeper demand released by the standard may catalyze policy and workflow development needed to support new and innovative use cases
Why Argonaut?

- FHIR is a nascent standard
- If it proceeds through the same processes as past standards, it will take a long time to reach the market
- In order to accelerate a standard:
  - Need to focus on maturing those parts of the standard that will cover most day-to-day use cases
  - Need to have focused technical input and project management discipline
  - Need to have testing and implementation feedback from real users
  - Need to have easily accessible implementation guides focused on high priority use cases
- Argonaut Project is addressing all of these areas
  - Focused technical SMEs and project management to develop accessible implementation guides for: data-level queries, document-level queries, and provider directory management
  - Implementation community engaged in managed testing sprints to provide ongoing feedback to implementation guide development
Where and when?

- Apps:
  - SMART on FHIR
  - CommonWell Health Alliance
  - Precision Medicine Initiative
  - Many others
- FHIR Server:
  - HealthIT vendor implementations (Allscripts, athenahealth, Cerner, Epic, McKesson, Surescripts, many others)
  - Industrial strength considerations: security, logging, audit, recovery
- When
  - Today: Draft Standard for Trial Use 2.0
  - Normative version: 2017
FHIR Innovators - Discussion

Grahame Grieve  FHIR Architect

Josh Mandel  SMART on FHIR Architect

Chuck Jaffe  HL7 CEO
Questions

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