Connectathon 13 Summary
CDS Hooks Track

SMART-on-FHIR App for Zika Workflow

October 5, 2016
Who We Are and What We Do

- Prime Dimensions helps healthcare organizations (HCOs) transform, redesign and extend healthcare delivery, with emphasis on improving quality, achieving better outcomes and lowering costs.
- We operate three core service areas:
  - Advisory Services
  - Digital Strategy
  - Healthcare Solutions
- We accelerate innovation for exceeding future standards of care, patient satisfaction and provider expectations and ensuring financial sustainability.
- Our offerings are designed to provide measurable clinical, operational and financial value.
- We utilize an agile delivery model and multidisciplinary, integrated teams of specialists to guide, build and deploy solutions that provide transformational impacts and promote scalability.
## Expertise and Capabilities

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### Systems Integration

- Architecture Development
- SDLC Management
- Business Process Management

### Application Development

- Platform Solutions
- Cloud Computing
- Mobile Applications

*Hadoop, YARN, Spark, NoSQL

**API Management**

**Data Virtualization**

*Systems Development Life Cycle*
SMART-on-FHIR Zika App

- Invokes **CDS Hooks services** to evaluate a patient for Zika risk
- Seamlessly pulls relevant information directly from the patient's medical record for evaluation within our embedded rules engine
- Responses provide additional context related to Zika exposure to determine next steps
- Persists CDS cards on subsequent patient-view CDS Hooks
- Benefits: While working in the EHR, a user can perform multiple activities in series or in parallel via a unique hookInstance
  - Includes a description of what events should initiate and terminate a given hook.
  - Allows an external service to associate requests with activity state, which is necessary to support the following app-centric decision sequence, linked by a common hookInstance:
    - EHR invokes CDS hook
    - CDS service returns *app link card*
    - User clicks app link and interacts with app
    - Flow returns to EHR, which re-invokes CDS hook
    - CDS service returns *decision* with user’s choice
Track Participants

Vendors

- Allscripts (1)
- Cerner (1)
- Epic (1)

Service Providers

- AllScripts (1)
- Harvard (1)
- Intermountain Healthcare (2)
- Philips (1)
- Polyglot (1)
- Premier (1)
- Prime Dimensions (2)
- RxREVU (3)
- Stanson Health (3)
- University of California (1)
- VisualDx (1)
Interoperability with Vendors
Live Demo

- **Our solution** provides EMR integration, data exchange, uninterrupted workflow automation and interoperability with multiple EMR vendors
- [http://demo.primedimensions.com](http://demo.primedimensions.com)
- Click on “Patient View”
Value-added FHIR Services

▲ Implement complex clinical workflows and execute transactions and rules within FHIR resource.

▲ SMART-on-FHIR application development

▲ Develop Design Specifications and Concept of Operations for proposed enterprise-wide FHIR solutions, including system interfaces and data repositories (relational and non-relational).

▲ Offer expertise and competencies related to defining, implementing and registering FHIR Extensions

▲ Establish best practices for mapping FHIR to previous HL7 implementations.

▲ Develop context diagrams, functional decompositions and data flow diagrams to define re-usable process definitions for redesigning, optimizing and automating clinical workflows that will be mapped to FHIR resources and profiles.
Value-added FHIR Services

▲ Serve as the systems integrator for the development and deployment of solutions that accelerate and/or complement FHIR adoption, such as data integration tools, analytics platform, workflow automation and visualization tools.

▲ Develop an Enterprise data strategy that identifies common data structures and environments to streamline FHIR-enabled application development and encourage innovation.

▲ Create, update and maintain APIs and FHIR-related documentation, process definitions and data models in a centralized knowledge base for all related artifacts.

▲ Conduct facilitated sessions and interviews with business users, clinical users and technical staff to guide the development of compelling use cases for FHIR applications.

▲ Perform gap analyses, architecture assessment and roadmap to consolidate, rationalize and modernize the IT infrastructure.
Future State Event-Driven Architecture for Health Care Organizations

**KEY FEATURES**

- Improves performance and scalability with Apache Spark, data discovery tools and analytic databases
- Optimizes workloads on the Clinical Data Warehouse for greater operational efficiency and sustainability
- Reduces IT operational costs by eliminating redundancies and aligning capabilities
- Enables advanced analytics and clinical informatics through an interoperable and scalable infrastructure
- Supports the emerging Fast Healthcare Interoperability Resources (FHIR) specification
- Ingests data streams from devices and sensors to prepare for the “Internet of Health Care Things”
- Streamlines technology insertion based on agile development methodology for rapid deployments
- Balances sustainment, incremental advances, and transformational technologies
- Supports strategic planning, organizational alignment, and continuous process improvement
- Provides a practical framework for defining and realizing the evolving future state
- Integrates multi-structured and stream data using advanced technologies that provide high velocity data capture, discovery and analysis
- Establishes a virtualized data environment and extensible service-oriented architecture that supports both Restful and SOAP APIs, allowing multiple data structures and formats (JSON, XML, etc.)
- Provides an application development platform with domain-specific enclaves for evolving from “systems of record” to “systems of engagement”

**DRIVING HEALTHCARE TRANSFORMATION**

- Population Health Management
- Care Coordination
- Patient Engagement
- Payment Reform
- Clinical Decision Support
- Research & Informatics
- Disease Management
- Utilization Optimization
- Resource Allocation
- Improved Quality of Care
- Better Patient Outcomes
Core Values

Ethical. We operate with the highest level integrity and professionalism.

Principled. We strive to do the right thing in every situation.

Passionate. We care deeply about our clients’ issues.

Practical. We propose and implement feasible solutions that endure.

Collaborative. We seek out, listen to, and team with our clients to serve as a trusted advisor.

Proactive. We remain forward-focused and attentive to situational awareness.

Invested. Our success is tightly coupled with performance and client satisfaction.
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