Cerner’s Open Platforms

Accelerating a Community of Innovation with SMART on FHIR

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Open Platforms Vision

Cerner is accelerating health care innovation by enabling a broad community to amplify the power of its open platforms
APIs enable apps for providers and consumers

Provider-facing apps can be developed that leverage the Millennium Platform using APIs

Government regulation requires more choices for consumer-facing apps via APIs

Plan to attest for Meaningful Use Stage 3?
The Ignite API for Millennium addresses Objective 5, Measure 1
Emerging standards are making “apps” a reality

- **FHIR = “Fast Health Interoperability Resources”**
  - A standard for accessing health care data (“Resources”)
  - ReSTful API design leverages Internet standards (HTTP, etc.)
  - Created by Health Level 7 International (HL7)
  - Emerging support by most major HIT providers (e.g., Argonaut Project)
  - Meets EHR Certification for MU3

- **SMART = “Substitutable Medical Applications and Reusable Technology”**
  - A SMART App is a Web App
    - HTML5 + JavaScript
    - Typically embedded in EHR
  - EHR Data Access is via FHIR
  - OAuth2 for security and context passing
  - Also supports smart-phone and patient-controlled apps
Cerner’s Ignite APIs fulfills MU3… and beyond…

Why a cloud-based API?
- Industry compliant security architecture for internet facing applications
  - Centrally Managed Security (connection to internet, authentication and authorization)
  - Data management
- Agile deployment of updates and enhancements of FHIR standard
- Centralized ontology mapping
- Flexibility – scale capacity to meet application demand (predictable costs)

Why FHIR?
- Standards-based API accelerates development community adoption
  - Common, web-based technology (REST, JSON, XML, OAuth)
  - Standardized data models (common, human readable set of data elements, “resources”)
  - Built in authentication and authorization model
  - ONC has suggested that FHIR may eventually be required
George Lassos the Moon.....
### Resource Availability (as of 03/15/17)

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Cerner Open Developer Experience (*code_*):  [http://code.cerner.com](http://code.cerner.com)
Cerner Open Platforms

- Apps registered on code.cerner.com: 1094 (139 patient-facing + 955 provider-facing)
- Free and open documentation of 18 FHIR API Resources.
- Starter app and tutorials
- Sandbox on actual Cerner EHR back-end for patient and provider-facing apps (over 300 registered apps)
- Active Google Group (Over 600 posts year-to-date). Cerner Engineers are highest contributors.
Open Business Approach

The culture that drives a **friendly business approach**, allows **extensibility** of our platforms and **enables a collaborative environment** that hastens innovation to advance health care.
Developer Program Growth

HEART PATHWAY APP
- Advanced Surgical Care Coordination
- Optimize PreOp Resources
- Decrease Case Delays and Cancellations
• Developed by VisualDx

• Provides image-driven differential diagnosis

• Uses SMART for launching within PowerChart

• Uses FHIR to curate a tailored sub-set of images based on patient age, sex, and medication prescriptions
Monitor Ignite APIs for Millennium

- Monitor application usage
- Identify highly used and adopted applications
- Transparency to Ignite API performance
Analyze Individual Application

- Understand application adoption and usage
- Discover top users
- Identify application usage and audience patterns
- Track application performance
Ignite APIs for Millennium

Consumer

Provider

Millennium®