Vaccine Code Sets Management Service (VCSMS) Pilot

April 12, 2017

Stuart Myerburg, JD
Immunization Information Systems Support Branch, CDC

John Wilkinson
Clinical Architecture
Agenda

- Background
- Pilot
- Next Steps
Background
Emerging Strategic Priorities and Initiative Alignment

Improving IIS Performance and Reducing Performance Disparities
Influencing the Health IT Environment
Improving Adherence to Standards
Improving Program Sustainability

Key Strategies
- Shared and centralized Services
  - Assisting awardees to diversify funding sources
IIS Centralized Service Vision & Mission

**Vision:** IIS nationwide are standardized and can achieve efficiencies through shared services and support in order to meet the needs of the immunization community

**Mission:** To facilitate enhanced collaboration, support, and sharing of services to enable efficient, cost-effective, standardized and high quality services and support to multiple IIS

---

**IIS Centralized Service Goals**

- **Provide shared services to support IIS**
- **Promote IIS Best Practices adoption**
- **Reduce IIS Variability**
- **Reduce costs**
- **Increase IIS operational efficiency and effective**
- **“Raise the bar” for awardees to achieve IIS goals**

---

**NCIRD Supports IIS Shared Service**

**Awardees Use IIS Shared Service**

**Sustainable Nationwide Immunization Information Management**
Background

Vaccine and Vaccine-related Code Sets

- **Challenge:** Need for increased flexibility and automation in data set management and distribution
- The current method for accessing the codes (illustrated below) will continue to be available
- New development will allow for enhanced features, easier content management, and new delivery methods
Pilot Overview
Vaccine Code Sets Management Service (VCSMS)

Objectives: Provide IIS and other targeted users with a comprehensive mapping and translation service for vaccine-related codes.

• Provide users with the content and formats they need
• Offer direct delivery of vaccine-related codes as an additional option to end users
• Increase automation and efficiency of vaccine content management

How: Implement and configure a platform that will provide users with flexibility, enhanced content format options, and new ways of receiving content updates.

Who (content subscribers): IIS, EHRs, IHEs, and other electronic health systems

Primary Goal Is More Efficiency and Automation
The scope of the codes and mappings offered will remain consistent in Year One. However, delivery and management of the information will be improved.
Pilot Timeline

Community input will help define the new model and delivery options.

<table>
<thead>
<tr>
<th>January 2017</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon] Pilot Introductions</td>
<td>![Icon] Identify and Interview Volunteers, Finalize Requirements</td>
<td>![Icon] Confirm Pilot Package Options</td>
<td>![Icon] Pilot and Test the Service (April – June)</td>
<td>![Icon] Pilot Evaluation (July – August)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pilot Requirements

The Requirements Gathering Process consists of two methods:

1. Detailed Discussions with Pilot Participants
2. Community Discussions and Education Sessions
Pilot Stakeholder Requirements Gathering Sessions

Output Formats
• The most common formats being used to extract code sets is Excel and Flat Files

Versioning
• All pilot stakeholders expressed an interested in implementing clear versioning of the code sets

Effective Dates
• For codes that have not been retired or removed, clear effective dates would be useful

Data Transformations
• Users that are extracting the data from the CDC Website are performing transformations to the code sets to enter into their applications
Symedical® Functions and Illustration

Configuration
- Environment and tool set up, data population
- Implement Symedical® Data Lifecycle Management and Data Architecture Framework

Data Package and Content
- Determine stakeholder data needs
- Define relevant data set packages

Distribution and Delivery
- Configure code set recipient’s subscription profile
Enhanced Code Set Outputs for Users

- Creation of new content packages (attributes useful to users)
- Functionality for users to subscribe to relevant content packages
- New method of delivery (i.e. Content Cloud Agent)
- Clear Versioning
- Standardized Content
- Enhanced Automation
Symedical – Terminology Life Cycle Management
Focusing on Distribution – Web Site

Subscription Portal
Terminology Management Tools
Map Management Tools

Symedical Core Content
Subscribed Content
Local Content
Terminology Maps
Mapping Engine

Legacy/Internal Distribution
Existing Databases
Flat Data Files
Client Application

Symedical
The Content Cloud will be a distribution method available to users of the vaccine code sets, in addition to the existing method of extracting outputs from the CDC Website.

**Content Cloud Details**

- Clinical Architecture’s hybrid push method of delivery
- Application used to access and subscribe to content packages available within the Clinical Architecture Content Cloud
- Files are delivered as pipe-delimited ASCII text files – easier for users to retrieve only the data needed
- Technical requirements and components will be installed with assistance from the Clinical Architecture team
Focusing on Distribution – Hybrid Push/Pull Model

**Terminology**
- Subscription Portal
- Terminology Management Tools
- Map Management Tools
- Symedical Core Content
- Local Content
- Terminology Maps
- Subscribed Content

**Tools**
- Content Publishing
- Mapping Engine
- Private Distribution Gateway
- Registered Distribution Portal

**Production Node**
- CDC

**Legacy/Internal Distribution**
- Existing Databases
- Flat Data Files
- Client Application

**Cloud Distribution**
- Download Agent
- Structured Flat Data Files
- Client Application

**Symedical Core Content**
Clinical Architecture – Content Cloud

![Clinical Architecture Content Cloud](image)

<table>
<thead>
<tr>
<th>Title</th>
<th>Subscribed</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC Immunization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDC Immunization Content Model</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>CDC Race and Ethnicity</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>CVX - CPT Reference Maps</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>CVX and MVX - NDC Reference Maps</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Census Data</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Current Item:

- CDC - Vaccine Information Statements (VIS)
- CDC - Immunization Information Source
- CDC - Manufacturers of Vaccine (MVX)
- CDC - Vaccine Administered (CVX)

Last Published: 2016-12-15

Licensing: General Use Restrictions
<table>
<thead>
<tr>
<th>SourceCode</th>
<th>TermOriginal</th>
<th>IsPreferred</th>
<th>CreationDate</th>
<th>ModificationDate</th>
<th>EffectiveDate</th>
<th>ObsoleteDate</th>
<th>IsRetired</th>
<th>LastUpdate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Hepatitis A and Hepatitis B Vaccine</td>
<td>TRUE</td>
<td>2013-04-08T1:00:00Z</td>
<td>2016-08-26T00:00:00Z</td>
<td>2016-08-26T00:00:00Z</td>
<td>2016-08-26T00:00:00Z</td>
<td>FALSE</td>
<td>08/26/2016</td>
</tr>
</tbody>
</table>

*Note: The table above represents a portion of the data related to hepatitis A and hepatitis B vaccines.*
Future Considerations

- Lot Number Discrepancies
- Codes Not Currently Published on IISSB Web Site (i.e. Codes in PHIN-VADS)
- User-Defined Output Formats
Thank you!