October 2020 CDS Connect Work Group Call

Agenda

Schedule	Topic
• 3:00 - 3:02	• Roll Call, Michelle Lenox (MITRE)
• 3:02 - 3:05	• Review of the Agenda, Maria Michaels (CDC)
• 3:05 - 3:50	• Share and Discuss CDS Connect Priorities thru September 2021, Lacy Fabian (MITRE)
• 3:50 - 3:55	• What's New with CDS Connect This Month (MITRE)
• 3:55 - 4:00	Open Discussion and Close Out, Maria Michaels (CDC) • Open discussion and announcements • Concluding comments, review next steps and adjourn

Objectives

- Share new features and resources available for CDS Connect
- Prioritize activities for CDS Connect's next year through September 2020
- Discuss topics of interest to members relating to opportunities for CDS Connect

SHARE AND DISCUSS CDS CONNECT PRIORITIES THROUGH SEPTEMBER 2021

Lacy Fabian, MITRE

Last Year's General Themes to Guide Selection of Stories

- "Must Have" General Themes:
  - ▶ Ensure Artifact Currency
    - − Update / validate artifacts to ensure they reflect the most recent clinical guidelines
  - ▶ Enforce Standards Compliance (Artifacts)
    - − Update artifacts already in the Repository to ensure compliance with applicable standards
- "Should Have" General Themes:
  - ▶ Increase Trust
    - − Implementing recommendations from the Trust Framework Work Group
  - ▶ Expand the Use of Existing Artifacts
    - − Improve usability and update the Repository to support expanded use of existing artifacts

Last Year's Trust Attributes to Rank Potential Stories Within Each Theme

- Trust attribute with (relatively) greatest influence on trust:
  - ▶ Evidence-based
    - − The evidence instantiated within an artifact must apply to the clinical condition it is meant to support
- Trust attributes with (relatively) greater influence on trust:
  - ▶ Discovery & Accessibility
    - − The evidence behind an executable knowledge artifact is documented (discoverable) from metadata associated with the artifact.
  - ▶ Transparency
    - − A knowledge artifact should be applied and used ethically to clearly convey all potential conflicts of interest and disclosures of interest related to its development or recommendation to detect bias or discrimination in its use
- Trust attributes with (relatively) lesser influence on trust:
  - ▶ Feedback and Updating
  - ▶ Compliance
  - ▶ Competency
- Trust attributes with (relatively) least influence on trust:
  - ▶ Organizational Capacity
  - ▶ Patient-centeredness
  - ▶ Consistency

*All trust attributes are significant contributors to trustworthiness.

CDS Connect 2020 Accomplishments and 2021 Goals

Project Objectives

- Maintained
- Up-to-date
- Meeting stakeholder needs

Accomplishments

- Implemented FHIR R4 and CPG-on-FHIR
- Added four CDS artifacts to the Repository (totals 61)
  - ► Implemented review and update process to apply to prior and new contributions
- Continued creating Repository and Authoring Tool accounts, email list of approximately 600 community stakeholders, 130+ member Work Group
- Implemented code to continuously track GitHub views and downloads of CDS Connect tools

Goals

- Stakeholders from myriad organizations want and trust CDS Connect
- They need…
  - ► Monitoring and feedback of technical use and impacts on practice
  - ► Maintainability and Reusability
  - ► Interoperability, alternate data sources, and scalable CDS

DISCUSSION:
CDS CONNECT PRIORITIZATION THROUGH SEPTEMBER 2021

Discussion: Work Group Prioritization Input

Mo

Must Have: *Most vital things you can't live without; critical to the success of the project.*

S

Should Have: *Things you consider important, but not vital. Try to include this year if possible.*

Co

Could Have: *The "nice to haves." Not critical to success of project.*

W

Won't Have: *Things that provide less value; least critical to project success.*

https://en.wikipedia.org/wiki/MoSCoW_method

► **How would you rate the relative importance of each <u>General Theme</u> this year? Why?**

1. **Enforce Standards Compliance (Artifacts)**
   - Update artifacts already in Repository to ensure compliance with applicable standards
   - Ensure CDS Connect provides consumable CDS now and in the future

2. **Enforce Standards Compliance (Repository)**
   - Define and implement submission coding and metadata standards
   - Ensure CDS Connect provides consumable CDS now and in the future

3. **Ensure Artifact Currency**
   - Update / validate artifacts to ensure they reflect the most recent clinical guidelines
   - Ensure that CDS Connect artifacts provide value to the CDS ecosystem

4. **Expand the Repository**
   - Improve usability and workflow and support development / addition of new artifacts
   - Expand the footprint for CDS Connect as primary government source for CDS artifacts

5. **Expand the Use of Existing Artifacts**
   - Improve usability and update Repository to support expanded use of existing artifacts
   - Demonstrate the value of CDS Connect

6. **Increase Trust**
   - Implementing recommendations from the Trust Framework Work Group
   - Enhance stakeholder confidence in CDS Connect

Mo — **Must Have**: *Most vital things you can't live without; critical to the success of the project.*

S — **Should Have**: *Things you consider important, but not vital. Try to include this year if possible.*

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1. **Enforce Standards Compliance (Artifacts)**
   - Update artifacts developed by CDS Connect to use FHIR R4 and CQL 1.5
   - Support CQL 1.5 in CDS Authoring Tool (AT) export, external CQL, and testing
   - Support CQL 1.5 in CDS Connect Prototype Tools (CQL Services & CQL Testing)
   - Enhance support of CPG on FHIR constructs in CDS AT
   - Perform FHIR server callbacks in CQL Services CDS Hooks implementation

2. **Enforce Standards Compliance (Repository)**
   - Metadata enhancements such as streamlining naming and field requirements
   - Functionality to publish from the AT to the Repository

3. **Ensure Artifact Currency**
   - Develop Repository User Guide
   - Make Repository groups more user-friendly

4. Expand the Repository

- Allow authors to extend CDS AT expressions using external CQL functions
- Access fine-grained data properties (e.g., dates) in CDS AT expressions
- Seamlessly upload CDS artifacts from CDS AT to the Repository
- Repository workflow refinements

5. Expand the Use of Existing Artifacts

- Expanded site redesign to include ease of artifact search by knowledge type, new pages for dissemination and implementation
- Expand artifact discovery features like sorting searching
- Pilot additional features to promote use like badges and invitations
- Free-text search in attachments and synonym

6. Increase Trust

- Improve maintainability, reusability, and efficiency of CDS AT source code
- Switch to NLM's API key authentication in CDS AT and Prototype Tools
- Expand account features to include histories of information viewed
- Better options for showing past versions of artifacts

► **How would you rate the relative importance of each <u>Trust Attribute</u> this year? Why?**

1. **Competency:** An actor is deemed competent in role played in CDS ecosystem.

2. **Compliance:** A knowledge artifact should conform to defined standards and criteria including copyright and intellectual property.

3. **Consistency:** A knowledge artifact should repeatedly generate expected results over time when given requisite inputs.

4. **Discoverability & Accessibility:** The evidence behind an executable knowledge artifact is documented (discoverable) from metadata associated with the artifact.

5. **Evidence-based:** The evidence instantiated within an artifact must apply to the clinical condition it is meant to support.

6. **Feedback and Updating:** Stakeholders have the functional ability to provide timely feedback and suggest improvements to a knowledge artifact.

7. **Organizational Capacity:** An organization that sponsors knowledge artifact development should be capable of maintaining a knowledge artifact.

8. **Patient-centeredness:** When possible, a knowledge artifact should leverage patient-centered outcome research findings and/or patient-specific information.

9. **Transparency:** A knowledge artifact should be applied and used ethically to clearly convey all potential conflicts related to its development.

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WHAT'S NEW WITH CDS CONNECT

David Winters and Chris Moesel, MITRE

Updates and New Features

- Authoring Tool
  - ► CPG on FHIR Library export (feature complete; ready for deployment)
  - ► External CQL Function support (in progress)
  - ► Analysis of opportunities to improve maintainability and reusability
  - ► Bug fixes and usability improvements

- Repository
  - ► New account signup form deployed: https://cds.ahrq.gov/cdsconnect/signup
  - ► CPG-on-FHIR work ready for early user testing
  - ► User documentation update underway
  - ► Various bug fixes and software updates

- Link to CDS Connect: https://cds.ahrq.gov/cdsconnect

ANNOUNCEMENTS, OPEN DISCUSSION AND CLOSE-OUT

Maria Michaels

Office of Public Health Scientific Services

Centers for Disease Control and Prevention

CDS Connect Video

https://www.youtube.com/watch?v=xjbYTBaycs8