



# CDS Connect

July 26, 2018 CDS Connect Work Group  
Call



## AGENDA

3:00 – 3:05	<b>Roll Call, Ginny Meadows (MITRE)</b>
3:05 – 3:10	<b>Review of the Agenda, Maria Michaels (CDC)</b>
3:10– 3:20	<b>New Testing Feature, CDS Connect Authoring Tool, Dylan Mahalingam (MITRE)</b> <ul style="list-style-type: none"><li>• Demonstration</li></ul>
3:20 – 3:40	<b>Future Planning for CDS Connect Authoring Tool, Chris Moesel (MITRE)</b> <ul style="list-style-type: none"><li>• Continued discussion from last month</li></ul>
3:40 – 3:55	<b>CDS Hooks Prototype, Chris Moesel (MITRE)</b> <ul style="list-style-type: none"><li>• Demonstration</li></ul>
3:55 – 4:10	<b>Groups Capability, Dave Winters (MITRE)</b> <ul style="list-style-type: none"><li>• Presentation and Demonstration</li></ul>
4:10 – 4:20	<b>Status of Pilot, Ginny Meadows (MITRE)</b>
4:20 – 4:30	<b>Open Discussion and Close Out, Maria Michaels (CDC)</b> <ul style="list-style-type: none"><li>• Open discussion and announcements</li><li>• Concluding comments, review next steps and adjourn</li></ul>

*CDS = Clinical Decision Support*

*CDC = Centers for Disease Control and Prevention*



## New Testing Feature, CDS Connect Authoring Tool Demonstration



## Future Planning for CDS Connect Authoring Tool



# CDS Authoring Tool - Potential FY2019 Features Review

- CQL authoring for other versions of FHIR
- Integration w/ the CDS Connect repository
- Additional user-facing testing capabilities
- Comments
- Additional terminology sources for value set / code searches
- CQL 1.2 error handling
- Additional CQL operators (math, timing, etc.)
- Advanced query construction
- Import & reference external CQL libraries
- Direct CQL entry
- Cross-artifact re-usable elements
- Additional CDS types
- Revision control

*CQL = Clinical Quality Language  
FHIR = Fast Healthcare Interoperability  
Resources*



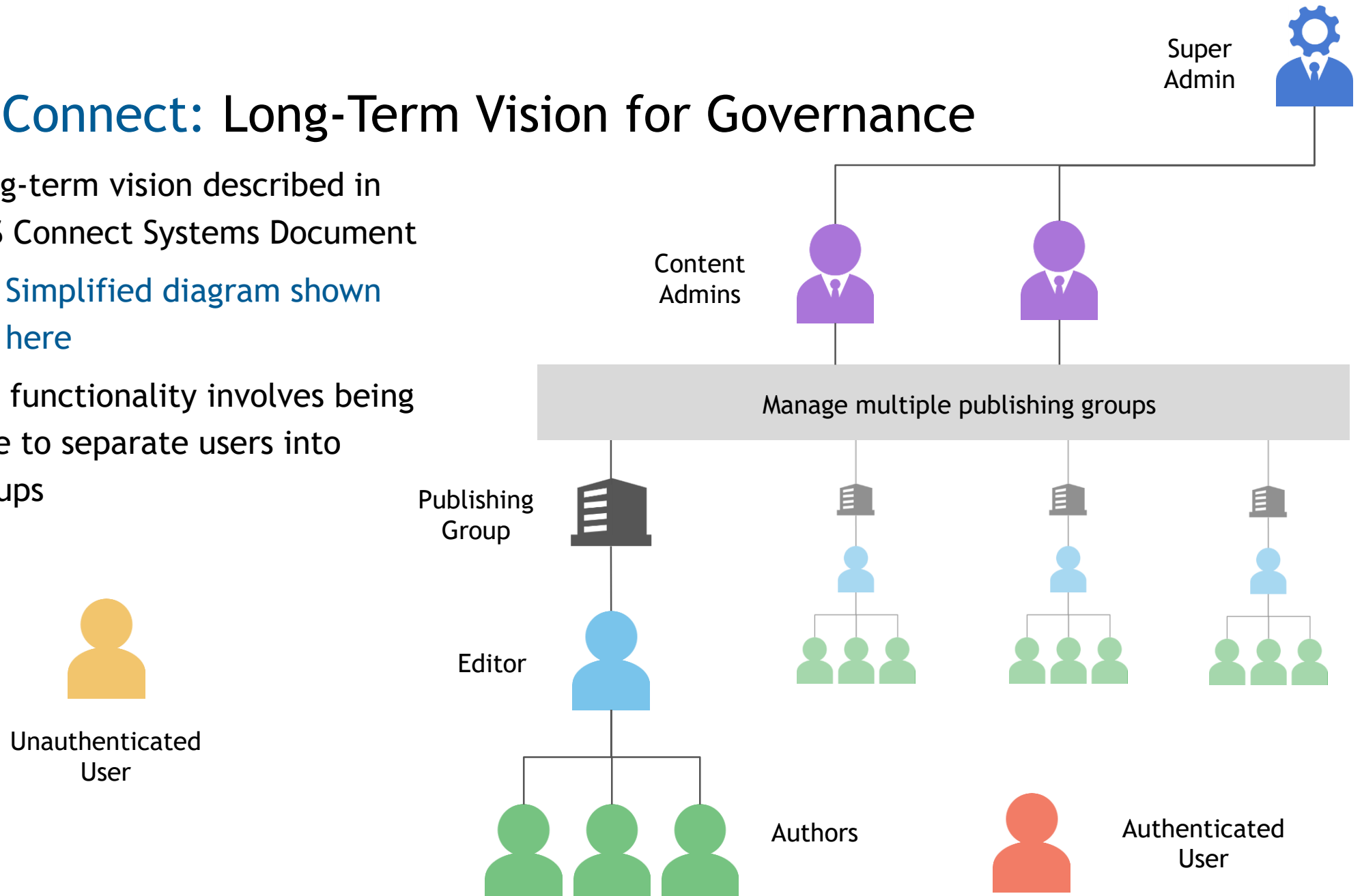
# CDS Hooks Prototype Demonstration



## **Groups Capability: User's Guide (Group Workflow)**

# CDS Connect: Long-Term Vision for Governance

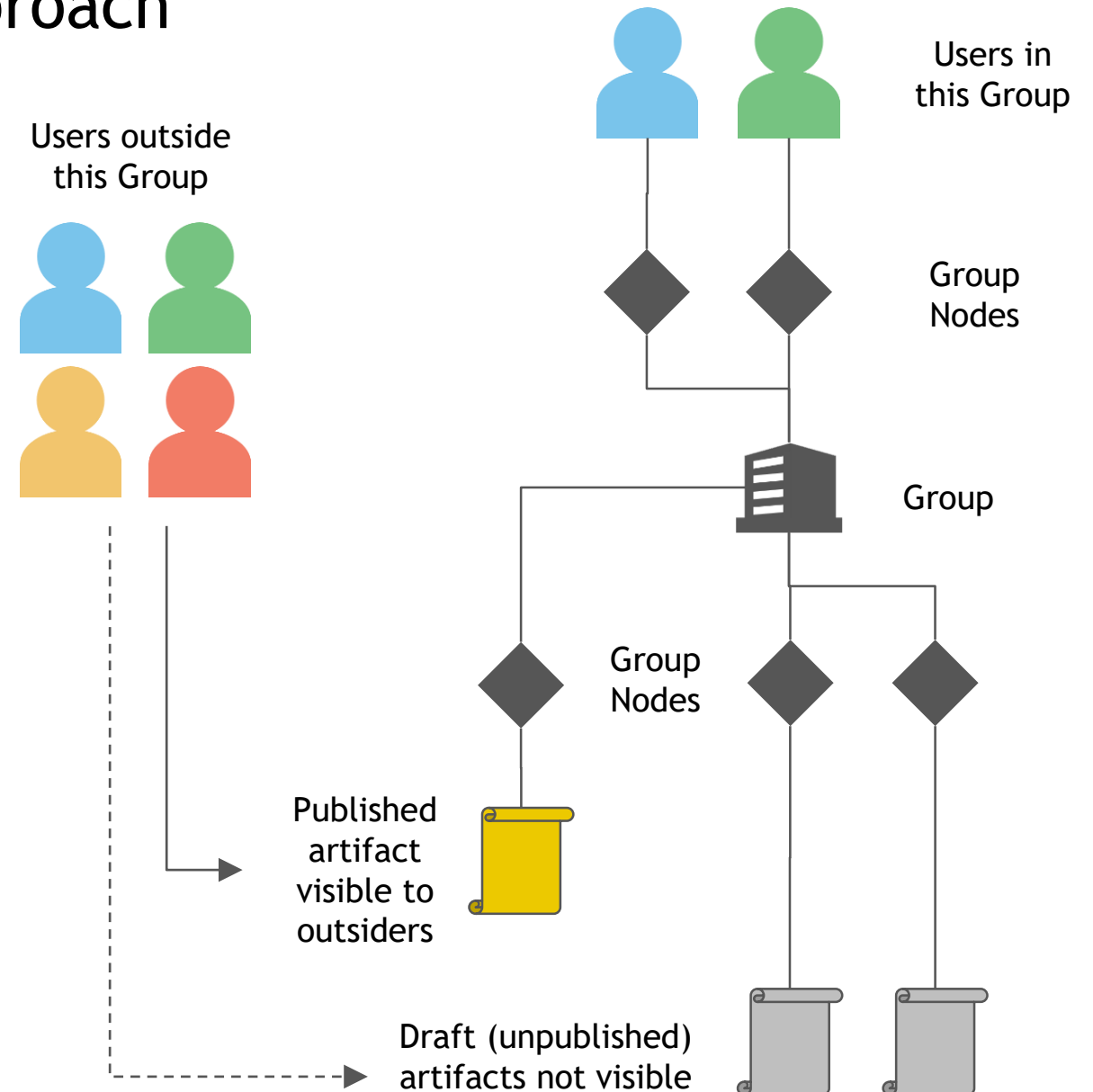
- Long-term vision described in CDS Connect Systems Document
  - [Simplified diagram shown here](#)
- Key functionality involves being able to separate users into groups





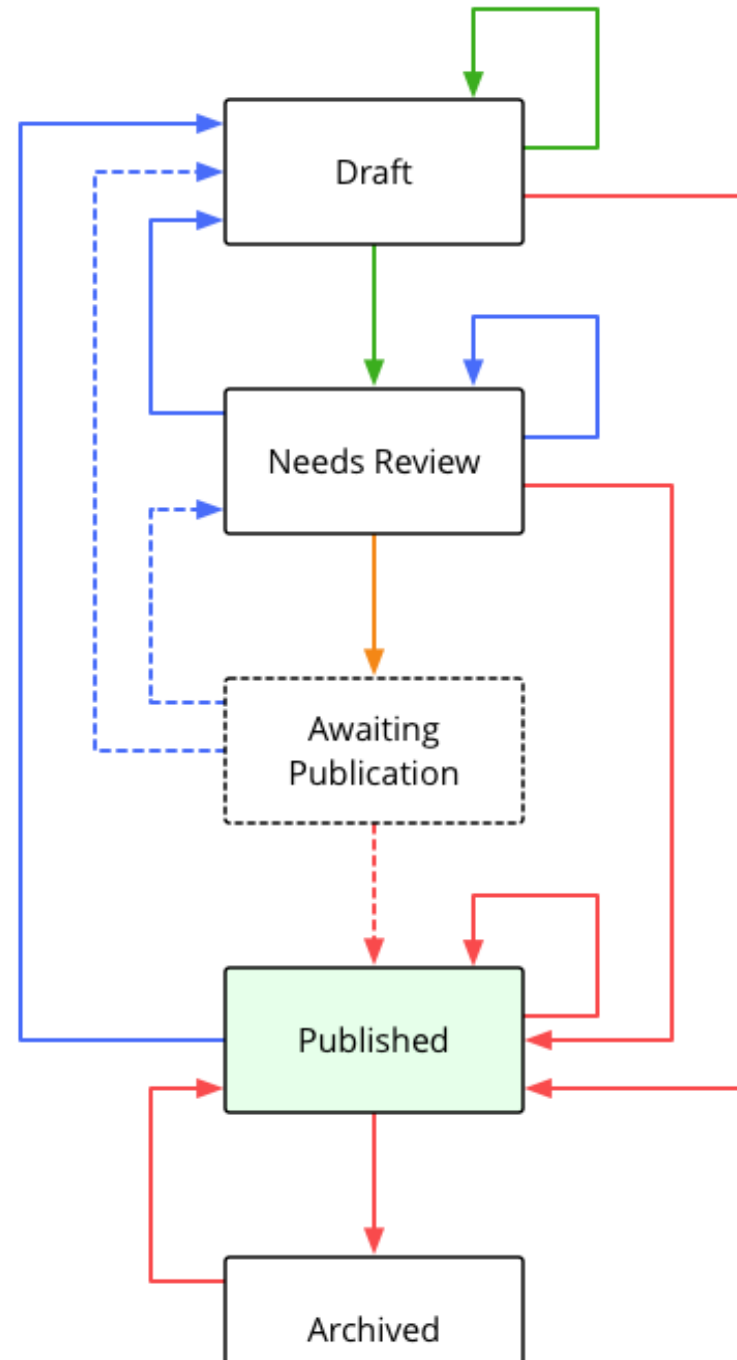
# Groups in CDS Connect: Approach

- Leveraged two Drupal modules
  - Group
  - Group Node
- Allows groups to be created which can be assigned:
  - Users
  - Content (artifacts)
- Group Nodes are entities which record the relationship between users/artifacts and a group
  - Can link users/artifacts to more than one group
- Allows a finer granularity of permissions
  - E.g., users outside the group cannot see unpublished artifacts linked to the group



## CDS Connect: Workflow Within a Group

- Iterative workflow enabled by well-defined user roles
  - Author
  - Editor
  - Publisher
  - Governor
- Only artifacts in the “Published” state are visible to external site visitors



### Role Guide

- Author
- Editor
- Publisher
- Governor  
Governor role can take any workflow step. Steps in red can *only* be taken by Governor role

---→ Temporary  
Temporary workflow state and transitions until we are comfortable with external contributors

**Published**  
Only items in the 'Published' state are visible to external site visitors

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In 2016, AHRQ launched a program of grants and contracts aimed at helping health care providers move patient-centered outcomes research (PCOR) evidence into practice through clinical decision support (CDS). AHRQ advances the science of CDS by supporting implementers, clinicians, and technology vendors in developing CDS tools that are shareable, standards-based, publicly-available, and patient-centered. The four components are detailed below.



## Learning Network

AHRQ awarded RTI International a cooperative agreement to become the Patient-Centered Clinical Decision Support Learning Network (PCCDS-LN). The PCCDS-LN is building a community of researchers, clinicians, professional societies, and others that is exploring and advancing patient-centered CDS.

<https://pccds-ln.org>

## CDS Connect

AHRQ awarded the MITRE Corporation a contract to develop "CDS Connect", an online web presence that will function as a repository of CDS artifacts and create prototype infrastructure for sharing CDS across different health care settings and technologies. MITRE will also develop, pilot, and share CDS artifacts on CDS Connect as a proof-of-concept.

<https://cds.ahrq.gov/cdsconnect>

**Users can access CDS Connect at <https://cds.ahrq.gov/>.  
Users can login by clicking on the Login link at the top right of the page.**



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**Username\***

annie\_author

**Password\***

.....

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***Authenticated users will be taken to their user profile page.***

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**The user profile page has its own menu. Clicking on “My Groups” will display a list of links to each of the groups that a user belongs to. Currently only admins can add users to groups.**

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***Clicking on “My Groups” will display a list of links to each of the groups that a user belongs to. Currently only admins can add users to groups.***

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Group / annies\_group

## Group operations

[Create Artifact](#)

annies\_group

View

Nodes

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***Clicking on the name of a group will take the user to the group homepage, an example of which is shown here. It is from this page that users can create artifacts that will be linked to their groups. This is accomplished by clicking on the “Create Artifact” button.***





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## Group operations

[Create Artifact](#)

## Create Organization: Group node (Artifact)

Primary Content

[Metadata](#)[Artifact Creation and Usage](#)[Artifact Organization](#)[Artifact Representation](#)[Implementation Details](#)[Purpose and Usage](#)[Supporting Evidence](#)

Name\*

Description

**B** **I** **S**  $x^2$   $x_2$  *I<sub>x</sub>* Format

Source

***Clicking on “Create Artifact” button will take a user to the artifact authoring page.***



## Group operations

[Create Artifact](#)[Group](#) / [annies\\_group](#) / [Content](#) / [Create content in group](#) / Create Organization: Group node (Artifact)

## Create Organization: Group node (Artifact)

[Primary Content](#)[Metadata](#)[Artifact Creation and Usage](#)

Identifying Metadata for an artifact

Identifier

Version\*

Status\*


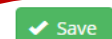
☐ Experimental

Artifact Type\*

Creation Date


Revision log message


Save as


 

***On the content author page, a user can start drafting an artifact by filling in the pertinent metadata and uploading attachments. The vertical tab lists all the categories of metadata available (“Metadata” shown here). Required fields are marked with an asterisk. A draft is saved by clicking on the “Save” button on the bottom.***

Manage

 **annie\_author**

 Subscription active (expires 2018/9/26)


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Welcome to CDS Connect / Artifacts / Annie's Artifact

Artifact **Annie's Artifact** has been created.


Annie's Artifact

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Edit

Delete

Artifact Type

 Alert

Version

1

Status

Draft

Experimental

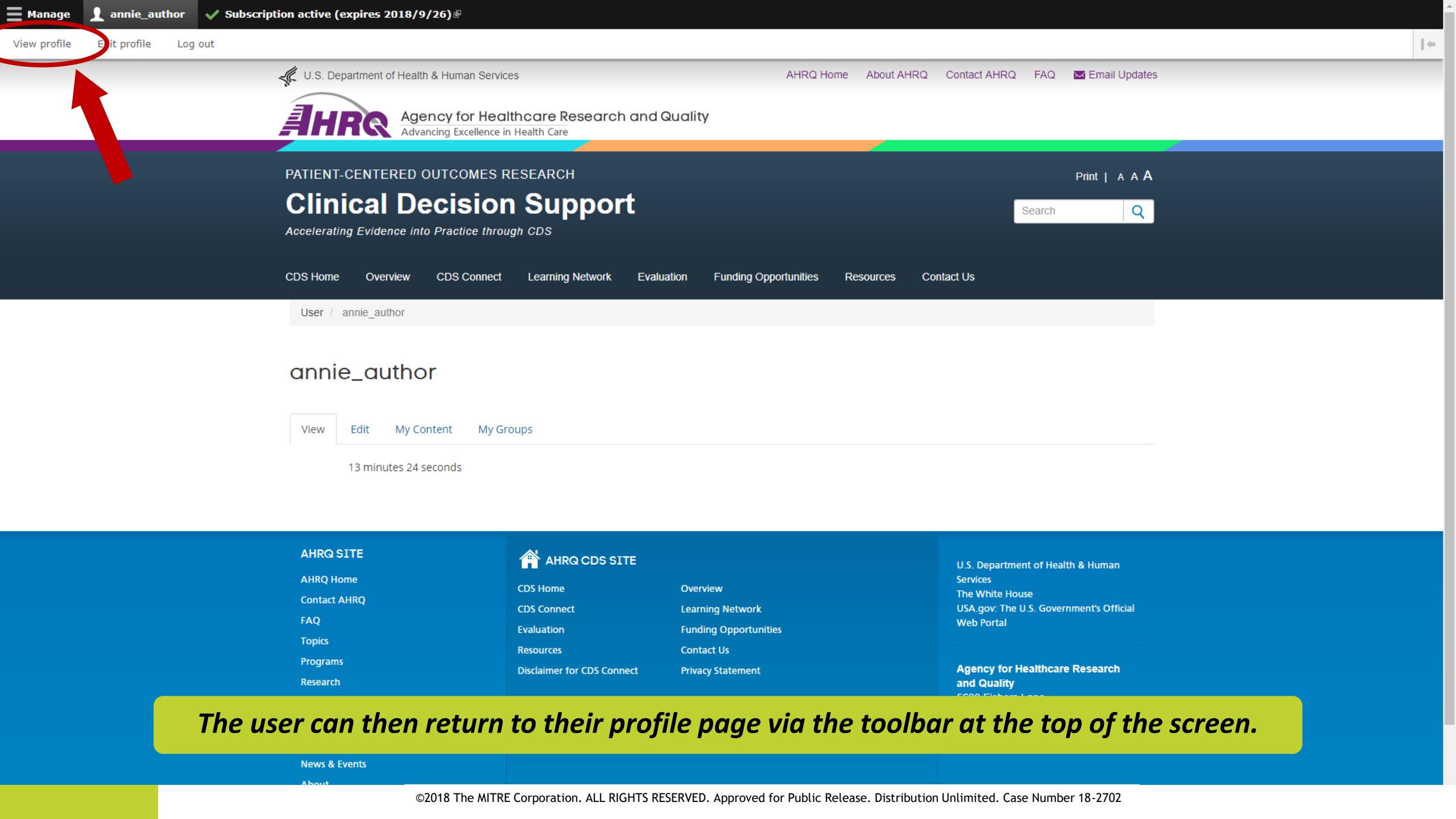
False

No (Report infringement)

IMPLEMENTATION DETAILS

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***After that, there should be a message displayed stating that the artifact was created. The user can then return to their profile page via the toolbar at the top of the screen.***



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Title	Content type	Visibility	Status	Updated
Annie's Artifact	Artifact	Unpublished	Draft	07/09/2018 - 10:17

The draft and unpublished artifact should show up under the “My Content” tab.

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*The artifact will also be visible to other users who are members of “annies\_group.”*

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*Navigating to “annies\_group,” the artifact will be visible under the “Nodes” tab.*

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Group operations

Create Artifact

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annies\_group nodes

ViewNodes

Create node

Published statusTypeApply

Title	Content type	Status	Updated	Operations
Annie's Artifact	Artifact	Unpublished	07/09/2018 - 10:17	View relation

***Navigating to “annies\_group,” the artifact will be visible under the “Nodes” tab. Any member of the group will be able to see and review the artifact. Users who are not group members will not be able to see the artifact until it is published.***





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## Group operations

Create Artifact

Group / annies\_group / Nodes

## annies\_group nodes

View Nodes

Create node


Published status  Type

Title	Content type	Status	Updated	Operations
Annie's Artifact	Artifact	Unpublished	07/09/2018 - 10:17	<input type="button" value="View relation"/>

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## Pilot Status



# Pilot Activities

## Reported Complete in June update:

- ✓ Tested SMART on FHIR app at OCHIN
- ✓ Finalized pilot site training materials
- ✓ Trained pilot site clinicians (6/14)
- ✓ “Go Live” at pilot site (6/20)

## Completed since June update:

- ✓ Weekly analytics and troubleshooting
- ✓ Planning for pilot focus group

*Substitutable Medical Applications, Reusable Technologies (SMART) on Fast Healthcare Interoperability Resources (FHIR)*



# Pilot Activities

## Next up:

- ✓ Continue weekly analytics and troubleshooting
- ✓ Finalize pilot focus group questions
- ✓ Pilot End Date: Friday, 8/11/2018
- ✓ Conduct Focus Group sessions (8/13/2018 & 8/14/2018)



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