

MADiE User Group

November User Group

Hosted by ICF/SemanticBits

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MADiE is owned and operated under contract with CMS

Contracting Officer Representative (COR): Emmanuel Kalluri

Disclaimer

This meeting is being recorded to ensure notes and action items are captured accurately.

Attendees who have objections to the meeting being recorded are asked to let the facilitator know at this time

Agenda and Objectives

Agenda

1. MADiE Updates
2. Community Questions & Discussions
3. Review of Resources

Objectives

- Inform MADiE users of current and planned activities
- Create a forum to gather community feedback on future enhancements
- Foster collaboration through open community discussion

60 Day Account Deactivation

Keeping your MADiE Account Active:

- In accordance with CMS and HHS security requirements, MADiE has implemented an account deactivation policy for all users who have not logged in within the previous 60 days or more.
- Users will receive warning messages after 30 days of inactivity.
- After 60 days of inactivity, accounts will be deactivated.
- To access a deactivated MADiE account again, users will need to request the MADiE role in HARP.
 - **Do NOT respond to the deactivation email.**

*Keep your MADiE account active to continue to receive important email communications!

MADiE

MADiE 2.0.7

MADiE: Current State

MADiE – 2.0.7 11/12/2024

- **QDM Measures:**
 - MADiE should support the "implies" operator. ([MADIE-1849](#))
 - Stratification Populations are returning a true value when it should be false in some scenarios. ([MADIE-2036](#))
 - MADiE was using the name of the population for the Measure observation, and it should display the label "Measure Observation". ([MADIE-2057](#))
 - Empty population descriptions appeared as empty white space or "null". ([MADIE-2058](#), [MADIE-2059](#))
 - Users are unable to execute the test case and enter Expected Values for a measure group that has measure observations. ([MADIE-2041](#))
- **QI-Core Measures:**
 - Users now have the ability to clone a test case.
 - Users are unable to execute test cases on some measures due to insufficient data mapping in MADiE between two of the vendor APIs used. ([MADIE-2061](#))
- **Resolved Issues:**
 - **QDM Measures:** Status' date timing included in the test case JSON is not being saved after translation completes.
 - **QDM Measures:** Measures making comparisons on quantities may receive inaccurate test case results. [MADIE-2056](#)

MADiE – Known Issues (1 of 5)

The Known Issues List is posted and maintained on the [Training and Resources](#) tab on the public website and the Summary page of the [MADiE ONC Jira Issue Tracker](#).

CQL-ELM Translator Known Issues as of 11/21/24:

There is an issue in how reasonCode is getting mapped to ELM for the CommunicationNotDone datatype in QI-Core 4.1.1. Refer to the following tickets for more information on this issue:

- https://github.com/cqframework/clinical_quality_language/issues/1153
- [MADIE-1420](#)

MADiE – Known Issues (2 of 5)

MADiE Known Issues as of 11/21/24:

- Users will automatically be logged out of MADiE after 30 minutes of inactivity. If the user has more than one active session of MADiE in any combination (in different tabs in the same browser or in different browsers) and one of the sessions reaches 30 minutes of inactivity the session will expire, and the user will be logged out of all sessions. If the user is logged out prior to saving changes, any unsaved changes will not be retained when the user logs into MADiE again.
 - **Workaround:** Users can keep all sessions active by clicking on the screen for each session periodically. Clicking on each active session prior to reaching 30 minutes of inactivity will prevent the sessions from expiring and prevent the user from being logged out of all sessions. [MADIE-1554](#) [MADIE-1623](#)
- Measures transferred from MAT to MADiE need to be reviewed in MADiE and the CQL updated (can just add a space to the CQL) after the transfer and prior to working with the measure (including working with test cases or exporting the measure). Until this step is complete you may see a CQL error notification on the Test Cases screen and/or during Measure Export.

MADiE – Known Issues (3 of 5)

MADiE Known Issues as of 11/21/24:

- **QDM Measures:** When editing a MADiE test case that was imported from Bonnie QDM, if the test case description exceeds the allowable 250 characters, the 'Save' button is disabled and updates cannot be made to the test case.
 - **Workaround:** Edit the MADiE test case description to less than 250 characters. [MADIE-1825](#)
- Users may experience toggling back and forth between their current tab and a new tab or flickering and, in some cases, discontinuation of their MADiE session.
 - **Workaround:** Refresh the page or log out of all MADiE instances and begin a new MADiE session. [MADIE-1922](#)
- If a MADiE user's UMLS API key has changed, the original UMLS API key entered into MADiE cannot be updated by the user
 - **Workaround:** Open a MADiE Issue Tracker ticket to make a request for the MADiE team to manually remove the existing UMLS key, so a new UMLS key may be entered. [MADIE-1912](#)

MADiE – Known Issues (4 of 5)

MADiE Known Issues as of 11/21/24:

- When importing QI-Core test cases from MADiE into a measure with Stratifications, the test cases will appear as if the measure does not have stratifications. This occurs even if the measure the test cases were exported from had stratifications.
 - **Workaround:** Navigate to the population criteria tab, modify any stratification, click save. Then navigate back to the test cases and stratification should now be present.
- ★ **QDM Measures:** QRDA export will fail if a measure includes one or more test cases that have the Payer data element added, but no code selected for the data element.
 - **Workaround:** Update the impacted test cases to either add a code to the Payer data element or remove the Payer data element.

[MADIE-2043](#)

MADiE – Known Issues (5 of 5)

MADiE Known Issues as of 11/21/24:

★ **QDM Measures:** MADiE users may receive a non-descript error message when trying to make updates to existing measures.

- **Work around:** This error message is resolved by updating the Improvement Notation to one of the three available options in the dropdown:
 - Increased score indicates improvement
 - Decreased score indicates improvement
 - Other

[MADIE-2085](#)

★ **QDM Measures:** Unexpected results are received for test cases that included a quantity prior to the update released with MADiE 2.0.7 on 10/12/2024.

- **Work around:** Users will need to update impacted test cases to edit the quantity and save the test case again. This will apply the update released with MADiE 2.0.7 to be applied to that test case.

[MADIE-2056](#)

MADiE Resources

The [MADiE public website](#) provides a Login button to access MADiE

The [Training and Resources](#) tab on the public website provides:

- User Access Guide – how to get your MADiE account
- User Guide – provides details regarding tool functionality
- JSON Test Case Guide – steps for using the JSON test case editor
- Known Issues – updated regularly
- MADiE Enhancement Request Form for CMS Contractors – additional details required when submitting an enhancement request
- MADiE CMS ID Deletion Request Form v1.0 – to request the CMS ID associated with a draft measure with no prior versions be deleted
- MADiE Measure and Library Sharing Request Form v3.0 – to request measures (and the measure’s test cases) or libraries to be shared – submitted by the owner via email
- MADiE Measure or Library Ownership Transfer Request Form v2.0 – to request transferring ownership of measures (and the measure’s test cases) or libraries - form should be submitted by the owner via email
- MADiE Revert Measure Version Request Form v1.0 – to request a measure version number be reverted to a previous version number if the measure was versioned in error
- MADiE Independent Testing Supplemental Guide v2.0
- Release Notes – posted with each MADiE release
- MADiE In Depth Training Videos

MADiE Resources (continued)

MADiE QI-Core Profile Examples

- The MADiE team has created a measure in MADiE with an included test case JSON bundle which contains entries for many QI-Core (v4.1.1) profiles.
- The purpose of this test case JSON bundle is to provide users the framework for commonly used QI-Core v4.1.1 profiles that can be leveraged with their own test case development.
- The measure (**QI-Corev4.1.1 Test Case Template**) is a blank measure (no CQL and no Population Criteria) with one test case (**QI-Corev4.1.1 Example Bundle version 2**).
- The QI-Core profiles examples in the JSON bundle are for guidance and are not intended to fulfill any measure or testing requirement. Updates to reflect the specific details of your test case will be necessary.
- Measure developers may copy any of the profiles from the QI-Corev4.1.1 Example Bundle version 2 test case directly to your test case(s) or use a source code editor (e.g., Notepad++ and Visual Studio Code) and make any updates needed to meet your testing needs.
- The MADiE Test Case JSON Guide, available on the [Training and Resources](#) tab on the public website, has been updated with detailed information regarding the **QI-Corev4.1.1 Example Bundle version** test case in MADiE and provides additional guidance for using this resource to aid MADiE users in updating or creating test cases in MADiE.

CMS Web Application Firewall Errors

CMS Web Application Firewall (WAF) Issues

- CMS WAF errors are received when an attempted action (i.e. saving or exporting) is rejected by the CMS security policy, blocking further action by the user
- This can happen when working in a measure or test case that previously did not receive a CMS WAF error, or when making a change to the measure or test case

When an action is blocked, please include the following information in your ONC JIRA ticket.

- Measure Name/ID
- Test case Name (if applicable)
- Action that resulted in unexpected error messages or an inability to save changes (include specific verbiage/CQL/JSON that was unable to save)
- Providing the error message assists the team in confirming the cause of the issue
- When error messages include a 'Support ID' include that ID number in your ticket so that can be provided to CMS to unblock the attempted action

Examples of CMS WAF error messages:

- The Measure Authoring Tool was unable to process the request. Please try again. If the problem persists, please contact the Help Desk.
- System error. Unable to process information
- 403 Forbidden The requested URL was rejected by CMS security policy. If you believe this is in error, please contact the HIDS Security Operations Center QNET_soc@cms.hhs.gov and reference your Support ID: 2586968644408754759

Versioning Measures in MADiE

QI-Core Measures: When versioning MADiE measures, please double check you have selected the appropriate version (Major, Minor or Patch). A pop up will appear where a user can select Major, Minor, or Patch version. The pop up will also display the current version number, the future version number after versioning is complete, and a text area for the user to confirm the new version number. Users will need to type in the version number, and it will need to match what the tool will be updating the version number to in order to proceed.

To better understand what part of the measure version is updated when versioning a measure, see the values below. X is the value that will be incremented. P is the value that remains the same after versioning. 0 is the value that will be cleared out and set to 0 after versioning.

Major X.0.000
Minor P.X.000
Patch P.P.XXX

If you version your measure using the wrong version type (Major, Minor, or Patch), the MADiE Help Desk Team can help. Complete the MADiE Revert Measure Version Request Form v1.0 available on the [Training and Resources](#) tab on the public website and submit the form via email to semanticbits-madie-help@icf.com

Create Version * Indicates required field

* Version Type: Patch

Current Version #: 0.0.000

New Version #: 0.0.001

* Confirm New Version #: Confirm New Version Number

Cancel Continue

Help Desk Ticket Submissions

Prior to creating a MADiE Issue Tracker ticket:

[Search for an Issue:](#) Have a question or experiencing an issue? Search by keyword or project, see if others have submitted the same question or reported the same issue, and review the responses.

When creating a ticket:

- Include all required information and supporting documentation based on the type of ticket you are creating.
- Tickets created with required information and supporting documentation missing will be sent back to the submitter with a comment listing the missing information and supporting documentation. Populating all applicable fields while creating the ticket will assist the MADiE team when processing this ticket.

IMPORTANT NOTE: Until all required information and supporting documentation are included, the ticket cannot be processed. Including this information at the time of ticket creation will expedite the time from ticket creation to when the team may begin processing the ticket.

Please review the MADiE Ticket Submission Guidance on the Training & Resources tab under the MADiE Helpful Links heading on the public website (<https://www.emasuretool.cms.gov/training-resources>) and attach supporting documentation as directed in the guide.

Help Desk Ticket Submission Process

The MADiE Ticket Submission Guidance document on the [Training and Resources](#) tab on the public website provides guidance to measure developers needing assistance with measures or test cases. This document includes the following:

- Steps to take prior to submitting a Help Desk ticket
 - Review available documentation
 - Consult with SMEs
- **A list of artifacts to include if a ticket is being created with either tracker for assistance with measure CQL or test case JSON**
 - Measure Export, Full measure CQL in a .txt file, test case export (if applicable) full test case JSON in a .txt file
 - **Do not** send screen prints of partial CQL and/or JSON
 - Indicate the tool version and Measure Model: QDM vs. QI Core
- The types of tickets to submit to the [CQL Issue Tracker](#)
 - Tickets submitted to the CQL Issue Tracker will be evaluated and the standards team may identify the ticket needs to be moved on to the MADiE Issue Tracker to evaluate MADiE functionality
- The types of tickets to submit to the [MADiE Issue Tracker](#)

Help Desk Requests Including HARP IDs

- The following requests must be submitted via email at semanticbits-madie-help@icf.com as they contain HARP IDs
 - Measure or library sharing requests
 - Measure or library ownership transfer requests
 - CMS ID deletion requests
 - Revert measure version requests
 - or other inquiries with a HARP ID
- Do not submit these requests until you have confirmed that all users involved in the request have active MADiE accounts

Reference the [MADiE Help Desk Process Diagram](#)

QI-Core CQL Libraries

Global Shared Libraries in MADiE:

Commonly used QI-Core libraries have been entered into MADiE.

FHIR Name in MAT (Prior to Decommissioning)	Version in MAT	QI-Core Name in MADiE	Version in MADiE
MATGlobalCommonFunctionsFHIR4	V 7.0.000	CQMCommon	V 2.2.000
FHIRCommon	V 1.1.000	FHIRCommon	V 4.3.000
FHIRHelpers	V 4.1.000	FHIRHelpers	V 4.4.000
QICoreCommon	V 1.0.000	QICoreCommon	V 2.1.000
CumulativeMedicationDurationFHIR4	V 2.0.000	CumulativeMedicationDuration	V 4.1.000
SupplementalDataElementsFHIR4	V 3.1.000	SupplementalDataElements	V 3.5.000

QDM CQL Libraries

Global Shared Libraries in MADiE:

Commonly used QDM libraries have been entered into MADiE.

QDM Name in MAT (Prior to Decommissioning)	Version in MAT	QDM Name in MADiE	Version in MADiE
MATGlobalCommonFunctionsQDM	V 8.0.000	MATGlobalCommonFunctionsQDM	V 8.0.000
CumulativeMedicationDurationQDM	V 3.0.000	CumulativeMedicationDurationQDM	V 3.0.000

Enhancement Request Process (1 of 3)

- Incoming Enhancement Requests must have all required details
- MADiE team performs analysis of the request, calculates business the value, & determines the proposed priority (using the details provided by the submitter)
- CMS Gatekeeper Meeting (CMS reviews and decision is made)

Enhancement Request Process (2 of 3)

- CMS Gatekeeper Meeting Outcome Categories
 - Denied - enhancement is not needed/will not be implemented
 - Submitter will be notified, and decision will be documented in our Decision Log
 - Accept & do not send to a community prioritization session
 - Submitter will be notified, and decision will be documented in our Decision Log
 - Feature will be placed on the roadmap, prioritized using the feedback from CMS and the submitter
 - Accept & send to a community prioritization session
 - Submitter will be notified, and the decision will be documented in our Decision Log
 - Feature will be placed on the roadmap backlog and included in the next prioritization session

Enhancement Request Process (3 of 3)

- MADiE Prioritization
 - Every Program Increment (PI) – 12 weeks – we have a PI Planning session
 - One month prior to PI Planning we have a Community Prioritization Session
 - In preparation for each PI Planning session, we use the feedback from CMS gatekeeper meetings coupled with the results of the community prioritization sessions to place features on the roadmap
 - In PI Planning the MADiE team, CMS, and community leaders and stakeholders review, discuss, and agree that MADiE is committing to the right features for the upcoming PI

Roadmap

- Our last PI Planning session was on November 13
- We planned PI17 (which is 11/13/2024 - 2/5/2025)
- Roadmap - <https://miro.com/app/board/uXjVPhO9hJg=/>

CQL Error Messages (1 of 2)

- Enhancing CQL Error Messages is an enhancement request the MADiE team begun working on in PI16.
- MADiE gets a majority of the CQL Error messages from the CQL-to-ELM translator
- MADiE Can update the error message that displays but this will require mapping from the translator message to the message we wish to display
 - With so many error messages, this isn't a small task.
- To ensure we are adjusting the correct error messages we want your input: <https://miro.com/app/board/uXjVLIZ4F1M=/>

CQL Error Messages (2 of 2)

Prioritization Process

- Opens Today (11/21) Closes December 3rd
- Discuss on the November 26th eCQM Working Group Meeting
- Examine the CQL Rule that triggers the error message and the error that is displayed
- Pick out your 5 most confusing errors
- Take a “dot” that is a color associated with your organization and place it in the “Vote” column next to the confusing error message
- We ask that you limit this to 5 errors to help us prioritize which error messages to address first.
- We will continue working through messages to improve them over time

Human Centered Design - HCD

- User Experience Design (UXD)
 - Qi-Core – Previous Design
 - Qi-Core – New Design

UXD - QI-Core (Previous Design)

Qi-Core (Previous)

Previous design was tested with users:

- Eliminated the Demographics section that currently exists in QDM
- Kept element categorization
- Stacked the tabs vertically
- Made the UI more flexible to accommodate all potential additional data available

The screenshot displays the MADiE (Measure Authoring Development Integrated Environment) web application. The top navigation bar includes the MADiE logo, version information (0.0.007), model name (QI-Core v4.1.1), and a date range (1/1/2023 - 12/31/2023). The main header shows the measure title: "Bone density evaluation for patients with prostate cancer and receiving androgen deprivation therapy". Below the header, there are tabs for "Details", "CQL Editor", "Population Criteria", "Test Cases (5)", and "Review Info". The "Test Cases" tab is active, showing a case named "Case #1: DENOMPASS - ICUEndOnEncEnd". The interface is divided into two main sections: "Elements" and "Measure CQL (View Only)". The "Elements" section features a "Profile Configuration" dropdown menu with options for "Individuals", "Billing", and "Management". The "Individuals" option is selected, and a "QI-Core Patient" button is visible. The "Measure CQL" section displays a list of CQL rules, including "library IntensiveCareUnitVenousThromboembolismProphylaxisFHIR version '0.1.000'", "using QI-Core version '4.1.1'", and various include and value set statements. At the bottom right, there are buttons for "Run Test", "Discard Changes", and "Save".

UXD - QI-Core (New Concept)

Qi-Core (New Concept)

New Design focused on:

- Simplifying the process further
- Aligning the design patterns to newly generated workflows for CQL Builder views
 - Includes
 - Value Sets
 - Codes
 - Parameters
 - Definitions
 - Functions

The screenshot displays the MADiE (Measure Authoring Development Integrated Environment) interface. The main title is "Bone density evaluation for patients with prostate cancer and receiving androgen deprivation therapy". The version is 0.0.007, the model is QI-Core v4.1.1, and the measure period is 1/1/2023 - 12/31/2023. The interface is currently in "In-Use" status.

The "Test Cases" tab is active, showing "Case #1: DENOMPASS - ICUEndOnEncEnd". The "Elements" panel on the left lists available value sets for various profiles:

Profile	Value Set	Actions
Patient	-	+ [edit]
Claim	Value Set example	+ [edit]
Encounter	Longer Value Set example here	+ [edit]
Flag	Another Value Set	+ [edit]
Location	Value Set example again	+ [edit]

The "Measure CQL (View Only)" panel on the right shows the following CQL code:

```
1 library IntensiveCareUnitVenousThromboembolismProphylaxisFHIR version '0.1.000'  
2  
3 using QICore version '4.1.1'  
4  
5 include CQMCommon version '1.1.000' called CQMCommon  
6 include FHIRHelpers version '4.2.000' called FHIRHelpers  
7 include QICoreCommon version '1.3.000' called QICoreCommon  
8 include SupplementalDataElements version '3.2.000' called SDE  
9 include TJCOverall version '8.7.000' called TJC  
10 include VTE version '8.4.000' called VTE  
11  
12 codesystem "LOINC": "http://loinc.org"  
13  
14 valueset "Application of Graduated Compression Stockings": "http://cts.nlm.nih.gov/  
15 fhir/ValueSet/2.16.840.1.113762.1.4.1110.66"  
16 valueset "Application of Intermittent Pneumatic Compression Devices": "http://  
17 cts.nlm.nih.gov/fhir/ValueSet/2.16.840.1.113762.1.4.1110.65"  
18 valueset "Application of Venous Foot Pumps": "http://cts.nlm.nih.gov/fhir/  
19 ValueSet/2.16.840.1.113762.1.4.1110.64"  
20 valueset "Atrial Fibrillation or Flutter": "http://cts.nlm.nih.gov/fhir/  
21 ValueSet/2.16.840.1.113883.3.117.1.1.202"  
22 valueset "Comfort Measures": "http://cts.nlm.nih.gov/fhir/  
23 ValueSet/1.3.6.1.4.1.33895.1.3.0.45"  
24 valueset "Direct Thrombin Inhibitor": "http://cts.nlm.nih.gov/fhir/  
25 ValueSet/2.16.840.1.113883.3.117.1.1.205"  
26 valueset "Emergency Department Visit": "http://cts.nlm.nih.gov/fhir/  
27 ValueSet/2.16.840.1.113883.3.117.1.1.292"  
28 valueset "General or Neuraxial Anesthesia": "http://cts.nlm.nih.gov/fhir/  
29 ValueSet/2.16.840.1.113883.3.666.5.1743"  
30 valueset "General Surgery": "http://cts.nlm.nih.gov/fhir/  
31 ValueSet/2.16.840.1.113883.3.117.1.1.255"  
32 valueset "Glycoprotein IIb/IIIa Inhibitors": "http://cts.nlm.nih.gov/fhir/
```

At the bottom right, there are buttons for "Run Test", "Discard Changes", and "Save".

User Research – Invitation to participate in concept testing session for Qi-Core test case builder.

- **What :** We are looking for participants to participate in concept testing session for the new Qi-Core test case builder workflow.
- **When :** The testing will be done in first half of December 2024
- **Duration :** The testing will take place for an hour
- **How to participate? :** Please type in your email in the chat or email us at abhishek.edlaashok@icf.com

User Group Discussion



- Topic suggestions and questions for the User Group can also be submitted through the MADiE Issue Tracker located here:
<https://oncprojecttracking.healthit.gov/support/projects/MADiE/summary>
- Additional questions or comments can be submitted by using the chat feature or unmuting your own line.

PII / PHI

- PHI and PII are prohibited in MADiE.
- Measure testing should only represent synthetic patient test data.
- Report any questions or concerns to the Help Desk.



Resources

Resources for Users

MADiE In Depth Training Videos

- Located on the public website [Training and Resources](#) tab
 - [Log In and Measures](#)
 - [QI-Core Test Cases](#)

JIRA Status and Resolution Use Cases

- Located on the [MADiE Issue Tracker](#) Summary page

MADiE Release Schedule

- Located on the public website [Training and Resources](#) tab

Resources for Users (continued)

MADiE 2.0.7

<https://madie.cms.gov>

MADiE Issue Tracker:

<https://oncprojecttracking.healthit.gov/support/projects/MADiE/summary>

eCQI Resource Center:

<https://ecqi.healthit.gov/>