



Bonnie, MAT and MADiE User Group



August User Group

Hosted by:

ICF

August 17, 2023

Disclaimer

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

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

Agenda and Objectives

Agenda

1. MAT Updates
2. Bonnie Updates
3. MADiE Updates
4. Community Questions & Discussion
5. Review of Resources

Objectives

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

Measure Authoring Tool

MAT 6.11 QDM & FHIR

Measure Authoring Tool: Current State

MAT 6.11

- MAT 6.11
- Maintenance Release occurred on 7/12/23
 - Updated draft QDM measures updated on or after 1/1/2023 to use 'Payer Type' value set
 - Measures created after the release will use 'Payer Type' value set
 - Reverted the CQL-ELM translator from 2.10.0 to 1.5.12 to address an issue with measure exports
- QDM Contingency release occurred on 6/29/23
 - Updated to version 2.10 of the CQL-ELM translator
 - Rename the Supplemental Data Element Defaults for all new measures from "Payer" to "Payer Type"
 - Updated NQF to CBE
- QDM Release Notes are available on the MAT web site under Training and Resources
- QDM measures have been updated to use version 1.5.12 of the CQL-ELM translator.
- FHIR measures continue to use version 1.5.4 of the CQL-ELM translator.

Measure Authoring Tool

Maintenance:

- Maintenance is usually zero down time.
- Any known downtime for maintenance will be communicated to all users via email.

Measure Authoring Tool – Known Issues

Known Issues:

1. For FHIR measures, when the same CQL definition is used in Supplemental Data Elements (SDE) and as a Risk Adjustment Variable (RAV), the measure is not able to be packaged. Users will receive an error for 'duplicate id value'. The workaround is to create different definition(s) when they are needed in both SDE and RAV. ([BonnieMAT-1212](#))
2. For FHIR measures, if the CQL Editor is used to enter value sets, the value sets are validated each time the CQL is saved. If the value set name and OID are not a match to the VSAC a CQL error will display and users may update the value set directly in the editor. When using the CQL Editor the 'Update from VSAC' button should not be used as this will display an 'Unable to Process' error message. This message does not prevent users from completing or saving work. They should continue to save their CQL to validate value sets in VSAC. ([BonnieMAT-1235](#)).

Bonnie

Bonnie 4.3.1 QDM (Prior)

Bonnie 5.1.4 QDM

Bonnie 6.2.5 FHIR

Bonnie Prior: Current State

Bonnie 4.3.1 Prior

- Supports QDM 5.5
- Users will receive a warning after 10 minute of inactivity and logged out after 15 minutes
- Bonnie 4.3.1 Prior maintenance release on 7/19/22

Bonnie QDM: Current State

Bonnie 5.1.4 QDM

- Bonnie 5.1.4 QDM Contingency Plan release on 7/31/23
 - Improved the user interface for observations on ratio measures
 - Resolved the following Known Issues:
 - [BONNIEMAT-1106](#): User can't differentiate denominator and numerator observations
 - [BONNIEMAT-1522](#): Users are unable to differentiate between Observations on test case edit page
- Bonnie 5.1.3 QDM Contingency Plan release on 7/12/23
 - CQM-models are updated to support the "is" operator for QDM entities.
 - Updated to use CQM-Execution Engine 4.1.3
 - Resolved the following Known Issues:
 - [BONNIEMAT-1096](#): Issue in presentation layer of CQL showing calculated results of number of items in an array
 - [BONNIEMAT-1158](#): Calculation error when the measure includes 'is' for entity Type check
 - [BONNIEMAT-1252](#) and [BONNIEMAT-1259](#): Date/times aren't being ignored when test case uses "dayOf"
 - [BONNIEMAT-1291](#): Issue with highlighting with a ratio measure
 - [BONNIEMAT-1365](#): Can't set facilityLocation in Diagnostic Study, Performed
 - [BONNIEMAT-1366](#): Encounter, Performed not bound to value set is ignored by Bonnie
- Supports QDM 5.6
- Supports QDM/CQL and CQL 1.5
- Patient conversion functionality will remain disabled

Bonnie FHIR: Current State

Bonnie 6.2.5 FHIR

- Bonnie 6.2.5 FHIR released on 12/13/22

Bonnie FHIR Attributes

- Attributes supported by Bonnie FHIR are linked on the Bonnie and MAT issue tracker on the summary page
- <https://oncprojecttracking.healthit.gov/support/projects/BONNIEMAT/summary>

Bonnie

Known Issues:

- The QRDA export is not correctly reflecting relevant date time. There is no workaround. We don't have plans to address this in Bonnie at this time.
- For Bonnie FHIR, measures that include stratification are not displaying properly for users to test. There is no workaround at this time. We don't have plans to address this in Bonnie at this time.
- For Bonnie Prior, test cases that include certain QDM attributes are preventing test case conversion from QDM to FHIR. The QDM attributes are PatientEntity, CarePartner, Practitioner and Organization. A workaround of removing these QDM attributes will allow the conversion to process. ([BONNIEMAT-1177](#))
- For Bonnie FHIR, the defaulted element/code combination for Malignant Intracranial Neoplasm (SNOMEDCT Code 109911004) prevents the user from saving the test case. If the code is updated to another SNOMEDCT code for this element, the test case can be saved and can, if desired, revert back to the defaulted SNOMEDCT Code 109911004 and not be prevented from saving the Test Case. ([BONNIEMAT-1485](#))

60 Day Account Deactivation

Keeping your MADiE, MAT and Bonnie Accounts Active:

- In accordance with CMS and HHS security requirements, these tools have implemented an account deactivation policy for all users who have not logged in within the previous 60 days or more.
 - Activity in at least one of the three Bonnie environments (every 60 days) is needed to keep accounts active.
- Users will receive warning messages after 30 days of inactivity.
- After 60 days of inactivity, accounts will be deactivated.
- To access deactivated MAT accounts again, users will need to request reactivation of their account by contacting the Help Desk.
- To access deactivated Bonnie accounts again, users will need to request reactivation of their account by contacting the Help Desk. ****Do not request a new account - to retain access to your measures and test cases you will need to request reactivation of your existing account.**
- To access a deactivated MADiE account again, users will need to request the MADiE role in HARP.

*Keep your Bonnie, MAT and MADiE accounts active to continue to receive important email communications!

Bonnie and MAT: Future State

Bonnie and MAT Support:

- As outlined above, Bonnie QDM and MAT were updated with features needed to support using them for the 2024 Annual Update.
- QDM Contingency plan is complete so no further enhancements are planned at this time.
- Bonnie and MAT will continue to be available.
- While it is the intention to sunset these tools in the future, no date has been set at this time.

All future MAT and Bonnie enhancements or updates will be evaluated for:

- Priority – Is it needed to support CMS contracted measure development work? Does it correct an issue?
- Level of Effort – Does this impact the delivery of future releases of MADiE?
- Benefit – Can users complete their work with or without the enhancement?
- Future MAT or Bonnie releases will be communicated to users during User Group, community and stakeholder meetings and via email communication.

MADiE

MVP 1.1.10

MADiE Release Timelines

✓ MADiE – 1.1.9 7/31/2023 Release

- QI-Core test case export
- Allow version of QI-Core measures with invalid test cases
- Reorder the Denominator Exceptions field on the human readable export
- Allowing Improvement Notation field to be deselected
- Validate the "using" statement in CQL for both QDM and QI-Core measures

✓ MADiE – 1.1.10 8/11/2023 Release

- Updated to HAPI version 6.6.2 in our madie-fhir-service
- Updated MADiE to support cross version extensions from HAPI when validating test case bundles
- Updated fqm-execution to latest version 1.2.2
- Updated cqm-execution to latest version 4.1.3
- Updated CQL translator to latest version 2.11.0
- Ability to re-import QI-Core test cases
- Ability to version/draft a QDM measure
- Updated QI-Core test case export PatientID references

MADiE – Future

- QDM Data Model Support
- QDM Measure, library and test case support

MADiE Release Schedule:

- MADiE releases will occur approximately every two weeks.
- Goal: Provide users with frequent delivery of high-quality features and correction of defects.
- Users will be notified via email and Release Notes will be made available on the [MADiE MVP tab](#) of the MAT public web site.

MADiE Known Issues

Known Issues as of 8/10/23:

Known Issues List will be posted and maintained on the [MADiE MVP tab](#) of the MAT public web site and the Summary page of the Bonnie MAT MADiE ONC Jira Issue Tracker here:

<https://oncprojectracking.healthit.gov/support/projects/BONNIEMAT/summary>

CQL-ELM Translator Known Issues

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 GitHub ticket for more information on this issue:

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

MADiE Known Issues (continued)

MADiE Known Issues as of 8/10/23:

- CQL Validation issues occur when a definition name is resolvable to a quoted identifier, but the definition name is not in quotations. Users may not receive CQL validation errors, however the Population Criteria section won't render, and a blank screen will display
 - Work around: Quotes should be added to all define statement names, even when resolvable to a quoted identifier.
- When users search for measure names and include special characters in the search criteria, the user may receive a 403 error, or the search results will not be returned.
 - Work around: Only include alpha numeric characters when searching for a measure.
- Users may receive VSAC timeout errors, even when active in UMLS.
 - Work around: As this issue is intermittent, if a user receives an error indicating a 401 or VSAC timeout error when saving, users should follow these steps if this occurs. Copy the updates you were saving, navigate away from the tab, navigate back to the tab to paste the updates, and save again. [BONNIEMAT-1330](#)
- Measure export may fail when text fields include some symbols. Less than (<) and ampersand (&) symbols have been identified as causing export to fail if they are included, but additional symbols may have this effect as well. [BONNIEMAT-1429](#)

MADiE Resources

MADiE MVP

- The [MADiE MVP tab](#) on the MAT public web site provides:
 - Login button to MADiE
 - 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
 - Release Notes – posted with each MADiE release
 - MADiE Measure Sharing Request Form v1.1 – to request measures and test cases be shared – submitted by the owner via email
 - MADiE Measure or Library Ownership Transfer Request Form is now available. This form should be submitted by the owner via email

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 [MADiE MVP tab](#) of the MAT 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.

Updated Help Desk Ticket Submission Process

- The [MAT_Bonnie_MADiE_TicketSubmissionGuidance](#) document 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, full test case JSON in a .txt file
 - **Do not** send screen prints of partial CQL and/or JSON
 - 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 Bonnie MAT MADiE Issue Tracker to evaluate MADiE, MAT and Bonnie functionality
 - The types of tickets to submit to the [Bonnie MAT MADiE Issue Tracker](#)

Help Desk Tickets

The Labels field has been updated

- **Labels**

- This field will now only be used by submitters to track labels important to the measure developers.
- If a label needs to be added to this field after the ticket has been created add a comment with the request and the MAT Bonnie MADiE team will make that update.

Help Desk Use Only Labels

- This new field is only available to help desk staff after a ticket is created.
- The labels in this field will be used by the MAT Bonnie MADiE team.

JIRA Status and Resolution Use Cases

- This document provides descriptions for each ONC JIRA status/resolution combination
- Available on the [Bonnie MAT Issue Tracker](#) Summary page
- <https://www.emeasuretool.cms.gov/sites/default/files/2023-05/JIRA%20Status%20and%20Resolution%20Use%20Cases.pdf>

Help Desk Tickets (continued)

Two new fields will be used when an ONC JIRA ticket results in a MADiE release. One indicating that the release is complete, and the other that the issue is confirmed as resolved by the submitter.

MADiE Release Version

- This new field is used by the help desk staff when a ticket resulted in an update to MADiE.
- The MADiE release(s) that included the update will be listed.
- If an issue requires multiple MADiE releases to fully resolve the issue, the Help Desk will add a comment to indicate a partial fix but will not complete the 'MADiE Release Version' field until the issue is fully resolved.

Submitter Resolution Confirmed

- This new field will be used by submitters to indicate if the issue has been resolved after the MADiE Release.
- Submitters can confirm the issue is resolved by selecting to 'Edit' the test case and then selecting 'Yes' from the radio button field, 'Submitter Resolution Confirmed'.
- If the submitter determines that the issue is not resolved, they should select 'No' from the radio button field and enter a comment in the ticket with their findings.
- The MADiE team will be notified of the update and if resolution is not confirmed will review the ticket and be in contact with the submitter.

CQL Libraries

Global Shared Libraries in MADiE:

Commonly used libraries were entered into MADiE following the MVP release.

FHIR Name in MAT	Version in MAT	QI-Core Name in MADiE	Version in MADiE
MATGlobalCommonFunctionsFHIR4	V 7.0.000	CQMCommon	V 1.4.000
FHIRCommon	V 1.1.000	FHIRCommon	V 4.3.000
FHIRHelpers	V 4.1.000	FHIRHelpers	V 4.3.000
QICoreCommon	V 1.0.000	QICoreCommon	V 1.5.000
CumulativeMedicationDurationFHIR4	V 2.0.000	CumulativeMedicationDuration	V 3.3.000
SupplementalDataElementsFHIR4	V 3.1.000	SupplementalDataElements	V 3.4.000

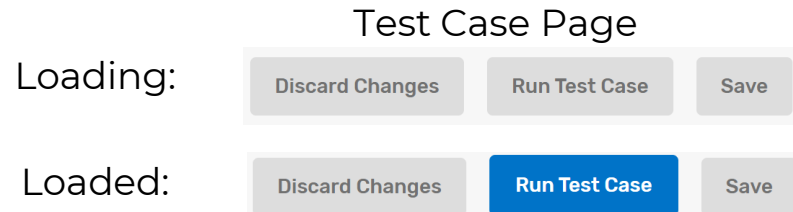
CQL Libraries (continued)

CQL Libraries owned by MAT users:

- Standalone CQL libraries for both FHIR and QDM will not transfer like measures.
- Library owners will need to create the shell library in MADiE with the correct model and then copy and paste the contents of the library from MAT into the library in MADiE.
- To ensure your library version number matches what was in MAT and used by your measure, users will need to major/minor version their library until the desired version number is reached.
- Reminder, versioned libraries cannot be deleted so version carefully.

Loading Value Sets in MADiE

- MADiE utilizes a connection to VSAC when a user accesses the Test Case tab.
- For measures that contain a large number of value sets or value sets with large amounts of data, users may experience a delay in the Test Case table or a test case selected to view/edit fully loading.

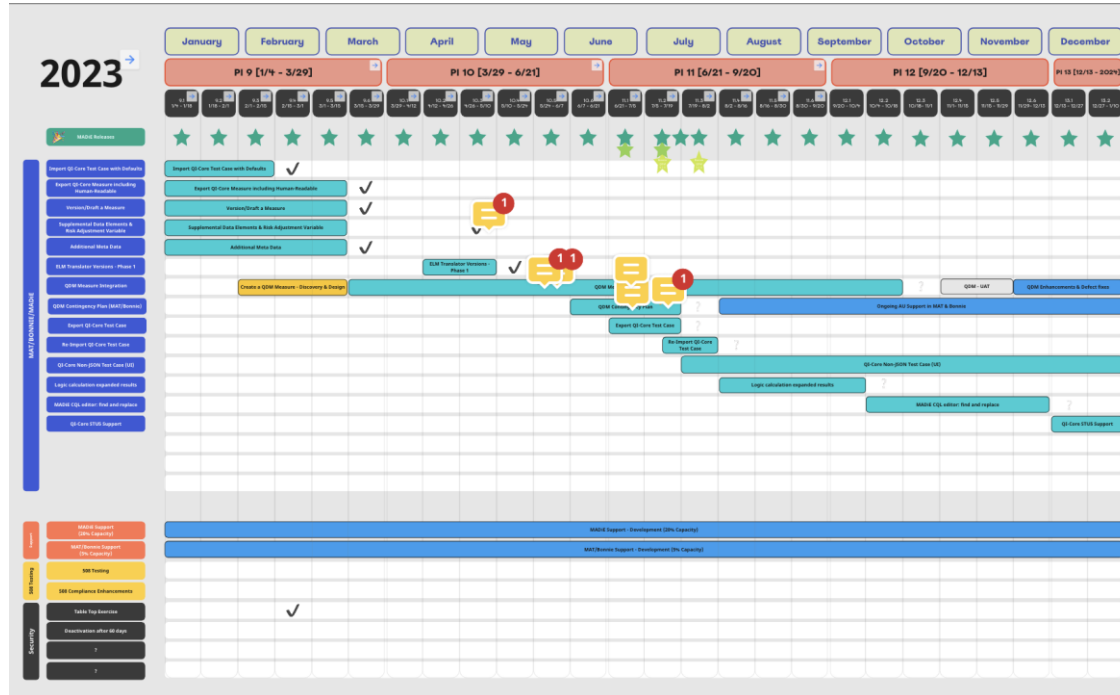


- If a user interacts with the Test Case tab before it fully loads, they may receive the following error, "An error exists with the measure CQL, please review the CQL Editor tab".
- If there are no errors on the CQL, this error message can display when the value sets have not had time to load on the Test Case tab.
- Users should wait until all content is loaded and all buttons on the page are enabled.

Community Questions & Discussion

MADiE 2023 Roadmap

https://miro.com/app/board/uXjVPhO9hJg=?share_link_id=133115215696



User Group Discussion (continued)

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

Reminder when submitting tickets...

MAT Tickets

- Indicate the tool type and Measure Model: QDM vs. FHIR
- Attach the measure package if appropriate
- Provide Screenshots of error messages

Bonnie Tickets

- Be sure to indicate tool type: Prior, QDM, FHIR
- Attach the affected test cases and reference them in the ticket by name if possible
- Attach the measure package used with the test cases
- Provide which account was used to test the measure(s)

MADiE Tickets

- ONC Jira is now updated to reflect MADiE
- All measure sharing requests, **measure or library ownership transfer requests** or inquiries with a HARP ID must be submitted via email at semanticbits-madie-help@icf.com
- Questions about updating measure CQL or test case JSON to resolve validation errors or unexpected actual results should be submitted to the [CQL Issue Tracker](#). If after CQL or JSON updates are identified and resolved questions/issues remain the ticket will be moved to the MADiE team for review.
- Attach the measure package and affected CQL and test case JSON, if appropriate, as text files and reference them in the ticket by name

Resources

PHI/ PII

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



Resources for Users

Bonnie and MAT Troubleshooting Guides

- Located on the ONC Jira Bonnie MAT Issue Tracker – Summary page
 - [Bonnie Troubleshooting Guide](#)
 - [MAT Troubleshooting Guide](#)

Tool Release Table

- Located on the MAT public website under Training and Resources/MAT Helpful Links
 - [Bonnie, MAT and MADiE Release Schedule](#)

Negation Rationale in Bonnie FHIR

- Located on the MAT public website under Training and Resources/Bonnie Helpful Links
 - [Bonnie FHIR: How to use Negation Rationale](#)

Resources

MAT Public Website:

<https://www.emasuretool.cms.gov/>

MAT 6.11:

<https://www.emasuretool.cms.gov/MeasureAuthoringTool/Login.html>

Bonnie 4.3.1 QDM (Prior) (QDM version 5.5):

<https://bonnie-prior.healthit.gov/>

Bonnie 5.1.4 QDM (QDM version 5.6):

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

Bonnie 6.2.5 FHIR:

<https://bonnie-fhir.healthit.gov/>

MADiE MVP – 1.1.10

<https://madie.cms.gov>

Bonnie MAT MADiE Issue Tracker:

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

eCQI Resource Center:

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