

# Bonnie, MAT and MADiE User Group



## ***February User Group***

*Hosted by:*

*ICF*

*February 16, 2023*

# Disclaimer

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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

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## MAT 6.10 QDM & FHIR

# Measure Authoring Tool: Current State

## MAT 6.10

- MAT 6.10
- Maintenance release on 11/16/22 included:
  - Ability for measure owners to transfer FHIR measures from MAT to MADiE.
  - While a measure does not need to be versioned to transfer, clicking the transfer button will initiate the measure to be packaged and then transferred.
  - Once a measure is transferred, it cannot be transferred again.
  - The CMS ID can only be created in the MAT. If a CMS ID is needed, it will need to be assigned in the MAT before being transferred to MADiE.
  - Once measures are moved from MAT to MADiE, there is no longer an association between the applications. Changes in MAT will not be reflected in MADiE and vice versa.
- Release Notes are available on the MAT web site under Training and Resources - contains additional information about what information will be transferred based upon measure type.
- QDM measures continue to use version 1.5.3 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.

## 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

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**Bonnie 4.3.1 QDM (Prior)**

**Bonnie 5.1.2 QDM**

**Bonnie 6.2.5 FHIR**

# Bonnie Prior: Current State

## Bonnie 4.3.1 Prior

- Supports QDM 5.5
- Requested patient conversion defaults implemented
- Users use HARP IDs for authentication
- Group Account functionality is available
- 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
  - Privacy Policy button linking to the [CMS Privacy Policy](#) added on the landing page



# Bonnie QDM: Current State

## Bonnie 5.1.2 QDM

- Bonnie 5.1.2 QDM maintenance release on 7/19/22
  - Privacy Policy button linking to the [CMS Privacy Policy](#) added on the landing page
- 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
  - JSON export files for test cases exported following the release include the following updates:
    - The MeasureReport resource has been removed from JSON export files
    - The QI-Core Patient Profile URL has been added to all patients
    - The Medical Record Identifier has been added to all patients
  - Please note - test cases will still need to be updated to reflect QI-Core

## Bonnie FHIR File Size

- A configuration change was made to increase the file size for measure uploads into Bonnie FHIR. Please contact the help desk if you receive an error when uploading a measure.

## Bonnie FHIR Attributes

- Attributes supported by Bonnie FHIR are linked on the Bonnie and MAT issue tracker on the summary page
- Updates have been made to reflect the current state of attribute support, naming conventions and to add clarifying footnotes
- <https://oncprojecttracking.healthit.gov/support/projects/BONNIEMAT/summary>

# Bonnie

## Known Issues:

1. 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.
2. 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.
3. For Bonnie QDM, if the result of any CQL aggregate functions, such as Count, Min, Max, Average, etc, is 0, then Bonnie currently displays 'No Result Calculated'. The Execution Engine is producing the correct results. This is a display issue only. We don't have a planned release to address this in Bonnie at this time. ([BONNIEMAT-1096](#))
4. For Bonnie QDM, when measure observations are used in ratio measures, the measure observation logic is being executed against test cases, even if that test case did not first meet the numerator or denominator criteria. When measure logic cannot be modified, there is no workaround. This will affect the pass rate of the measure. There are not plans to address this in a future release. ([BONNIEMAT-1106](#))
5. For Bonnie QDM, the CQM Model used in Bonnie does not currently support the 'is' operator when it is referencing any 'entity', which can include practitioner, patient, organization care partner or location. Logic may be able to be altered as a workaround. ([BONNIEMAT-1158](#))
6. 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](#))
7. Bonnie currently uses version 4.0.2 of the Execution Engine. In this version, there are issues with appropriate handling of timezone offsets. This has been corrected in current versions of the Execution Engine and we are working with CMS and stakeholders to understand the priority of updating Bonnie QDM. ([BONNIEMAT-1252](#)) and ([BONNIEMAT-1259](#))

# 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.
- To access a deactivated MADiE account again, users will need to request the MADiE role in HARP.

# Bonnie and MAT: Future State

## **Bonnie and MAT Support:**

- Bonnie and MAT will continue to be available following the release of MADiE.
- 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.

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

# MADiE

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MVP 1.0.5

# MADiE Release Timelines



## **MADiE 1.0.4 - January 2023 Release - 1/25/23**

- When transferring measures between MAT and MADiE, the version numbers will retain a consistent format: major + minor + revision\_number Example: 1.1.000.
- Error messages have been updated for consistency throughout MADiE.
- The Expected Results labels have been updated when executing test cases with more than one population.



## **MADiE 1.0.5 - February 2023 Release – 2/7/23**

- Users can now view the version of the measure they are editing on the header of the Measure page. Draft measures will also display the version number for which that draft is based.

## **MADiE 1.0.6- February 2023 Release**

- Upload of individual Bonnie FHIR test cases
- Default values for subset of required elements

## **Updated 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 Release Timelines (continued)

## **MADiE - 1.0.7 - March 2023 Release**

- Drafting and Versioning of measures
- Supplemental Data Element (SDE) Support
- Risk Adjustment Variable (RAV) Support

## **MADiE – 1.1.0 - March 2023 Release**

- Export support
  - JSON
  - XML
  - Human Readable
  - Zip file
- Additional Meta Data support

## **MADiE – 2.0.0 - July 2023 Release**

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



# MADiE MVP Known Issues

## Known Issues as of 2/15/23:

- 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://oncprojecttracking.healthit.gov/support/projects/BONNIEMAT/summary>
- 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.

# MADiE MVP Known Issues (continued)

- MADiE had previously introduced validations to help users create QMIG-compliant population criteria. MADiE is currently incorrectly validating the use of some functions. When the CQL contains a function with a complex argument type in the primary library, users may receive an error when trying to create a population criteria: 'Failed to create the group'.
  - Work around: The user may create a standalone library with this function and then reference that function through the appropriate include mechanism available in CQL
- Users may receive incorrect test case results if their test cases use Observations. MADiE requires an update to enable profile-informed execution within FQM Execution.
  - Work around: Users may use a general Observation retrieve with the respective profile code, for example e.g., [Observation: "BMI"] within their measure CQL
- When a user selects a Measurement Period (MP) Start and End date, MADiE is inappropriately appending the current system time to the MP Start and End date. Users are unable to edit the time. For example, if a user is logged into MADiE at 5PM and selects the MP, the MP is recognized as 2023-01-01 at 5PM to 2023-12-31 at 5PM. MP time should start at 00:00AM and end at 23:59PM.

# MADiE MVP Known Issues (continued)

## Execution Known Issues

Note, for these issues the MADiE Team is working hand in hand with the FQM-Execution Team to address these updates.

- Ratio Measures with single Initial Population and Measure Observations will not calculate properly.
- Test cases that do not specify race or ethnicity may receive an error when executed as the current version of the FQM-Execution Engine cannot union null with another value. Additional information regarding this issue can be found [here](#).
  - Work around: Include data for both race and ethnicity in test cases.

# 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

# 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.

# Organization Contact Information

## MADiE Organization URLs Needed for March Release

- We are asking for assistance with identifying the public URL to include in MADiE for steward organizations (e.g., <http://www.myOrganizationURL.com>). This URL will be associated with the organization's name when it displays in the 'Steward' and 'Developers' fields on the Details tab during FHIR measure creation in MADiE, as well as in the MADiE export of FHIR measures.
- If information is needed from you for your organization, you were sent a communication requesting URL information for their organizations. This information is needed for MADiE to create compliant export files.
- If a URL isn't received by EOD 2/17/2023 the MADiE team will identify the organization's public site and use that URL.
- In the event we are not able to locate a URL for an organization, that organization will no longer be listed as an option to select for the 'Steward' and 'Developers' fields on the Details tab during FHIR measure creation, and as a result will not be included in the MADiE export of FHIR measures.
- Organization URLs received after 2/17/23 will be added to MADiE in a future release.
- Refer to the information for the contact element in the [CQFM Publishable Measure](#) profile in the [FHIR Quality Measure Implementation Guide \(QMIG\) STU 3](#) specification.

# 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 1.0.000
FHIRCommon	V 1.1.000	FHIRCommon	V 4.1.000
FHIRHelpers	V 4.1.000	FHIRHelpers	V 4.1.000
QICoreCommon	V 1.0.000	QICoreCommon	V 1.2.000
CumulativeMedicationDurationFHIR4	V 1.4.000	CumulativeMedicationDuration	V 3.0.000
SupplementalDataElementsFHIR4	V 3.0.000	SupplementalDataElements	V 3.0.000

# CQL Libraries (continued)

## **CQL Libraries owned by MAT users:**

- Standalone CQL libraries will not transfer like measures.
- Library owners will need to create the shell library in MADiE 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.



# Web Application Firewall Errors

## Web Application Firewall (WAF) Errors in MAT, Bonnie and MADiE

- 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 WAF error, or when making a change to the measure or test case

**When an error message is received, please copy the text of the message or take a screenshot and include that in your ONC JIRA ticket.**

- Providing the error message assists the team in confirming the cause of the issue
- When error messages include a 'Support ID' that will be provided to CMS to unblock the attempted action

### **Examples of 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 [soc@hcqis.org](mailto:soc@hcqis.org) and reference your Support ID: 2586968644408754759

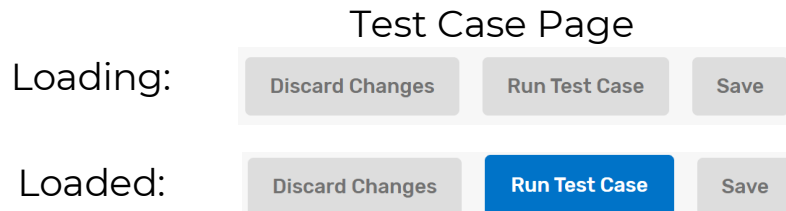
**Note:** Submit an [ONC JIRA ticket](#), do not email the security operations center as indicated in the final error message example

# Community Questions & Discussion

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# 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.

# Measure Name Display

- If a measure name is very long or a user has their screen resolution or size set smaller than what allows the measure name to fit on one line, the measure name will wrap in the header of MADiE, causing some undesirable UI behavior and overlapping.
- Notice the measure name in the example below wraps and the line with the model and measurement period is hidden/overlaps with the tabs.



Measure Authoring Development  
Integrated Environment

Measures

Libraries

Help

● UMLS Active



Heather ▾

[Measures](#) / [Details](#)

Core Clinical Data Elements for the Hybrid Hospital-Wide (All-Condition, All-Procedure)  
Risk-Standardized Mortality Measure (HWM) FHIR v0.0.001

Draft

Delete  
Measure

Details

7/1/2023 - 6/30/2024  
CQL Editor

Population Criteria

Test Cases

# Measure Name Display: Option 1

**Option 1** – Truncate the measure name, put ellipses at the end, and provide the full name in a tooltip on mouseover. The version number and 'Draft' display on the second line (under the tooltip shown below).

- Pro – Stops long titles from wrapping to a new line, causing the UI issues
- Con – Measure names that are similar at the beginning but differ at the end may get confusing

The screenshot shows the MADiE web application interface. The top navigation bar includes the MADiE logo, the text "Measure Authoring Development Integrated Environment", and tabs for "Measures", "Libraries", and "Help". On the right, there is a "Connect to UMLS" button and a user profile for "Jonathan".

The main content area has a breadcrumb "Home > Measure" and a "Delete Measure" button. The measure title is "Appropriate Use of DXA Scans in Women Under 65 Years Who Do Not Meet the Risk Facto...", with a tooltip showing the full title: "Appropriate Use of DXA Scans in Women Under 65 Years Who Do Not Meet the Risk Factor Profile for Osteoporotic FractureFHIR". Below the title, the version "Version 0.0.007" and the category "QI-Core" are displayed.

The "Details" tab is selected, showing a list of code snippets:

```
1 library MyTestMeasureCQLLibrary version '0.0.000'
2
3 using FHIR version '4.0.1'
4
5 include FHIRHelpers version '4.0.001' called FHIRHelpers
6 include SupplementalDataElementsFHIR4 version '2.0.000' called SDE
```

# Measure Name Display: Option 2

**Option 2** – Display the abbreviated name instead of the full name, and provide the full name in a tooltip on mouseover. The version number and ‘Draft’ display on the first line with the truncated measure name.

- Pro – Should stop long titles from wrapping to a new line, causing the UI issues
- Con – User could still create a “long” abbreviated title (up to 100 characters) and could still have the same issues at a smaller screen resolution/size

The screenshot displays the MADiE (Measure Authoring Development Integrated Environment) web application. The top navigation bar includes the MADiE logo, the text "Measure Authoring Development Integrated Environment", and links for "Measures", "Libraries", and "Help". On the right, there is a "Connect to UMLS" button and a user profile for "Jonathan".

The main content area has a dark blue header with the breadcrumb "Home > Measure" and a "+ New Measure" button. The measure title is "Abbreviated Measure Name Example Here V.1.1.0" followed by a "Draft" status badge. Below the title, it shows "QI-Core v4.1.1" and a date range "1/1/2023 - 12/31/2023" with an "In-Use" badge.

Below the header is a tabbed interface with four tabs: "Details" (selected), "CQL Editor", "Population Criteria", and "Test Cases". The "Details" tab is active, showing a list of CQL code snippets with line numbers 1 through 11:

```
1 library MyTestMeasureCQLLibrary version '0.0.000'
2
3 using FHIR version '4.0.1'
4
5 include FHIRHelpers version '4.0.001' called FHIRHelpers
6 include SupplementalDataElementsFHIR4 version '2.0.000' called SDE
7 include MATGlobalCommonFunctionsFHIR4 version '5.0.000' called Global
8
9 parameter "Measurement Period" Interval<DateTime>
10
11 context Patient
```

# Measure Name Display: Option 3

**Option 3** – Header stretches dynamically to fit the content. The version number and ‘Draft’ display after the measure name, either the first or second line depending on measure name length.

- Pro – Quickly fixes the line break issue, full name would always be in view
- Con – Height of header increases which lessens the available workspace height

The screenshot displays the MADiE (Measure Authoring Development Integrated Environment) interface. At the top, the MADiE logo is on the left, and navigation links for Measures, Libraries, Help, Connect to UMLS, and a user profile (Jonathan) are on the right. The main header area is dark blue and contains the breadcrumb 'Home > Measure', a 'Delete Measure' button, and the measure title 'Appropriate Use of DXA Scans in Women Under 65 Years Who Do Not Meet the Risk Factor Profile for Osteo V1.1.0' with a 'Draft' status. Below the title, it shows 'QI-Core v4.1.1', the date range '1/1/2023 - 12/31/2023', and an 'In-Use' status. A tabbed interface below the header shows 'Details', 'CQL Editor', 'Population Criteria', and 'Test Cases'. The 'CQL Editor' tab is active, displaying a list of CQL statements with line numbers 1 through 10 on the left margin.

```
1 library MyTestMeasureCQLLibrary version '0.0.000'
2
3 using FHIR version '4.0.1'
4
5 include FHIRHelpers version '4.0.001' called FHIRHelpers
6 include SupplementalDataElementsFHIR4 version '2.0.000' called SDE
7 include MATGlobalCommonFunctionsFHIR4 version '5.0.000' called Global
8
9 parameter "Measurement Period" Interval<DateTime>
10
```

# User Group Discussion

- 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.



# 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.



# 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 or inquiries with a HARP ID must be submitted via email at [semanticbits-madie-help@icf.com](mailto:semanticbits-madie-help@icf.com)

# Resources

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# 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.emeasuretool.cms.gov/>

MAT 6.10:

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

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

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

Bonnie 5.1.2 QDM (QDM version 5.6):

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

Bonnie 6.2.5 FHIR:

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

MADiE MVP – 1.0.5

<https://madie.cms.gov>

Bonnie MAT MADiE Issue Tracker:

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

eCQI Resource Center:

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