

Figure 1: CMS Logo



Measure Authoring Tool Release Notes

Version 5.7.0

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Enhancements

A description of the enhancements included in the Measure Authoring Tool (MAT) version 5.7.0 are listed below. This includes changes made to the user interface, the back-end processes, and the exports.

1.0 Updated the MAT to Version 5.7

- The MAT will now show version 5.7 for any new measures, new drafts of existing measures, and for any measures that were in a draft state upon packaging of that measure.

1.1 Migrate ANT to Maven in the MAT codebase

- The MAT made a change in the way it handles its dependencies within the tool to ensure it is up to date with advances in technology.

1.2 Update of the CQL to ELM Parser

- The measure authoring tool has updated the CQL to ELM parser to use version 1.3.14
- Changes to the settings of the CQL to ELM parser were made to use spaces instead of tabs when formatting CQL logic.

1.3 MAT Hibernate framework updated to version 5.2.17

- The measure authoring tool has updated the mapping framework to Hibernate version 5.2.17.

1.4 MAT Main Header Redesign

- The main header of the measure authoring tool has been redesigned to take up less space on the screen. This was done to minimize some of the scrolling in the tool.
- The MAT account tab is no longer found along the top of the MAT. Users can access their MAT account and log out of the MAT through the new profile icon in the upper right-hand corner of the screen.
- The MAT title, 'Measure Authoring Tool v.5.7', is now a link that will take a user back to the measure library page.
- The Bonnie login link on the MAT main header will now change to a 'Disconnect from Bonnie' link while the user is logged in to Bonnie. This will allow the user to disconnect from anywhere in the tool.

1.5 Changes to Measure Library and CQL Library Page Layout

- The recent activity table now spans the width of the top of the screens
- All icons that are found in the search tables below are now present in the recent activity table. This allows users to perform necessary functions like drafting or versioning on their most recently used measures or libraries without having to search for them first.
- The search area has been moved below the recent activity table.

1.6 Advanced Search

- There is now an Advanced Search on both the Measure Library and the CQL Library screens. The advanced search on the Measure Library screen allows users to search by measure state, patient-based indicator, measure scoring, when the measure was last modified, who last modified the measure, and the measure owner. The advanced search on the CQL Library screen allows users to search by library state, when the library was last modified, who last modified the library, and the library owner.
- There is now a Search Criteria section on both the CQL Library and Measure Library screens that will show users what options were chosen when the search was performed that affects what measures are shown in the search table.
- The Search Criteria section contains a Reset link which will remove all currently selected search filters to allow the user to make new choices.
- The count of the measures returned in a search is now shown in the Search Criteria Section.

1.7 Measure Details

- The measure details section of the measure composer has been re-designed in the MAT.
- There is now a left-hand navigation on the measure details page that allows users to click through each of the components that make up their measure metadata.
- The edit function for the measure name, eCQM abbreviate title, measure scoring, patient-based measure indicator, and the composite scoring method (composite measures only) has been moved to the general measure information section of the re-designed measure details screen.
- Using the edit icon on the measure library tab will now take users into the general measure information section of the measure details screen.
- Sub-tabs have been added under the populations section of the left-hand navigation that will contain areas to enter information about each population that could be used for the measure scoring type chosen.
- Checkmarks have been added to the left-hand navigation to show a user if they have information already saved in that section. A solid green circle with a white checkmark shows that the section has been completed. An open orange circle with an orange checkmark shows if a section has been partially completed. No checkmark indicates that the field has not yet been filled out.
- A view human readable button has been added to the top-right of the measure details screen that allows users to view all of the metadata entered in a format similar to how it will be shown in the Human Readable export.

1.8 Change in Location for the Icons on the CQL Editor

- In the CQL workspace and the CQL composer, the save, delete, and erase icons have been moved below the CQL Editor to create a better flow for users using assistive technology.

1.9 Expression Builder

- There is a new icon on the definition section of the CQL Workspace, above the CQL Editor, that will allow users to open the new expression builder in the MAT.
- The expression builder will open in a modal and will walk users through a workflow that will allow users to create expressions by choosing items from dropdown menus.
- Clicking the complete build button in the expression builder will insert the created expression into the CQL editor. If information has already been added to the CQL editor, the expression from the expression builder will be appended to the end of that information.

1.10 In-App Help

- The MAT now has an In-App help feature on the CQL Library and CQL Workspace to provide additional information to users that will offer help and guide them through the process of each screen.
- Users will see a question mark next to the heading on each section of the CQL Workspace.
- Clicking the question mark icon will open a text box that will contain the help for the fields on that screen.

1.11 New Pre-defined Function in the MAT

- ToDate() is now listed as a pre-defined function in the MAT.
- Users can find the ToDate() function under the pre-defined functions in the insert icon and in the function shortcut key Ctrl-Alt-f.

1.12 Perpetuate a Function Name Change Across Measure Observations

- If a user changes the name of a function that was previously applied as a Measure Observation in the Population Workspace, the Measure Observation will now show that name change.

1.13 Warning Messages Displayed in the MAT

- The measure authoring tool will now display warning messages on the View CQL section of the CQL Workspace and the CQL Composer. These messages will be indicated on the line of the logic where the warning occurs and is indicated by a triangle with an exclamation point. Hovering over the icon will show the user the warning message.
- The error export file has been upgraded to show any warning messages along with the error messages. If there are no errors or warnings, the user will be presented with a statement at the bottom of the report.
- Only the warning messages for the measure or library the user is working in will be shown on the View CQL Workspace and in the exports. It will not include any warnings for included libraries or component measures.

1.14 Mismatched QDM version message on View CQL section

- If a measure or a stand-alone CQL library is using a different version of QDM than that of an included library(ies), a message will now show on the View CQL section of the CQL Workspace or the CQL Composer.

1.15 Changes to Associations on the Measure Packager

- The Measure Packager screen will now display associations immediately when a user creates a measure grouping that requires them. This is intended to make it more clear as to when associations are required and where in the tool you need to add them.

1.16 Change in the Edit Icon for Read-only Measures on the Measure Packager

- The edit icon in the measure grouping list on the measure packager has now been replaced with a read-only icon for read-only measures.

1.17 New Bonnie Upload from the Measure Packager

- There is now a “Package and Upload to Bonnie Button” on the measure packager screen so that users no longer need to leave the measure, go back to the Measure Library screen, and then to the export screen to upload a measure to Bonnie.

1.18 Changes to the Human Readable Export

- The MAT is now sorting the items in the terminology section alphanumerically regardless of case.
- The Component measures field has been renamed to Component Measures List to match the title in the CMS blueprint.1.9
- The information in the Data Criteria section of the Human Readable is now sorted alphabetically by datatype and then by name of code or value set.

System Fixes

System fixes are items done to improve issues found in the current version of the measure authoring tool.

2.1 Corrected Drafting from a QDM measure that did not have a package

- The MAT now allows a draft from a non-CQL measure that was never previously packaged to be created, so it can be converted into a CQL measure.

2.2 Corrected unused items in the exports

- The MAT will now not mark items as used if a user has used the same identifier name as an alias in a logic expression. This will keep unused items from appearing in the exports.

2.3 Corrected duplicate records in the Human Readable for Composite Measures

- Duplicate records have been eliminated from the Data Criteria and Terminology sections of the Human Readable for composite measures when the composite measure and the component measures were utilizing the same data (i.e. value set).

2.4 Increased security regarding external code

- The measure authoring tool has added measures to increase security which disallows external code from being entered into the tool.

2.5 Disabled of Package and Version

- The MAT now disables the 'Package and Version' and 'Cancel' buttons while the versioning of a measure is in process.

Known Issues

Known issues are existing issues within the current MAT release. Workarounds are provided where possible to ensure users can continue with their measure authoring activities.

3.1 Measure Packaging Error with Duplicate Names in the Same Measure

- If a measure includes a CQL definition with the same name as its associated alias within the CQL logic, a packaging error will occur, and the following message will be displayed:

“Populations or Measure Observations within a Measure Grouping must contain a valid Definition or Function.”

To resolve the packaging issue, users should ensure alias names and definitions are unique, and then repackage the measure.