MADiE User Group

December User Group

Hosted by ICF/SemanticBits

December 19th, 2024

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 2.1.0

MADiE: Current State

MADiE – 2.1.0 12/18/2024

- **QDM Measures**: The Measure References screen has been updated to replace the Select button with Edit and Delete icons.
- Users now have the ability to request shared edit access for a measure they own be removed from other users. To request that a user no longer has shared edit access to your measure (and its test cases), fill out the new MADiE Add or Remove Measure and Library Sharing Request Form and send it to semanticbits-madie-help@icf.com.

  NOTE: This form replaces the MADiE Measure and Library Sharing Request Form that was previously used to submit share requests.
- **QI-Core Measures:** MADiE now supports Measure and Library creation in QI-Core v6.0.0. Users also can update existing measures and libraries when creating a draft by selecting to change the model used to QI-Core v6.0.0.

  NOTE: MADiE does not perform validation on QI-Core v6.0.0 measure test cases at this time.
- **QI-Core Measures:** Test case exports now contain stratification information for both patient and episode based measures.
- **Resolved Issues:**
  - MADiE was not correctly validating patient expired exceptions in test cases. (MADIE-2084)

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 12/19/24:

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 12/19/24:

- 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.
- **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

MADiE – Known Issues (3 of 5)

MADiE Known Issues as of 12/19/24:

- 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
- 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.

MADiE – Known Issues (4 of 5)

MADiE Known Issues as of 12/19/24:

- **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
- **QDM Measures**: MADiE users may receive a non-descript error message when trying to make updates to existing measures.
  - **Workaround:** 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.
  - **Workaround:** 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 – Known Issues (5 of 5)

MADiE Known Issues as of 12/19/24:

- **QDM Measures:** For Ratio and Continuous Variable measures, in test cases imported from Bonnie with observations, users may receive an error message and be prevented from editing the impacted test cases.
  - **Workaround:** Remove the observation expected value by zeroing out the relevant population (Numerator, Denominator or Measure Population), and then re-enter the expected values. If a test case has multiple observations, each will need to be updated accordingly.

  MADIE-2090

- **QI-Core Measures:** Measures will continue to use CQL-ELM Translator v3.14.0 instead of the updated v3.18.0 when versioning a draft measure that has not been updated since the CQL-ELM Translator was updated from to v3.18.0 with the MADiE 2.0.8 release.
  - **Workaround:** Make any edit to the draft measure (adding a space in the CQL or measure details would be sufficient) and SAVE the draft prior to creating a new version of the measure.

  MADIE-2098

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 Add or Remove Measure and Library Sharing Request Form v1.0 – to request measures (and the measure's test cases) or libraries to be shared OR that measure sharing access be removed – 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.

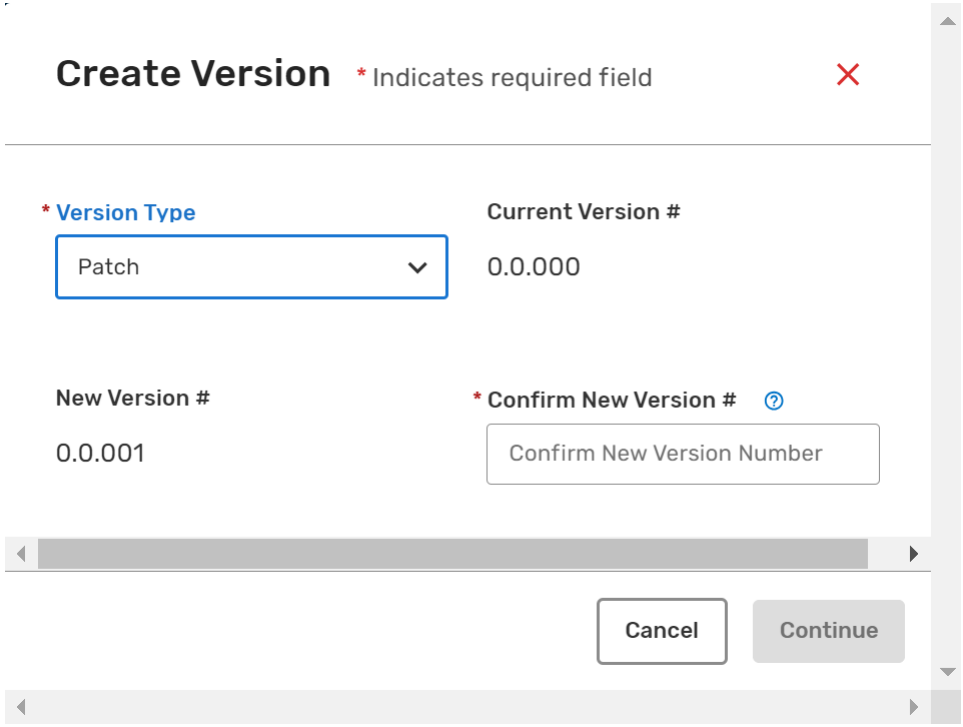
- Measure Name/ID
- Test case Name (if applicable)
- Action that resulted in unexpected error messages or an inability to save changes (include specific verbiage/CQL/JSON that was unable to save)
- Providing the error message assists the team in confirming the cause of the issue
- When error messages 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

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.emeasuretool.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
  - Remove measure sharing access requests (**NOTE:** Remove library sharing access requests will be added in a future release)
  - 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

Value Set and Code System Updates

MADiE Demonstration

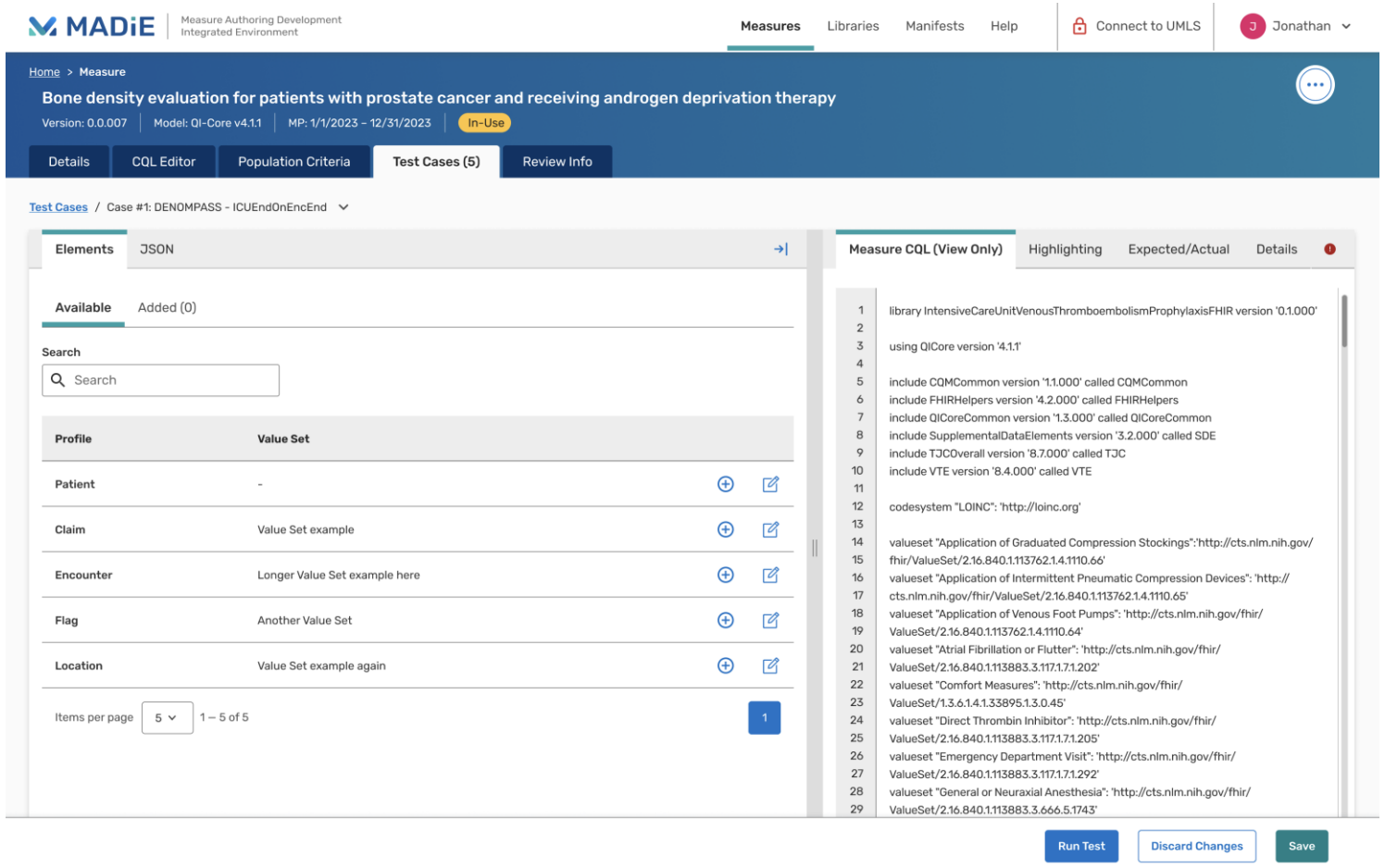
Human Centered Design - HCD

- User Experience Research (UXR)
  - Qi-Core – New Design (Testing)
- User Experience Design (UXD)
  - Measure – Copy To

UXR – QI Core

- **What did we do:** We conducted concept testing session for the new Qi-Core test case builder workflow.
- **No of participants:** 5
- **Research method:** Concept prototype was presented to the users and gathered feedback on ease of use, visual appeal and task completion confidence rating
- **How was the test administered:** The test was conducted using MS-Teams, the presenter shared the screen and questions were asked based on the screens shown in screen share session.

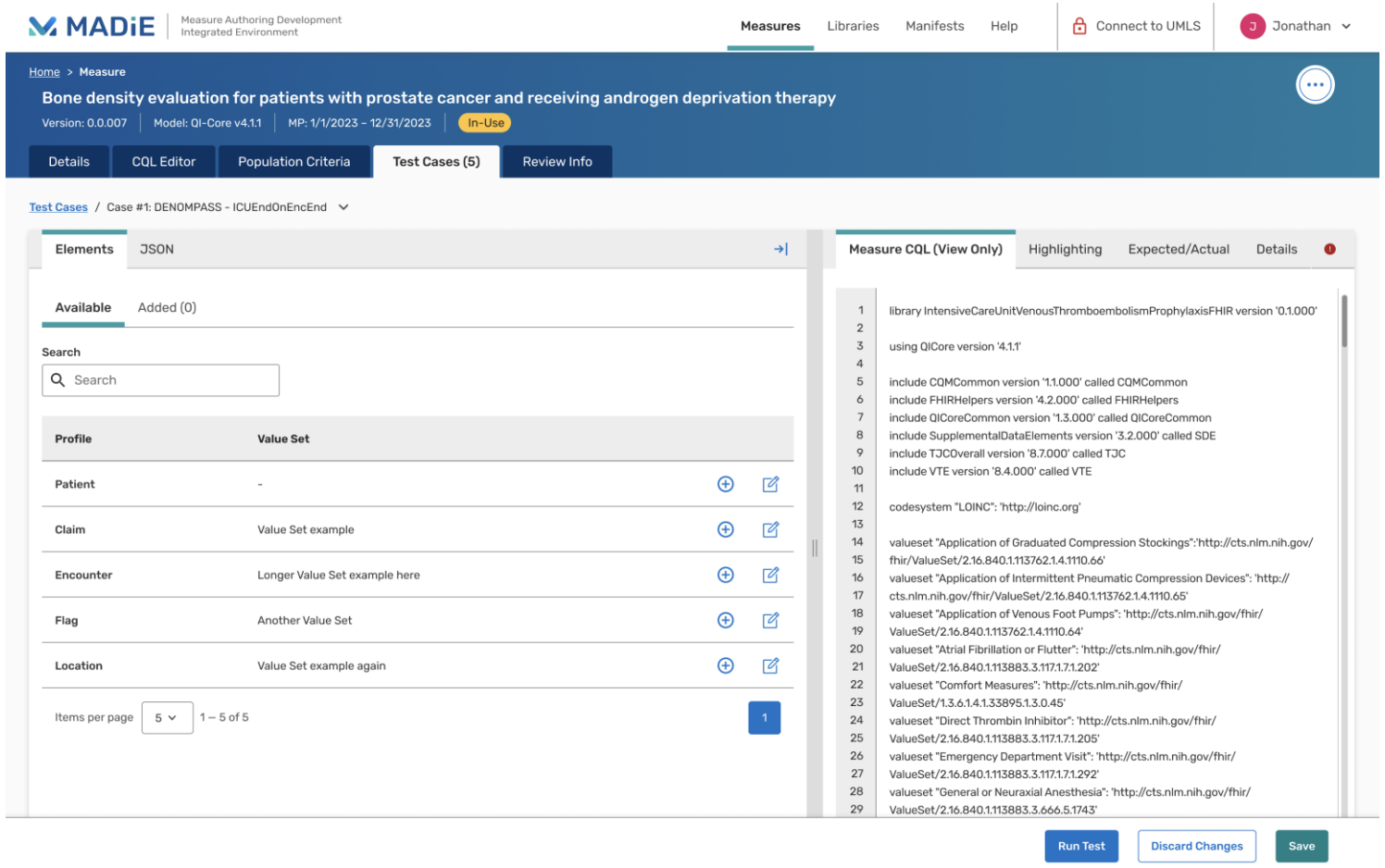
Finding 1



Hypothesis: We aimed to test whether the user's mental model naturally guided them to click the "Save" button after adding a profile to a test case.

Insight: All users intuitively clicked the "Save" button upon completing the task of adding profiles to the test cases, validating the hypothesis.

Finding 2

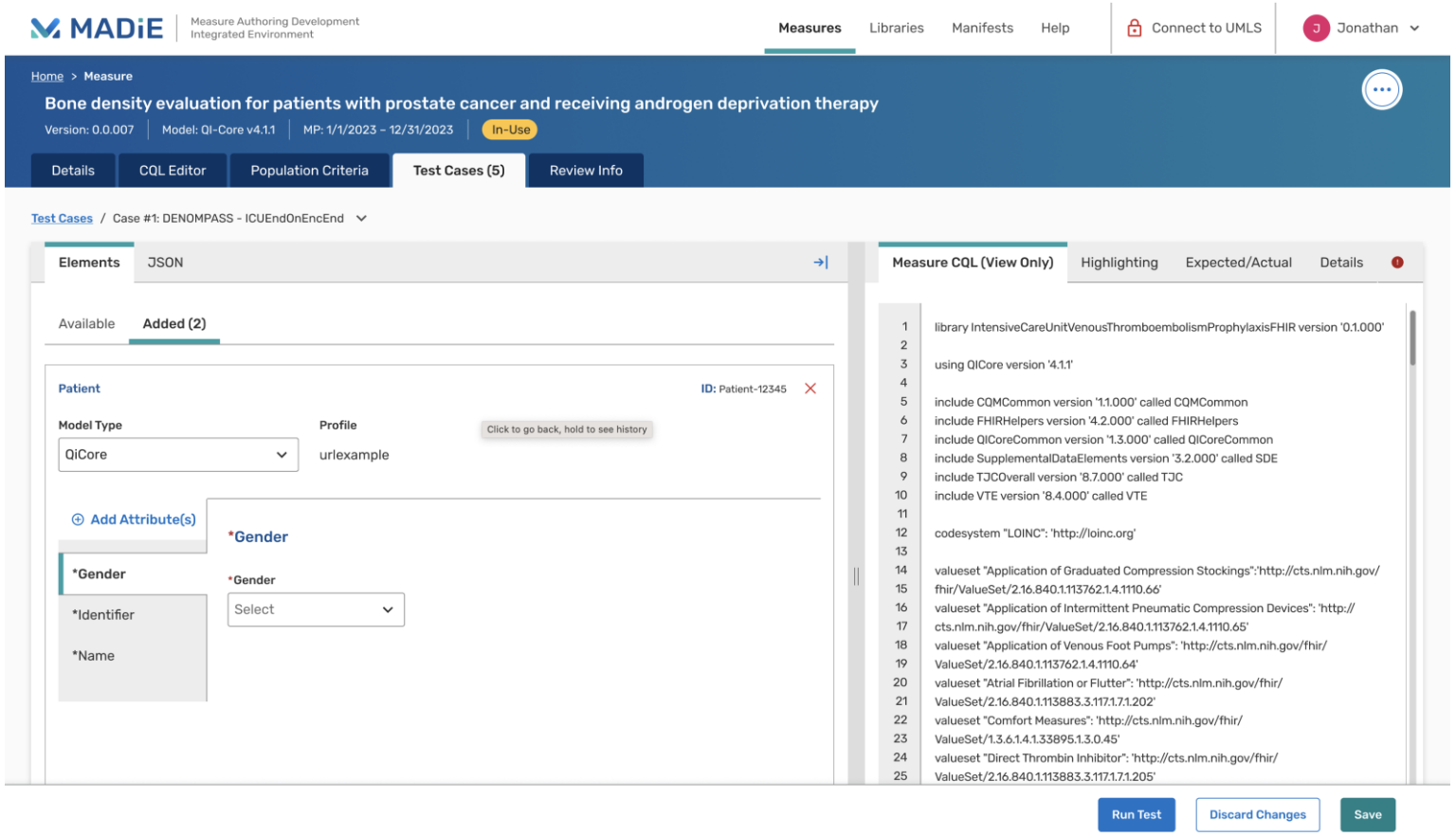


The prototype enabled users to perform adding and editing the profile by two methods

- 1) **Method 1:** Clicking the "Add" button first to add the profile to the test case, followed by editing.
- **Method 2:** Clicking the "Edit" button first to modify the profile, then adding it to the test case.

Four out of five users preferred the first method, demonstrating a natural inclination to add the profile to the test case before editing it.

Finding 3



All participants expressed curiosity about the new QI-Core test case standards and raised numerous questions during the session.

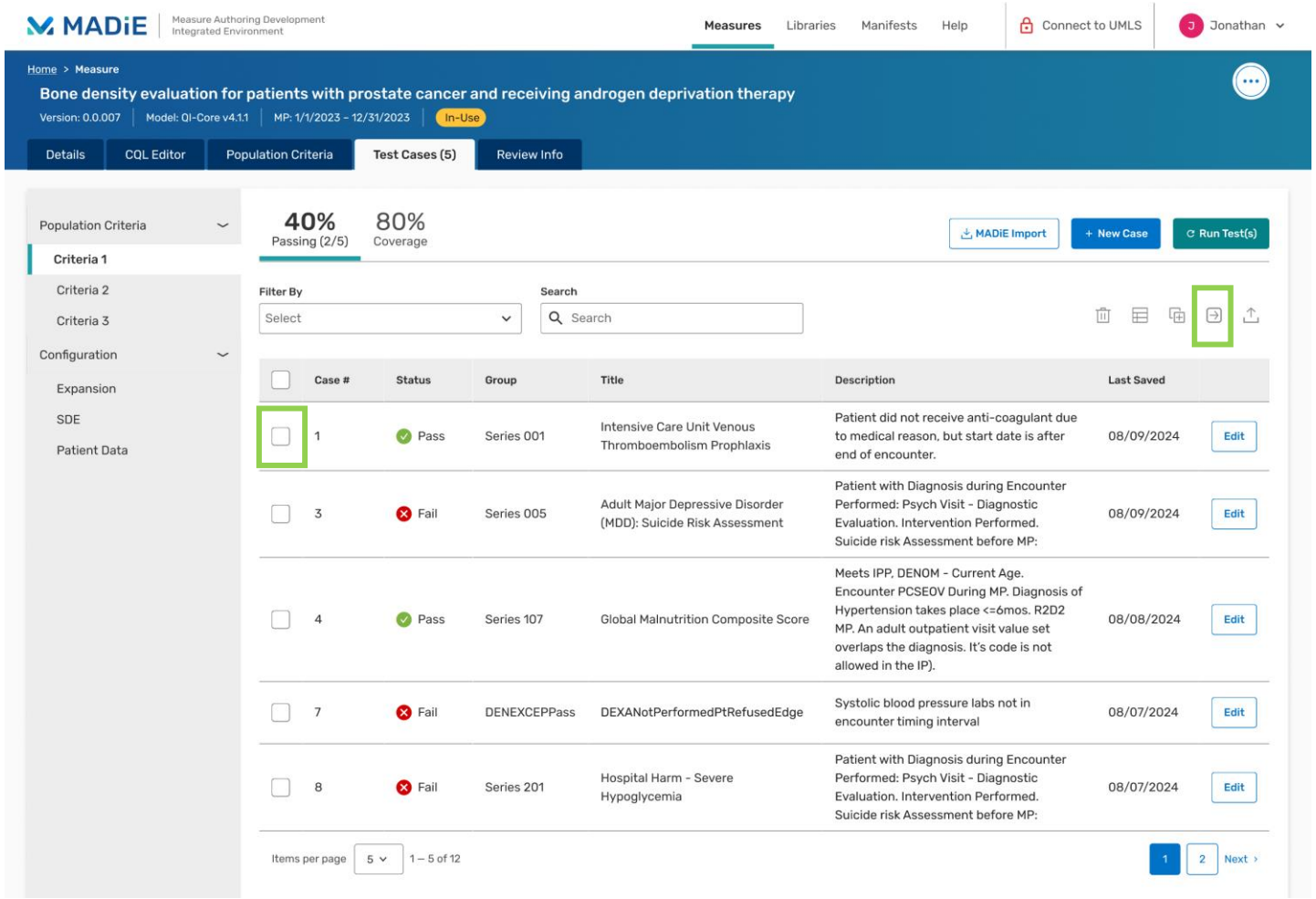
Introducing a dedicated training module could streamline onboarding and help users confidently navigate the QI-Core test case builder.

UXD - Copy To

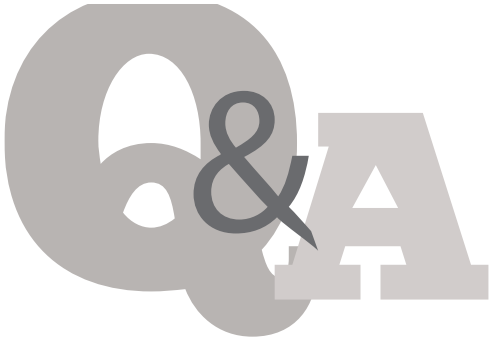
Test Cases

User would have the ability to Copy a test case to a different measure:

- Select a test case
- Find the Measure they would like to copy to
- Select that measure
- Save



User Group Discussion



- Topic suggestions and questions for the User Group can also be submitted through the MADiE Issue Tracker located here:

  https://oncprojectracking.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 2.1.0
https://madie.cms.gov

MADiE Issue Tracker:
https://oncprojectracking.healthit.gov/support/projects/MADIE/summary

eCQI Resource Center:
https://ecqi.healthit.gov/