Module 7: Case Validation: Case Selection Options

Case Validation Overview

As mentioned in Module 6: Data Diagnostics, ASPIRE sites contribute information from various sections of the electronic health record to obtain preoperative, intraoperative, and postoperative data. Two separate strategies are employed to improve data quality and ensure data accuracy. First, data diagnostics are used by technical and clinical staff to detect systematic errors with data extraction, transformation, or mappings. Second, clinicians at each site are required to manually validate between 5 and 10 cases per month to ensure that the data extracted into MPOG matches the original EHR documentation utilizing the MPOG Case Validation application. This micro-level view of the data allows for detection of data issues at an individual case level that may not be visible using data diagnostics. A series of standard questions are used to validate case information in MPOG is accurate. The first section of this module (7.1) outlines the options for how to select a case. The second section of this module (7.2) summarizes the steps for performing case validation.

For the purpose of the monthly required case validation, it is suggested that a variety of case types are included in the sample for case validation. For example, if your institution has cardiac surgery, orthopedic surgery, obstetrics/gynecologic surgery, vascular surgery, and transplant surgery, then you should review a case for every service. It is also recommended that emergent cases be validated as the data for an emergent case may not always extract in the same way a scheduled case does. After a few months, you may see trends in issues with mapping. Based upon initial review and with help from an MPOG QI Coordinator, you will decide how to select future cases for review. For example, you may find that there is a trend in issues with mapping for cardiac procedures. In this case, you will want to place emphasis on reviewing cardiac cases for a few months until the data issue is resolved.

**BCBS Funded sites:** MPOG requires review of 10 cases per month for at least 6 months prior to MPOG Central. All historical data should be validated with a minimum of 5 case validations completed per month.

**Non-funded sites:** MPOG requires review of 5 cases per month for 6 months before initial upload. All historical data should be validated with a minimum of 5 case validations completed per month but can be completed after initial upload if Data Diagnostics are accurate throughout.
1. Open the MPOG Application Suite and Open Case Validation.

![MPOG Application Suite](image1.png)

2. The left side of window displays 4 options for how you can select and open a case. The right side of the window displays the number of cases that have been reviewed historically for each month. Green indicates that the required number of cases per month have been reviewed.
3. Pick a Case for Review: There are 4 options to select from.
   a. Pick case by MRN and date
   b. Pick case by case ID
   c. Pick random unreviewed case
   d. Pick already reviewed case

**Case Selection Options**

1. **Pick case by MRN and date:**
   a. Click the dial next to “Pick case by MRN and date.” Both MRN and Date of Operation are required for this type of case selection method. Click “Validate Case”
   b. The Case Validation screen should display. You would typically verify that the patient MRN & Date of Operation are the same as the case you were initially trying to select and then begin case validation. Refer to Section 7.2 for how to begin the case validation.
2. Pick case by case ID:
   a. Click the dial next to “Pick case by case ID.” Enter MPOG Case ID. Click “Verify Case”

   b. The Case Validation screen should display. Typically, you would verify that the MPOG Case ID is the same as the case you were initially trying to select and then begin case validation. Refer to Section 7.2 for how to begin case validation.

3. Pick random un-reviewed case:
   a. Click the dial next to “Pick random un-reviewed case.”
b. Choose the date range. Select a surgical service from the dropdown menu (optional)
c. Select “Validate Case” at the bottom of the screen.

d. The Case Validation screen should display. At this point, you could begin case validation. Refer to Section 7.2 for how to begin case validation.

4. Picking an Already Reviewed Case:
   a. Click the dial next to “Pick an already reviewed case.”
b. Select a case from the dropdown menu. The date of operation and procedure type will display.

c. Select “Validate Case” at the bottom of the screen.

d. The Case Validation screen should display. At this point, you would verify that the case selected matches the case type that displays in the validator and begin case validation. Refer to Section 7.2 for how to begin case validation.
Module 7.2 Case Review & Validation

Case Validation Overview: See Module 7.1

Validation Requirements:

**BCBS Funded sites:** MPOG requires review of 10 cases per month for at least 6 months prior to MPOG Central. All historical data should be validated with a minimum of 5 case validations completed per month.

**Non-funded sites:** MPOG requires review of 5 cases per month for 6 months before initial upload. All historical data should be validated with a minimum of 5 case validations completed per month but can be completed after initial upload if Data Diagnostics are accurate throughout.

1. Select a case using one of the options discussed in Section 7.1. For the purpose of this training, random case selection will be utilized as this is the most common method applied for case validation. See step 3 in Section 7.1 for more details.

2. The Case Validation questionnaire will display. For the purpose of this training exercise, the PHI was removed.
4. On this screen, you must answer every question with ‘yes’ or ‘no’ unless there is no data in which case the row for the question is highlighted in red (see step 11 below). Compare questions against EHR. Please add comments as needed to explain any discrepancies. For issues that need follow-up from the site technical team or coordinating center, the “Save As Image” button is available to save a screenshot of the case. PHI will automatically be eliminated from the screenshot.

5. A window will display asking you to save the image. The MPOG Case ID will automatically populate the File Name. Choose a file location where you will be able to access again. Click ‘Save.’

![Screenshot SAVE]

6. You can now email and attach the saved screenshot to communicate any issues to the site technical team or member of the ASPIRE coordinating center.

7. As you answer each question, you may need 3-4 programs open at a time to verify the information in the MPOG case validator “matches” the information present in the hospital Anesthesia Information Management System (AIMS). For this reason, it is recommended that you have at least 2 monitors/screens available for use. Most likely, you will need the intra-op record open on one screen and the MPOG case validator on the other. However, the source of truth varies per institution depending on the electronic documentation system.

For example: At the University of Michigan Health System, multiple systems are used for case validation:

- b. Epic: Inpatient record, used for validation preop medications and admission status
- c. Carelink: Previous EHR used for validating cases pre-dating Epic implementation.
8. It may be useful to open the Case Viewer within the MPOG Suite to assist in the case review. To access from the Case Validation Utility screen, click on the ‘Open Case in MPOG Case Viewer’ tab at the top right hand of the screen. For further details on the Case Viewer, refer to Module 3.

9. If a case is missing information in the MPOG database for any reason, the case validator will highlight the row for that question in red and will not gray out the yes/no checkboxes. If multiple cases seem to be missing the same type of data, note the MPOG case IDs. This can indicate an extract issue or a documentation issue- discuss with the MPOG QI Coordinator to identify next steps. See example below.
10. After all questions are answered for the selected case, click the “Save Answers” button in the bottom right corner of the screen. Once the case has been submitted, there is no way to go back and make change to the form. Also, once the case is open, you must complete it as the information will not be saved if the case is closed before submitting.

11. This will automatically save and update the monthly count for cases reviewed in the ‘Overall Progress’ section as seen below.
12. To review a summary of past case validations, use the “Review Saved Validation” button. First, click the month that you want to see. Then, click “Review Saved Validation:

![Image of Case Validation screen]

13. This screen will appear with a summary of the case validation questions and counts of the number of cases that month that had the question answered “No” and the number of cases with comments.

![Image of Validation report]

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14. Clicking on a question will bring up more information on the case validation answers for each case. You can use his screen to find cases with “No” answers for further review. To hide the “Yes” answers, click “Hide passing questions”. Double click on any MPOG Case ID to open the case in Case Viewer.

15. Look for trends in issues, such as date of the case. This can be helpful when identifying issues with the data.