Data Review:
Case Validation

Case Validation Overview

- Case validation is used along with Data Diagnostics (see Module: Data Review – Data Diagnostics) to ensure data accuracy

- Ensures that the data extracted into MPOG matches the original EHR documentation utilizing the MPOG Case Validation application

- Allows for detection of data issues at an individual case level that may not be visible using data diagnostics

- Series of standard questions are used to validate case information

Case Validation Overview

- A variety of cases should be sampled
  - 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

- Emergent cases should 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.

Case Validation Overview

- Based upon initial review and with help from an MPOG Informatics Specialist, 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.

Requirements

BCBS Funded sites

- MPOG requires review of 5 cases per month for at least 6 months prior to initial MPOG Central upload

- All historical data should be validated with a minimum of 5 case validations completed per month.

- Required to validate 5 cases per month prior to uploading to MPOG central each 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.

- Required to validate 5 cases per month prior to each upload to MPOG Central

Accessing Case Validation

Contact: support@mpog.zendesk.com
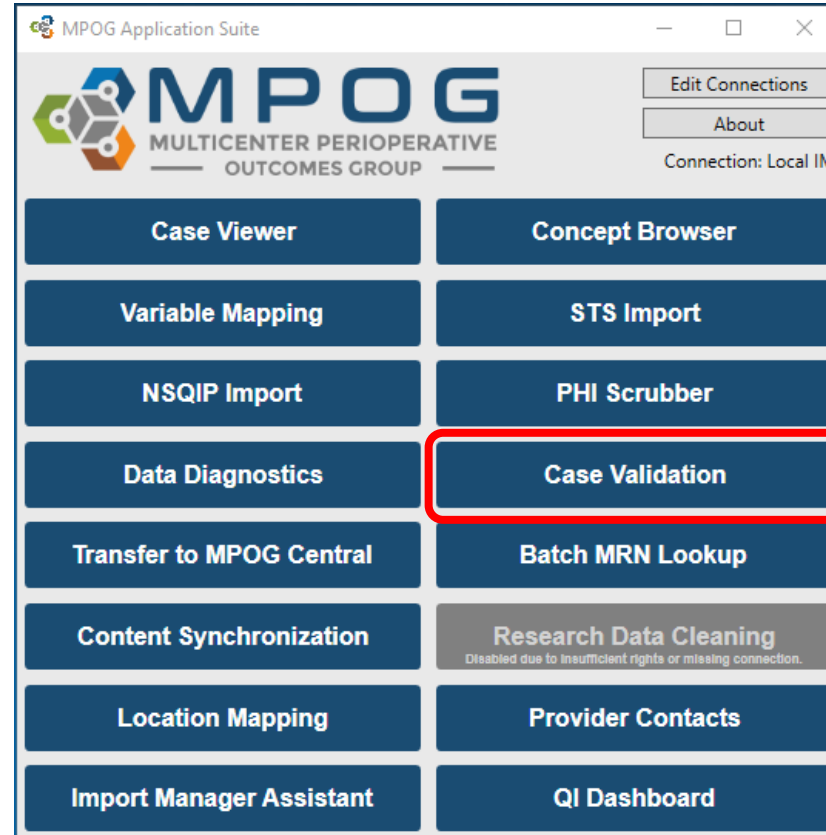
Case Validation App

- 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.

Pick a Case for Review

- 4 Options
  - Pick case by MRN and date
  - Pick case by MPOG case ID
  - Pick random unreviewed case
  - Pick already reviewed case

Pick a Case for Review: Select by MRN and Date

- 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"

- 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.

Pick a Case for Review: Select by Case ID

- Click the dial next to "Pick case by case ID." Enter MPOG Case ID. Click "Verify Case"

- 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.

Pick random unreviewed case

- Click the dial next to "Pick random unreviewed case."

Pick random unreviewed case

- Choose the date range

Pick random un-reviewed case

- Select a surgical service from the dropdown menu
  - Choose cases from different service types. Validating a variety of different type cases will give you a bigger picture of how your data looks

Pick random un-reviewed case

- Optional: select a location from the dropdown menu
  - This will allow you to validate cases at different locations based on your location mapping and will be especially helpful for institutions that have more than one site on the same instance of Import Manager.
  - Location Mapping must be completed before this filter is available (see Module: Getting Started - Location Mapping).
- Select "Validate Case" at the bottom of the screen

Pick a Case for Review: Picking an Already Reviewed Case

- Click the dial next to "Pick an already reviewed case."

- Select a case from the dropdown menu. The date of operation and procedure type will display.

- Select "Validate Case" at the bottom of the screen.

- 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.

Case Validation

- Select a case using one of the previously described options
- The Case Validation questionnaire will display. For the purpose of this training exercise, PHI was removed.

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Case Validation

- You must answer every question with 'Correct' or 'Incorrect' unless there is no data in which case the row for the question is highlighted in red.

- Compare questions against EHR. Please add comments as needed to explain any discrepancies.

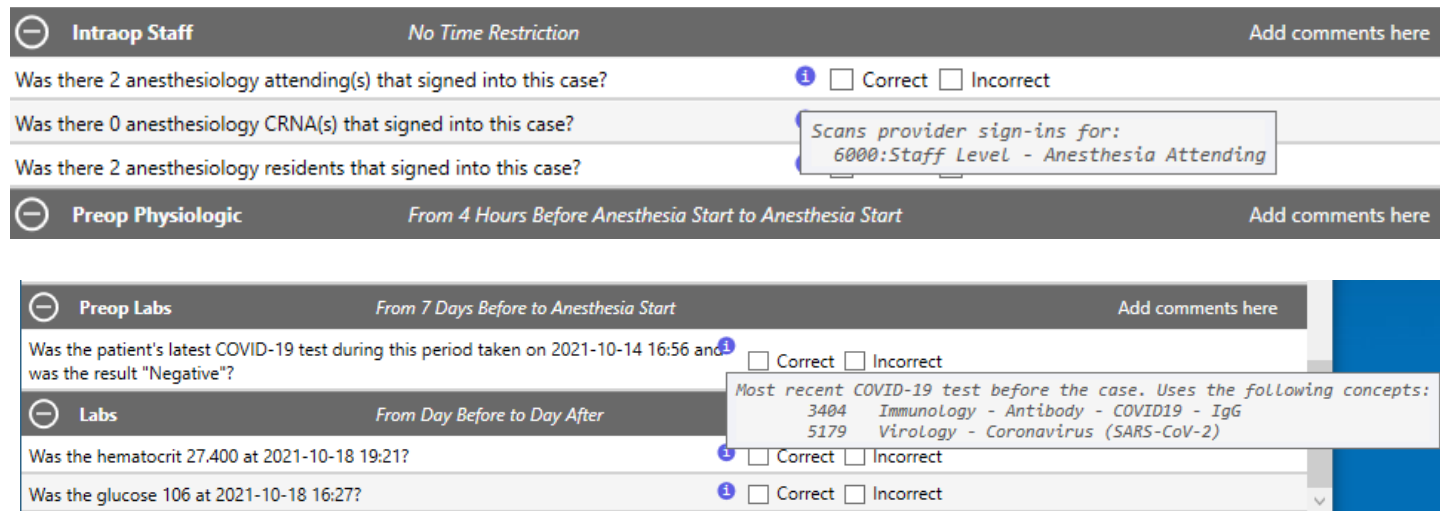- For issues that need follow- up from the site technical team or coordinating center, the "Save As Image" button is available to save a screenshot of the case. **PHI will automatically be eliminated from the screenshot.**

- 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

File name: MPOG CASE ID WILL POPULATE HERE.png

Save as type: Image files (*.png)

le Folders

Save   Cancel
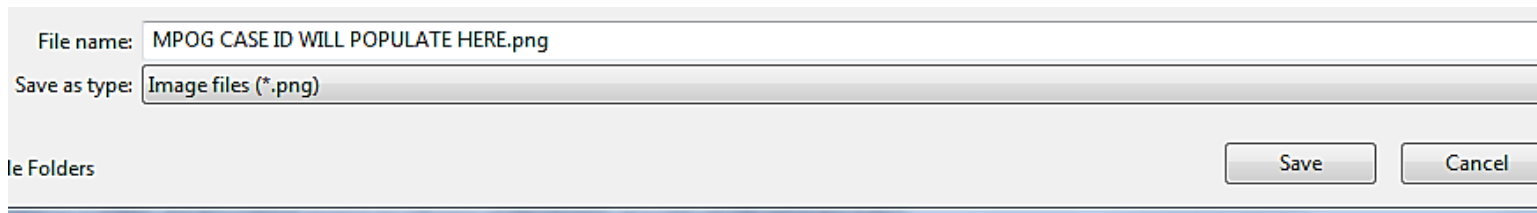
Case Validation

- Tooltips are available by hovering over the 🛈. Tooltips provide more information regarding which concepts the question uses
  - The Preop Labs section looks for COVID-19 test results only
  - The Labs section looks for Hematocrit and Glucose results only

Case Validation

- May need 3-4 programs open at a time to verify the data in the MPOG case validator "matches" the information present in the hospital Anesthesia Information Management System (AIMS)

- It is recommended reviewers have 2 monitors/screens available for use

- Most likely will need intra-op record open on one screen and the MPOG case validator on the other

- The source of truth varies per institution depending on the electronic documenting system

Case Validation

- For example: At the University of Michigan Health System, multiple systems are used for case validation:
  - Centricity contains the Intra-op record, Anesthesia H&P, Case details.
  - Epic: Inpatient record, used for validation preop medications and admission status
  - Carelink: Previous EHR used for validating cases pre-dating Epic implementation.

Case Validation

- 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 the module Data Review: Case Viewer.
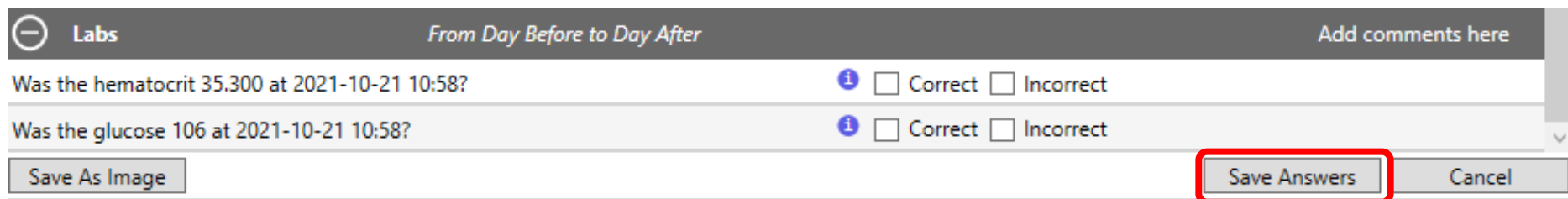
Case Validation

- 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 correct/incorrect 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 Informatics Specialist to identify next steps. See example below.

Case Validation

- 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 changes to the form.

- Once the case is open, you must complete it as the information will not be saved if the case is closed before submitting.

Case Validation

This will automatically save and update the monthly count for cases reviewed in the 'Overall Progress' section as seen below.

Case Validation

- 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

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- 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. A column is available to show who reviewed the case as well.

- Clicking on a question will bring up more information on the case validation answers for each case.

- You can use this 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.

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

Case Validation Tips

- If you are validating a case on a patient who is older than 90 years old, answer 'Correct' to the question 'Was the patient's age at the time of operation 90 years?'
    - MPOG cuts age off at 90 years old to decrease the chance that the patient could be identified, since most of the patients are younger than 90.

- The question for preop labs is looking for COVID-19 lab results within 7 days before anesthesia start. It will not look at any other labs during this time frame.

- The questions under the labs section are looking for only hemoglobin, hematocrit, and glucose labs from the day before through the day after the procedure. It will not look at any other labs during this time frame.

Case Validation Tips

- Why does the date and time of operation show up as 01/01/0000 - 00:00?
  - The data for this case has not yet finished handoff. You can either choose another case to validate or save the MPOG Case ID and try to validate the case again in a few days after handoff is complete. Check Import Manager Assistant to assess the handoff queue (see Module: Data Review – IM Assistant.

- If you are validating a case that does not have an incision time (i.e., Labor epidural), you will see 'Was surgical incision NOT FOUND' and the line highlighted in red. This is expected and you can skip the question.
  - If you expect to see an incision time and it is highlighted red, it may not have completed handoff. Review Import Manager Assistant to verify if handoff is complete.
  - If handoff is complete, review Import Manager Assistant for missing days and contact your local Technical Support person to help troubleshoot. Contact the MPOG help desk (support@mpog.zendesk.com) if further assistance is needed

Case Validation Tips

- How does MPOG determine if a medication is a bolus or an infusion?
  - This is determined by site documentation, but the medications that MPOG typically expects to see as boluses or infusions are listed in the table below.

Bolus	Infusion
Medications given via the following routes: SQ, PO, IM, ID	Any medications administered via IV infusion (i.e., heparin, insulin, propofol)
Medications given via IV push (i.e., versed, fentanyl, labetalol, morphine, ondansetron, rocuronium)	Typically documented with start/end times with rate (ie: ml/hr, mg/kg/min)
Antibiotics (including vancomycin and other antibiotics that are given over a longer period of time may be considered boluses)	