Module 5
Case Viewer
Case Viewer Overview

The MPOG Case Viewer application displays individual case data just as an anesthesia information management system (AIMS) would display.
To open a case, search by MPOG Patient ID, MPOG Case ID, or MRN in either location.

Option to browse for cases by using one or more filters listed under “browse for cases”.

Import or copy/paste a case list here if interested in viewing multiple specific cases from a list.
View Multiple Cases from Case List

Enter a list of MPOG Case IDs in the box, one per line, and click “Import”. A case will open.
Using the Case List

- Arrows appear along the bottom of the left hand column to scroll between cases. If a case number is known (ex: you want to go to case 50 of 100), use the text field to type the desired case number.
- When scrolling through cases using this feature, any ‘Sections’ opened in the case view (see ‘Sections’ slide) will remain open
- User will remain in the same section of the chart when scrolling between cases
Search by Filter

Search for cases by specific age ranges

- **CPT code** - Search for cases that include a specific CPT code.

- **MPOG Concept ID** – Lists all cases that have a specific MPOG concept documented.
  - Without other filters, searching by MPOG Concept ID may take awhile. Consider adding a date range filter.

- **Opened Date Range** - This will generate a list of cases that the user previously opened during that time period.

- **Primary Surgical Service** - allows users to search by the primary surgical service associated with each case

- **Procedure Text** - Searches for matches in the Procedure Text field associated with a case (eg. CABG)

- **Registry Data** - Lists all cases that include data from MSQC, NSQIP, STS Adult Cardiac, STS Congenital Heart and STS General Thoracic

- **Surgery Date Range** - Find cases that occurred between specific dates.
Search By Filter

Multiple filters may be applied at a time to narrow down a case list. The “Search Results” pane will automatically update a list of cases as filters are added.
To search cases by filter, click the filter name and supply any necessary information.

For example, to find a General Surgery case from September, click “Primary Surgical Service” and choose General from the dropdown box.
Next, filter down to September cases by clicking “Surgery Date Range” and specifying 9/1/2019 to 9/30/2019.

Click ‘Enter’ to apply the filter

After these filters are applied, you can see General Surgery cases in September in the Search Results Pane to the Right
Opening a Case

• Double click on a case in the Search Results pane to open. Case viewer will open to the “Chart” Tab. PHI has been removed for the purposes of this guide.
To return to the case list generated in the previous step, click “Case Search” in the upper left hand corner at any time while the case is open.
The white header at the top of the screen provides basic demographic information:

- **MPOG Case ID**
- **Institution**
- **Procedure**
- **Patient Name and MRN**
- **Patient demographics (Age/Sex/Race)**
- **Height/Weight**
- **ASA Class**
- **Surgical Service**
- **Admission Status**
- **Room Name**
- **Date of Death (if known)**
Chart View

The MRN and MPOG Case ID can be copied using the ‘Copy’ button

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Copy</th>
<th>Patient IDs</th>
<th>(Last Name Missing), (First Name Missing) (MRN Missing)</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The left side pane allows users to toggle between different views:

- Chart
- Record Search
- Administrative
- H&P
- Outcomes
- Labs.

The current tab is highlighted in a lighter blue.
• For viewing on smaller laptop screens, the blue panel can be collapsed to save space by using the small arrow
The tab across the top shows which case you have open. Users may open up to 4 cases at a time. The patient’s age, gender, and institution appear in the tab. For the purposes of this training guide, PHI has been hidden, however.
• The top of “Chart” view shows physiologic data in a graphical format
• A key is available to the left
• This section is “frozen” meaning that as you scroll to see more data, the graph will remain at the top
• Use the [-] buttons to expand and collapse sections as needed
• Choosing “Show Reference Line” adds an adjustable horizontal line across the grid

• This can be adjusted by clicking and moving up or down
• The top frozen section also shows a timeline representation of key times in the case:
  • Anesthesia Start to End
  • In room to out of room
  • Length of surgery
  • Staff sign in/out times
• The grey column to the left divides the case into the following section
  • Bolus meds
  • Bolus inputs
  • Outputs
  • Physiologic
  • Ventilator
  • Notes
  • Labs
• Scroll through the sections by either hovering over the grey bar and using the scroll wheel on your mouse OR using the scroll bar to the right.
• Use the “[−]” buttons to expand and collapse sections as needed.
• Use “Collapse All” to collapse all sections.
Information available in the body of the chart is arranged to match the chronological timeline listed across the top of the view. To view more information, hover the mouse pointer over the flow sheet and use the scroll bar to scroll in or out. “Zoom Out” and “Zoom In” buttons are also available in the upper right corner.

Use scroll wheel to zoom in and out

Hover Mouse Pointer
Tick marks on the flowsheet let users know that more information is available if you scroll in.
• Users can see what the original variable is and what MPOG concept it is mapped to
• Useful for determining incorrect mappings
• “X” in the upper right hand corner closes the box
• Use the scroll bar at the bottom to see more information
• Clicking a value brings up more information

• Allows for further drill down of the information
• Data in this view can also be sorted by clicking on the column header.
• Side box view can be especially helpful when reviewing notes if users wish to see them in chronological order similar to some EHRs

• The note information is also available in the body of the flowsheet
• When applicable, the note entered time is available at the bottom of the yellow pane to compare differences between Observed Time and Entered Time
• Observed Time- The time the event/note happened
• Entered Time- The time the user entered in the information into the EHR
• Bolded “parent” notes have associated “child” detail notes. Clicking on a bolded note will give the additional details as well.
• Holding down ‘Shift’ and selecting multiple headers will open those headers together in the notes pane.
• Data can be copied out of the yellow pane and pasted into Excel for purposes of chart review
• Highlight desired rows
• Use Ctrl + C to copy
• Use Ctrl + V to paste in Excel
Sections Menu

• Upper right hand corner
• Use to add and remove sections from the body of the chart as needed
• MPOG Measure related sections (PONV, GLU, NMB, TRAN, TEMP, BP, CARD, AKI, PUL, and SUS) pull in a summary section of all relevant variables to complete chart review on those measures.
For example, the PONV section summarizes PONV relevant information such as anti-emetics given, anesthetic gases used, and PONV and smoking history and risk factors. While this information is available elsewhere in the chart, this view quickly summarizes and puts the information into one place.

When using an imported case list and the box on the left to move through cases, any ‘Section’ you have open will remain open case to case.
Preset Menu

• The “Preset” menu in the upper right corner shows users preset views of the chart based on their choice.
For example, choosing “Surgery Duration” zooms the chart to show the times between surgery start and end. Users can see the rest of the chart by zooming in or out or clicking and dragging as usual.
Record Search

• Next view available in the left pane
• Search relevant information, including by MPOG Concept ID (exact match required for Concept ID)
• Temporarily save that information together in the “Shopping cart” to the right using the “+”
• Remove information from the shopping cart using the “X”
Record Search

- Search for multiple terms/variables at the same time using the ‘|’ symbol between variables
  - Hint: | is found on the same key as \, use ‘Shift’ to type |
  - Ex: 50002 | 50003 | Propofol | lactated ringers
    - This will pull in everything mapped to those two concept IDs and everything including the words ‘propofol’ and ‘lactated ringers’
Record Search

• Ctrl + Click or Shift + Click allows for multi-select and the ability to add more than one row of information into the “Shopping Cart”
• Utilize Record Search to look at information relevant to a chart evaluation in one location
Record Search

• Users can copy and paste select information from the “Shopping Cart” into an Excel file if needed
• Select the desired rows and use Ctrl + C to copy information
• In an Excel spreadsheet, Paste the information
The Administrative view has information regarding Demographics, Professional Fee Billing, Location Hierarchy, and Hospital Discharge Billing. PHI has been removed for the purposes of this guide.
The H&P View shows perioperative assessment data. Similar to in Chart view, any blue text can be clicked to show more information in the right yellow pane.
Outcomes

The Outcomes view shows documented outcomes and mortality if available. The blue text in this view also remains clickable to reveal more information in the yellow right pane.
- Shows labs in clinical groupings and chronological order
- Info is also available in chart view
- Blue shading across the top shows the day of surgery
Clicking on the lab name on the right will show all labs in that category in the right hand yellow pane. Clicking a lab value itself will give more information about that lab value.
• Clicking a value brings up more information
Table View
Table view displays all data submitted to MPOG central that was documented for a particular case regardless of if it was mapped to an MPOG concept or not. The dropdown menu allows to view data in specific storage tables.
Preferences

• The preferences option on the bottom of the left pane lets users turn on/off PHI viewing and deleted record information

• Values marked as ‘Artifact’ are not shown when the option to not show Deleted data is selected
ACQR “Cheat Sheet”

• Example search strings for failed case review. Copy and paste into “Record Search”

• Glucose Measures:
  glucose | insulin | anesthesia start | anesthesia End | dextrose | diabetes | 50012 | 50304 | 6008 | 50301 | 50443 | 50016 | 50002 | 50011 | 50069 | 50110 | 50211 | 50009

• Transfusion Measures:
  anesthesia start | anesthesia end | HCT | hematocrit | hemoglobin | HGB | Red blood cells | Estimated blood loss | Saline 0.9% | lactated ringers | albumin | platelets | phenylephrine | ephedrine | epinephrine