

# Case Viewer

## Case Viewer Overview

The MPOG Case Viewer application displays individual case data just as an anesthesia information management system (AIMS) would display. Intraoperative notes are visible on the left side of the screen, physiologic data shows both as a graphic and in grid form. Medications, fluids, laboratory values are all displayed in grid form underneath the physiologic data. The familiar format assists MPOG users in reviewing cases efficiently. Case Viewer can be filtered to display only for the intraoperative period or to include both preoperative and postoperative data as well.

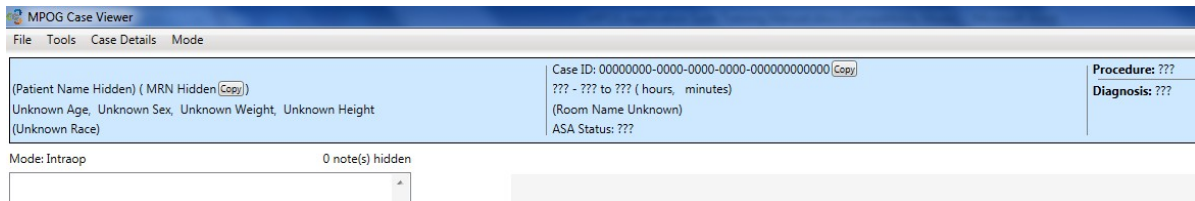
1. Open the MPOG Application Suite.



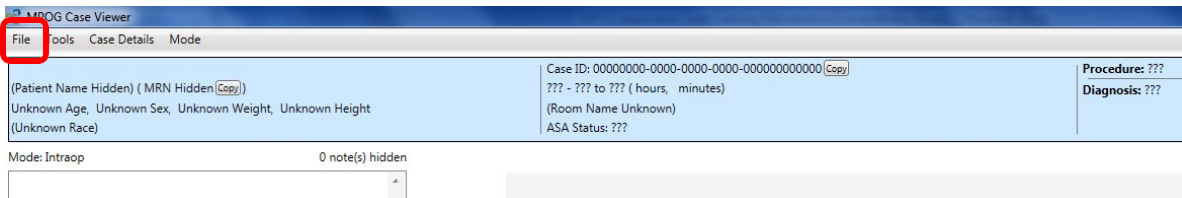
2. Click on “Case Viewer.”



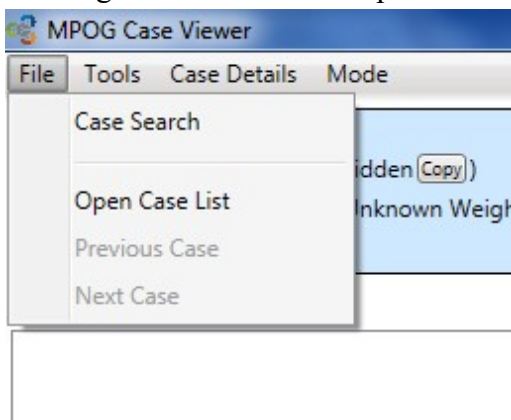
3. The Case Viewer will open. Because you have not selected a case yet, the screen will not populate with any patient information but should look as follows:



4. Select "File" in the upper left corner of the screen.



5. You will need either some case information or a specific case type you would like to review before selecting the "Case Search" option from the File dropdown menu.



6. The 'Open Case' form will look as follows. If you have a specific patient or case that you would like to review, type or copy and paste the ID in the top row. If you prefer to search for cases by institution, service, time period or procedure, populate the sections below and leave the Patient Case ID row blank.

Open Case

Patient or Case ID

Institution: Any

Service: Any

Date Range: Select a date 15 To Select a date 15

Procedure:

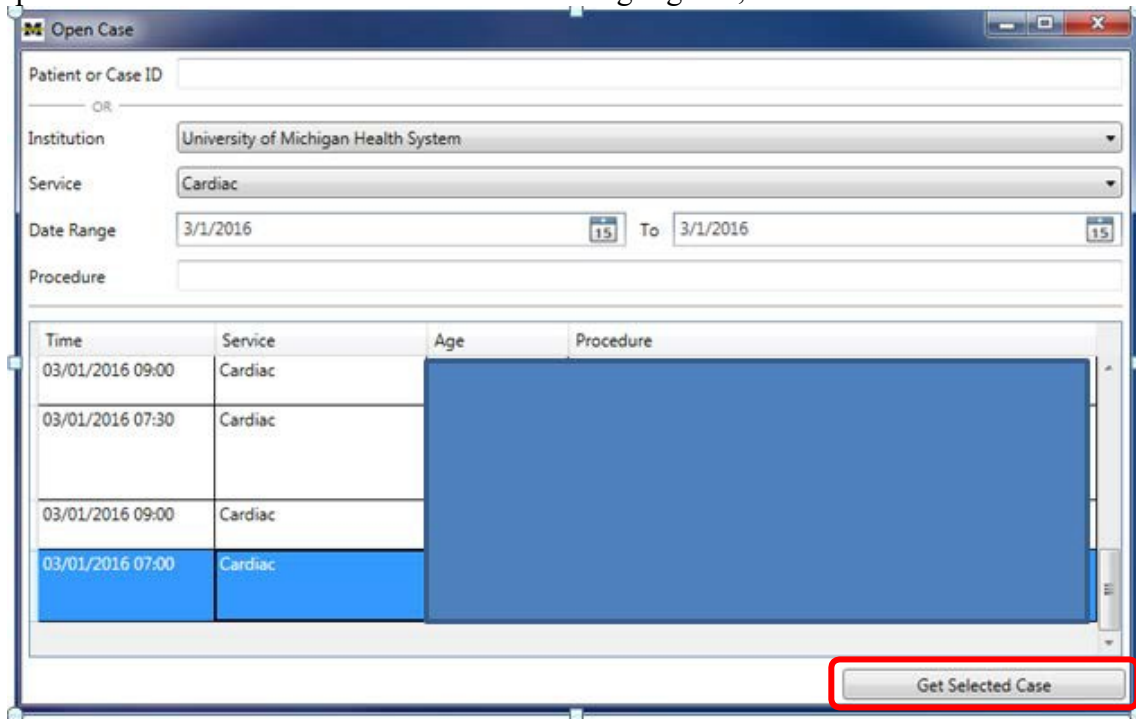
Time	Service	Age	Procedure
01/02/2004 04:00	Urology		
01/02/2004 02:00	Orthopedics		
01/02/2004 08:00	Psychiatry		
01/05/2004 10:30	Orthopedics		
01/04/2004 07:00	Orthopedics		
01/02/2004 07:30	Vascular		
01/05/2004 07:30	Orthopedics		
01/02/2004 09:00	Urology		
01/04/2004 12:00	Obstetrics / Gynecology		
01/02/2004 07:30	General		

Your search was limited to the first 500 results

Get Selected Case

7. For the purpose of this training, PHI has been removed & filters have been applied for:
- University of Michigan Health System
  - Cardiac Service cases only.
  - Date of operation: 3/1/2016.

Cardiac cases will populate the bottom section of the screen, scroll until you find the case you plan to review. Click on the case row so it is highlighted, then click “Get Selected Case.”



The screenshot shows a software window titled "Open Case". It contains several input fields for searching cases:

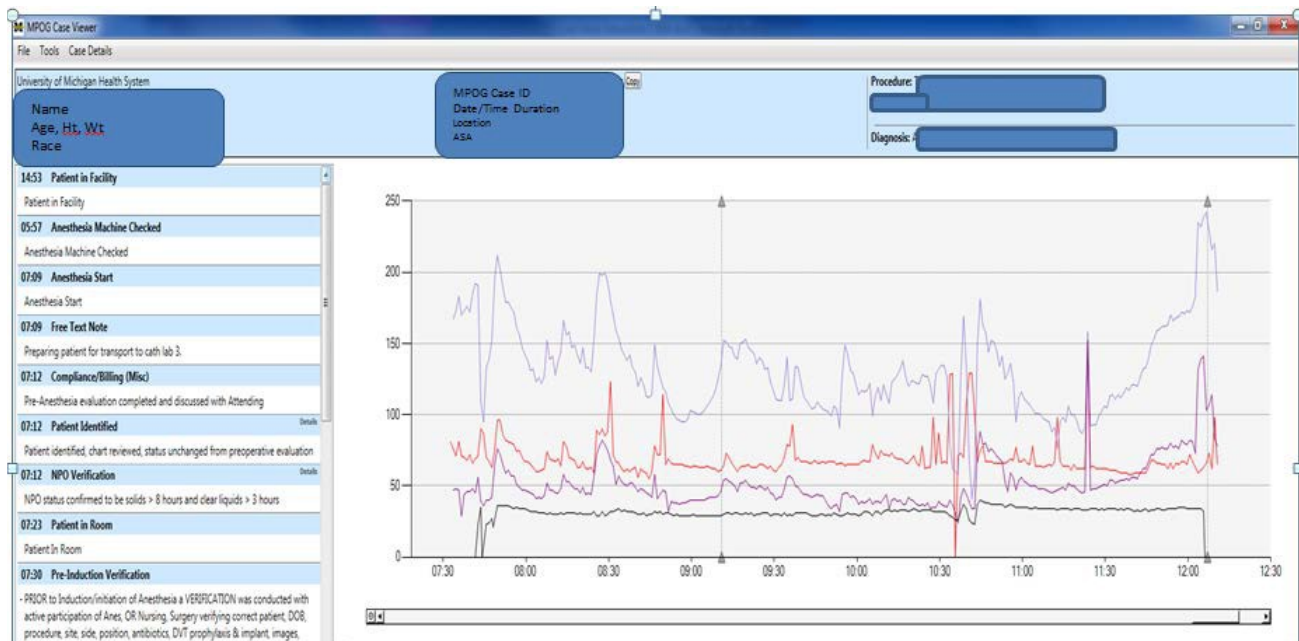
- Patient or Case ID:** An empty text box.
- OR:** A small text label between the ID field and the Institution dropdown.
- Institution:** A dropdown menu with "University of Michigan Health System" selected.
- Service:** A dropdown menu with "Cardiac" selected.
- Date Range:** Two date pickers. The first is set to "3/1/2016" and the second to "3/1/2016".
- Procedure:** An empty text box.

Below the filters is a table with the following columns: Time, Service, Age, and Procedure. The table contains four rows of data, all for "Cardiac" service on "03/01/2016". The first row is highlighted in blue.

Time	Service	Age	Procedure
03/01/2016 09:00	Cardiac		
03/01/2016 07:30	Cardiac		
03/01/2016 09:00	Cardiac		
03/01/2016 07:00	Cardiac		

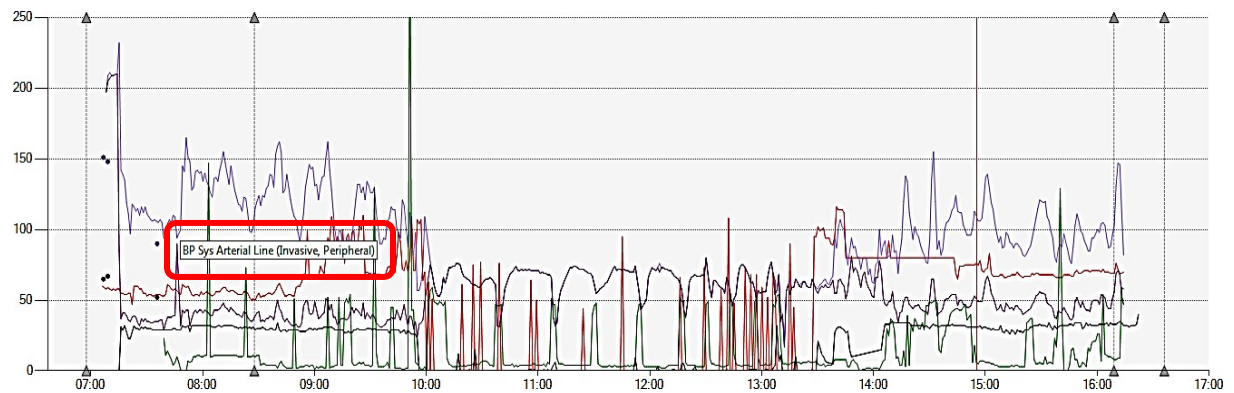
At the bottom right of the window, there is a button labeled "Get Selected Case" which is highlighted with a red rectangle.

8. The Case Viewer will open with the case information for the case selected. PHI has been removed and labels replaced to indicate the type of information available in the Case Viewer header.



- a. The light blue banner at the top of the screen provides basic demographic information:
  - 1) Institution Name
  - 2) Patient Name
  - 3) Age, Ht, Wt
  - 4) Race
  - 5) MPOG Case ID
  - 6) Date/Time/Duration of case
  - 7) Location
  - 8) ASA status.
  - 9) Procedure
  - 10) Diagnosis
- b. The left side of the screen is the Intraoperative Notes section of Case Viewer and displays case events and the associated times for these events. Row colors indicate different data types:
  - 1) **Blue**: MPOG Concept that the AIMS Intraoperative Note was mapped to
  - 2) **Orange**: MPOG Concept mapped unexpectedly (potentially incorrect mapping-investigate). i.e.: ASA status is mapped as intraop note instead of pre-op.
  - 3) **Black**: Variable not mapped.
  - 4) **Red**: Deleted note (Will not see this unless you change the default in preferences to “Show audit trail/deleted documentation.”)

9. Within the Case Viewer, you can view physiologic data such as pulse, BP, CVP readings in graphical format. By hovering over each line, the type of monitoring displays. The example below shows the light purple line represents BP Sys Arterial Line (Invasive, Peripheral).

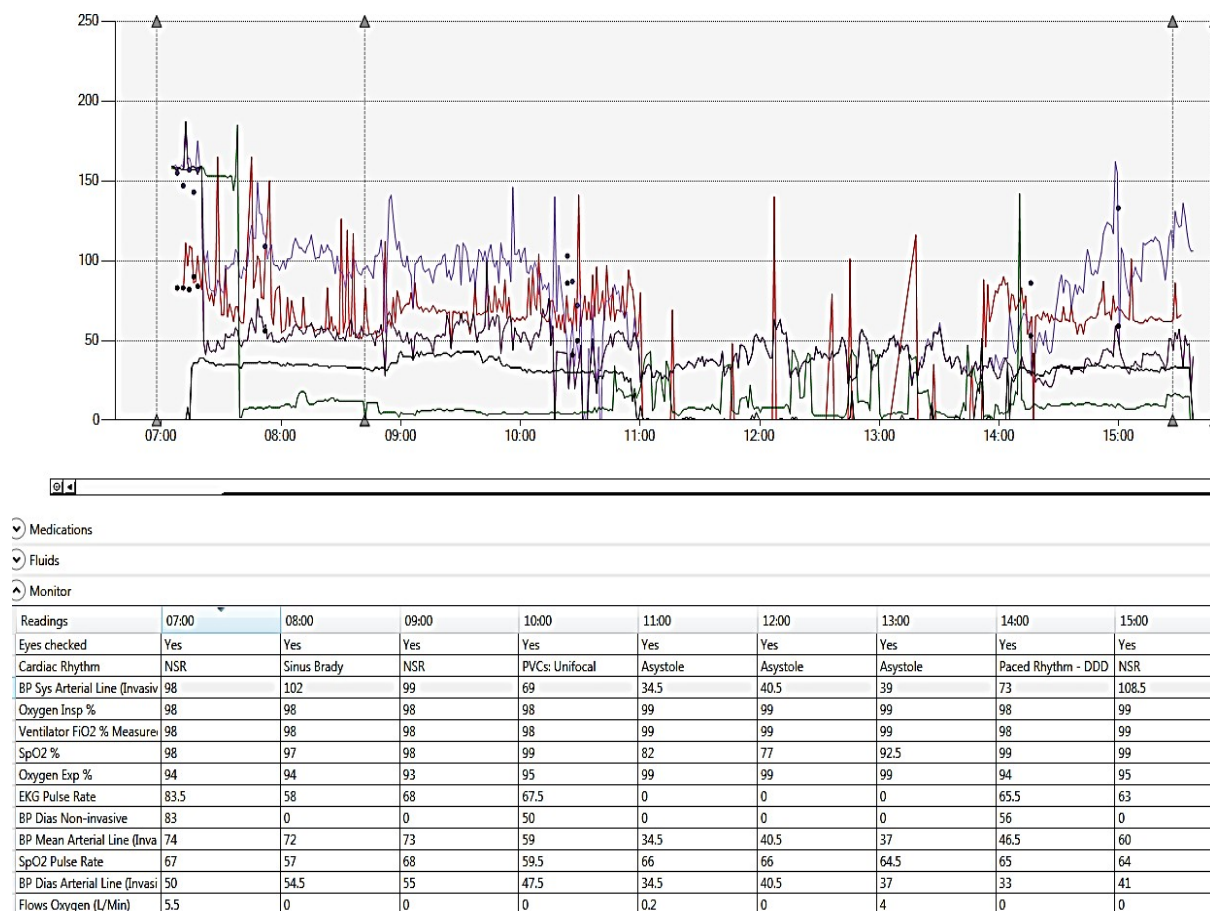


Also, monitoring types will always be represented by the same line color.

For example:

- Light purple line: BP Sys Arterial Line (Invasive, Peripheral)
- Light purple dot: BP Sys Noninvasive
- Dark purple line: BP Dias Arterial Line (Invasive, Peripheral)
- Dark purple dot: BP Dias Noninvasive
- Green: CVP
- Black: End Tidal CO<sub>2</sub>
- Red: EKG Pulse Rate

10. To view individual physiologic readings at specific times during the case, clicking on the “Monitor” section below the graph will open all physiologic readings during the case on the hour.



11. Double-clicking on the specific monitor type will open up a separate window to view all recorded readings for that monitor type. Scroll to find the specific value or time period for review.

Data Details					
BP Sys Arterial Line (Invasive, Peripheral)					
Time	Value	Comments	Artifact Code	Entry Code	Time Entered
05/21/2013 07:20	159		Normal	Machine Captured	05/21/2013 07:20
05/21/2013 07:21	104		Normal	Machine Captured	05/21/2013 07:21
05/21/2013 07:22	99		Normal	Machine Captured	05/21/2013 07:22
05/21/2013 07:23	106		Normal	Machine Captured	05/21/2013 07:23
05/21/2013 07:24	83		Normal	Machine Captured	05/21/2013 07:24
05/21/2013 07:25	81		Normal	Machine Captured	05/21/2013 07:25
05/21/2013 07:26	81		Normal	Machine Captured	05/21/2013 07:26



12. In addition to the “Monitor” section, there are three other sections under the graph that provide intraoperative details. See the screenshot below. The categories include: Medications, Fluids, and Intraoperative Labs. Clicking on any of these section headings will open a grid displaying the values and times for each of events associated with the indicated categories.

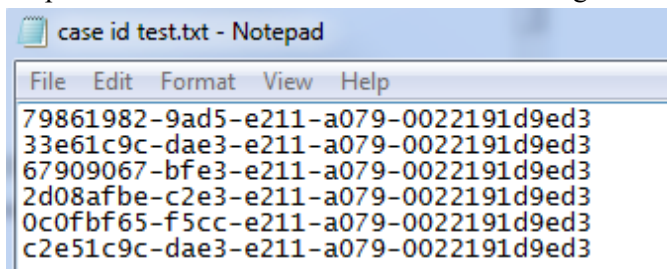


13. For example, clicking on “Medications” will display the grid of medications administered during the case. Infusion rows are highlighted in blue. XX indicates that the infusion was stopped. An arrow (---->) indicates the continuation of an infusion.

Medications

Medications	07:00	08:00	09:00	10:00	11:00	12:00	13:00
PHENYLEPHRINE MCG/MIN	20	20	80	60	80	----	XX
TRANEXAMIC ACID MG/KG		4	----	----	----	----	----
INSULIN REGULAR UNITS/H			3	----	----	4	6
NOREPINEPHRINE MCG/KG							0.05
MILRINONE MCG/KG/MIN							0.25
PROPOFOL MCG/KG/MIN							
SODIUM CITRATE ML ORAL	0	0	0	0	0	0	0
LIDOCAINE MG IV (AIMS: L	60	0	0	0	0	0	200
SUCCINYLCHOLINE MG IV	120	0	0	0	0	0	0

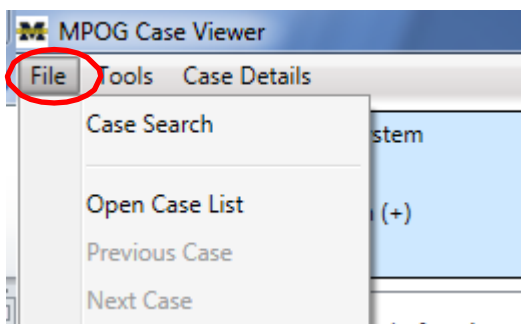
14. Case Viewer also has the capability to open and review multiple cases by accessing a saved \*.txt file in Notepad that lists MPOG case IDs in the following format:



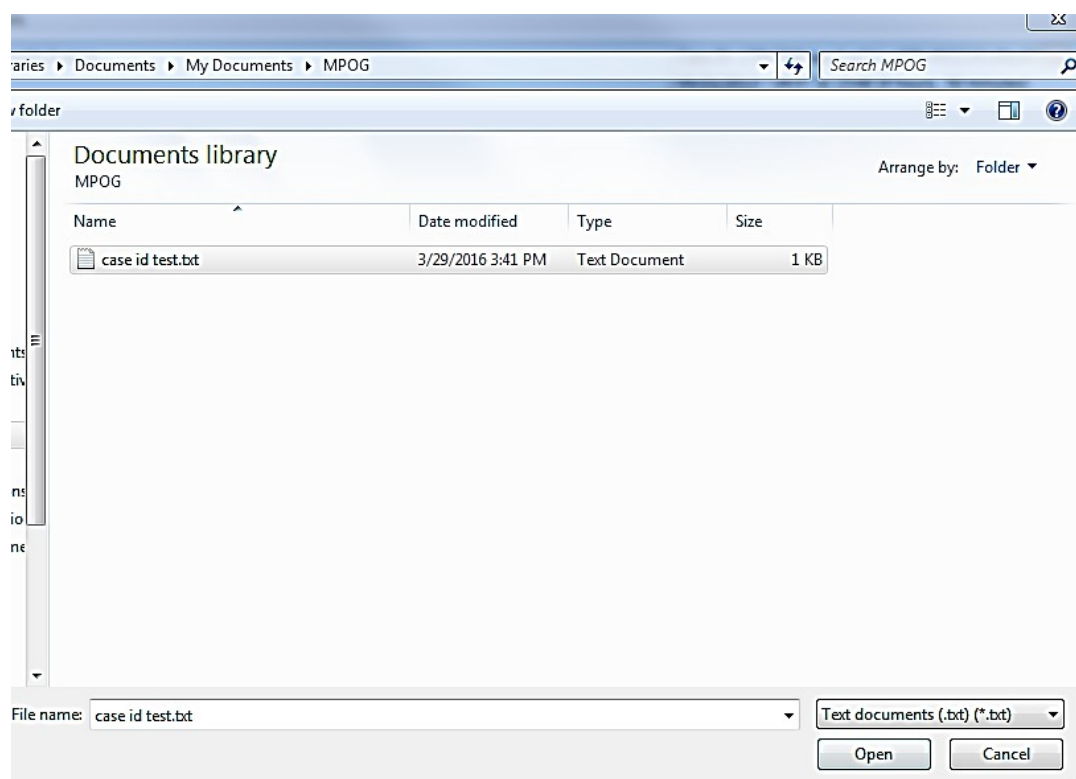
>



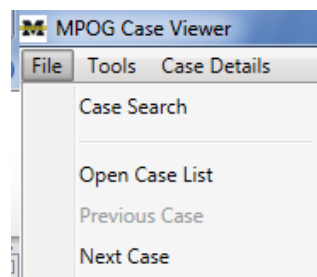
15. To open the list and begin case review, click on “File” and then click on “Open Case List.”



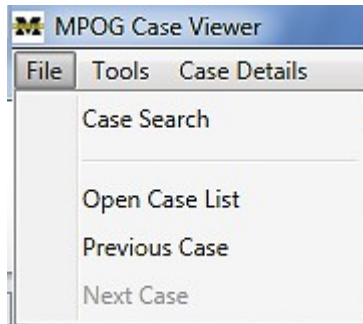
16. Select the file containing the MPOG Case IDs for review. Click “Open.”



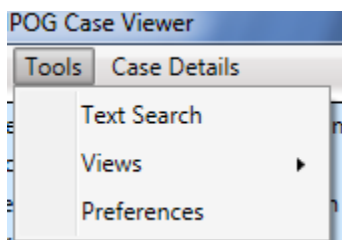
17. The Case Viewer will open to the first case listed in the file automatically. To move to the next case, select “Next Case” from the dropdown File menu:



18. Continue reviewing cases from the list in the saved file using the “Next Case” option in the File menu. When you have reached the last case from the list in the file, “Next Case” will be grayed out. You can either move to a previous case on the list or simply conclude your review and close Case Viewer.



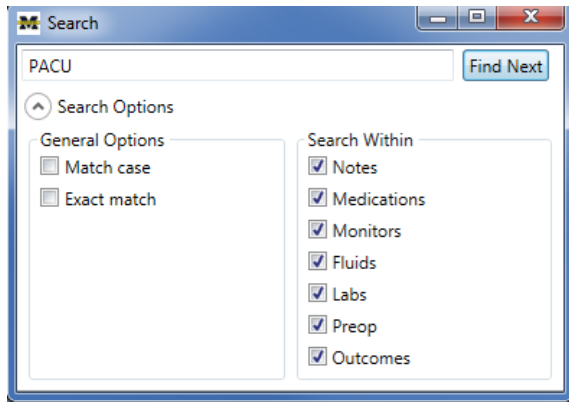
19. Under Tools, the “Text Search” option allows you to look for a specific word or phrase within the Case Viewer.



20. A text box will open allowing you to type the specific word or phrase you are seeking to find. Clicking on “Search Options” will list options for filtering or expanding your search.

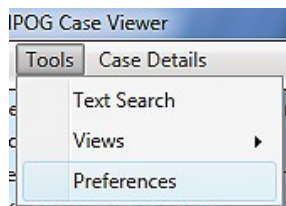


21. After typing in the selected word or phrase and applying necessary filters, click “Find Next” on the right side of the display box.

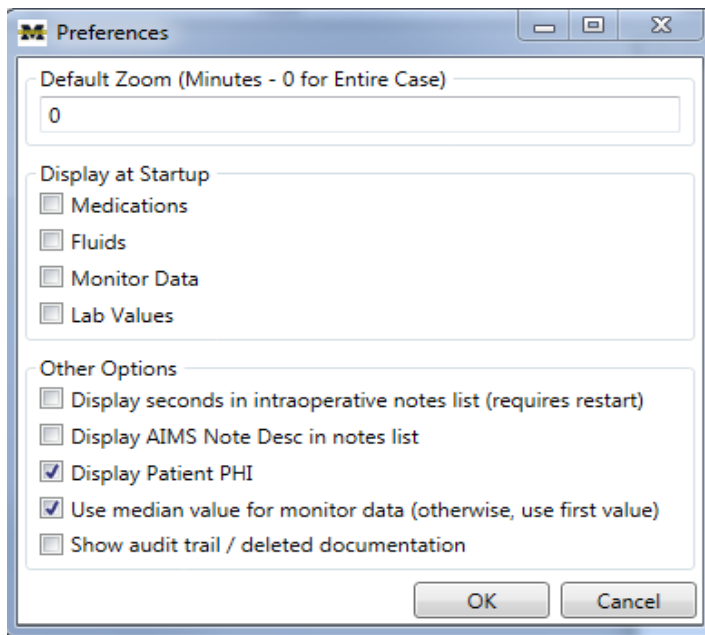


22. Case Viewer will now highlight in yellow the area(s) where the word or phrase is found. If the word does not exist within the page, nothing will be highlighted and a text box stating “End of results reached” will present.

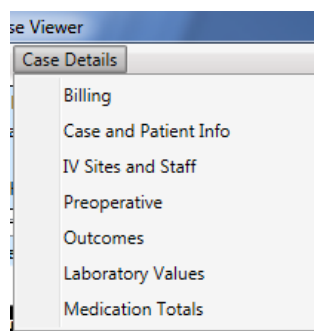
23. To modify your default display settings within Case Viewer, click on “Tools” and select “Preferences.”



24. The 'Preferences' form will display options for Case Viewer. Most common option is the "Display Patient PHI." When this option is NOT selected (default), PHI will be hidden in Case Viewer. This is important when sharing screens via webinar or when giving a presentation. You will need to select "Display Patient PHI" when doing Case Validation and using the Case Viewer. Click "Okay" after completing selections.



25. The next tab within Case Viewer is "Case Details." This tab allows you to view more specific case information related to billing, case demographics, IV sites/staff, Preop, Outcomes, Lab values, and Medication Totals.



26. Returning to the Case Details dropdown menu, selecting “Billing” from the dropdown menu displays procedure and diagnosis codes as well as hospital discharge information. If your site has not yet loaded billing data, this form will be incomplete.

The screenshot shows a software window titled "Billing". It is divided into two main sections: "Professional Fee" and "Hospital Discharge".

**Professional Fee Section:**

- Procedures:** A table with columns: Code, Type, Start Time, End Time.
 

Code	Type	Start Time	End Time
00400	Unspecified Professional Fee	06/25/13 00:00:00	
11402	Unspecified Professional Fee	06/25/13 00:00:00	
12031	Unspecified Professional Fee	06/25/13 00:00:00	
00400	Anesthesia Professional Fee	06/25/13 16:49:00	06/25/13 17:33:00
- Diagnoses:** A table with columns: Code, Type, Start Time, End Time. It is currently empty.

**Hospital Discharge Section:**

(Within one month of operation)

- Procedures:** A table with columns: Code, Start Time, End Time. It is currently empty.
- Diagnoses:** A table with columns: Code, Present on Admit, Start Time, End Time.
 

Code	Present on Admit	Start Time	End Time
706.2	True	05/30/13	05/30/13
706.2	True	05/30/13	05/30/13
300.00	True	06/03/13	06/03/13
780.52	True	06/03/13	06/03/13
724.5	True	06/03/13	06/03/13
311	True	06/03/13	06/03/13
401.9	True	06/03/13	06/03/13

27. Returning to the Case Details dropdown menu, selecting “Case and Patient Info” from the dropdown list displays demographic information specific to the patient and case. PHI is hidden for this purpose of this training.

The screenshot shows a software window titled "Case Header". It displays demographic information for a patient and case. PHI (Protected Health Information) is redacted with blue boxes.

**Case and Patient Information:**

Field	Value	Field	Value
MPOG Case ID	c2e51c9c-dae3-e211-a079-0022191d9ed3	MPOG Patient ID	d9938579-d597-e111-8ea6-0022191d9ed3
AIMS Case ID	[Redacted]	AIMS reg num	PHI
AIMS Encounter ID	[Redacted]	AIMS Patient ID	[Redacted]
MPOG Procedure Room Concept	Freestanding ambulatory surgery center - outpatient operating room	AIMS first name	PHI
AIMS Procedure Room Name	[Redacted]	AIMS last name	PHI
MPOG Admission Concept	Surgical Admission Type - Outpatient	AIMS middle name	PHI
AIMS Admission Type	S	AIMS sex	F
MPOG Primary Procedural Service Concept	General	AIMS dob	PHI
AIMS Primary Procedural Service	SON	MPOG Patient Race Concept	[Redacted]
Patient Age	[Redacted]	AIMS Race Text	[Redacted]
AIMS Scheduled Duration Minutes	45	AIMS Address Street 1	PHI
AIMS Scheduled DT	[Redacted]	AIMS Address Street 2	PHI
AIMS Preoperative Diagnosis Text	sebaceous cyst 21555 21556	AIMS Address City	PHI
AIMS Scheduled Procedure Text	LUMPECTOMY, EXCISION OF SEBACEOUS CYST IN CENTER OF CHEST BETWEEN BREASTS	AIMS Address State Province	PHI
AIMS Actual Procedure Text	LUMPECTOMY, EXCISION OF SEBACEOUS CYST IN CENTER OF CHEST BETWEEN BREASTS	AIMS Address Postal Code	PHI
AIMS Documentation Template Text	MAC	AIMS Phone Number	PHI
AIMS Documentation Template CD	5129	AIMS Medicaid Identifier	PHI

IV Sites and Staff

MPOG Site Type	MPOG Site Side, Location, Size	AIMS Site Type and Label	AIMS Site Side, Location, Size	AIMSSite_Comment	MPOGPreExisting_Site_CD	MPOGDiscontinue
Peripheral	Right, Hand, 18 g	Peripheral, Right Hand 18 g	Right, Hand, 18 g		1	0

conceptdesc	aimsstaff_role	aimsstaff_id	aimscase_in_dt	aimscase_out_dt	mpogStaff_role_concept_id	mpogstaff_physically_present_cd
Staff Level - Surgical Attending (primary)	7872				6006	1
Staff Level - Anesthesia Attending	7874				6000	1
Staff Level - Anesthesia Resident CA2	7876				6002	1
Staff Level - Postop Nurse	70000579				6009	1

Preop

MPOG Concept	Value	Time	Value Code
▼ Airway - Physical Exam (27 Items)			
▼ General - History - Pediatrics - OB/Gyn (13 Items)			
▼ Uncategorized (41 Items)			
▼ Cardiovascular (8 Items)			
▼ Respiratory - Hematologic - ID - Misc (12 Items)			
▼ GI - Endocrine - Renal and Urologic - Rheumatologic (8 Items)			
▼ Neuro - Musculoskeletal - Pain (8 Items)			
▼ Assessment and Plan - Studies - Testing (12 Items)			

31. Returning to the Case Details dropdown menu, selecting “Laboratory Values” displays a grid listing all preop and postop lab results available via the MPOG suite.

Lab Values		
<i>Double-click on a lab value to bring up details for that lab.</i>		
Lab Type	07-29-2003 21:20	02-20-2004 10:45
Formal lab - Potassium, Serum/Plasma	4	
Formal lab - Creatinine, Serum/Plasma	0.9	
Formal lab - Glucose, Serum/Plasma	88	
Formal lab - Platelets	301	252
Formal lab - Hemoglobin	15.4	13.7
Formal lab - Hematocrit	44.2	40
Formal lab - Blood Urea Nitrogen, Serum/Plasma	12	
Formal lab - Bilirubin Total, Serum/Plasma	0.2	0.4
Formal lab - Thyroid Stimulating Hormone	4.15	
Formal lab - Sodium, Serum/Plasma	146	
Formal lab - Chloride, Serum/Plasma	105	
Formal lab - AST (SGOT), Serum/Plasma	24	30
Formal lab - ALT (SGPT), Serum/Plasma	20	34
Formal lab - Alkaline Phosphatase, Serum/Plasma	43	45
Formal lab - Blood gas - HCO3	26	

32. Returning to the Case Details dropdown menu, selecting “Medication Totals” displays a grid listing all medication totals for the case.

Medication and Fluid Totals					
Medication Totals					
MPOG Med Name	AIMS Med Name	Total	Unit	Route	
CEFAZOLIN	Cefazolin	2	GM	IV	
LIDOCAINE	Lidocaine MG IV	40	MG	IV	
LIDOCAINE/EPINEPHRINE 1%	Lidocaine 1% w/ epi surgeon	32	MG	IV	
MIDAZOLAM	Midazolam (IVP)	2	MG	IV	
PROPOFOL	Propofol Bolus	20	MG	IV	
Fluids, Inputs, and Outputs Total					
MPOG IO Name	AIMS IO Name	Total	Unit		
LACTATED RINGERS	LR	200	ML		



33. The final tab in Case Viewer allows for changing the view mode of the Case Viewer. The Case Viewer displays only Intraoperative notes by default but by changing the mode, one can view only data documented in PACU or all data available, regardless of time period.

