MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Module 1
Downloading and Accessing the MPOG Application Suite

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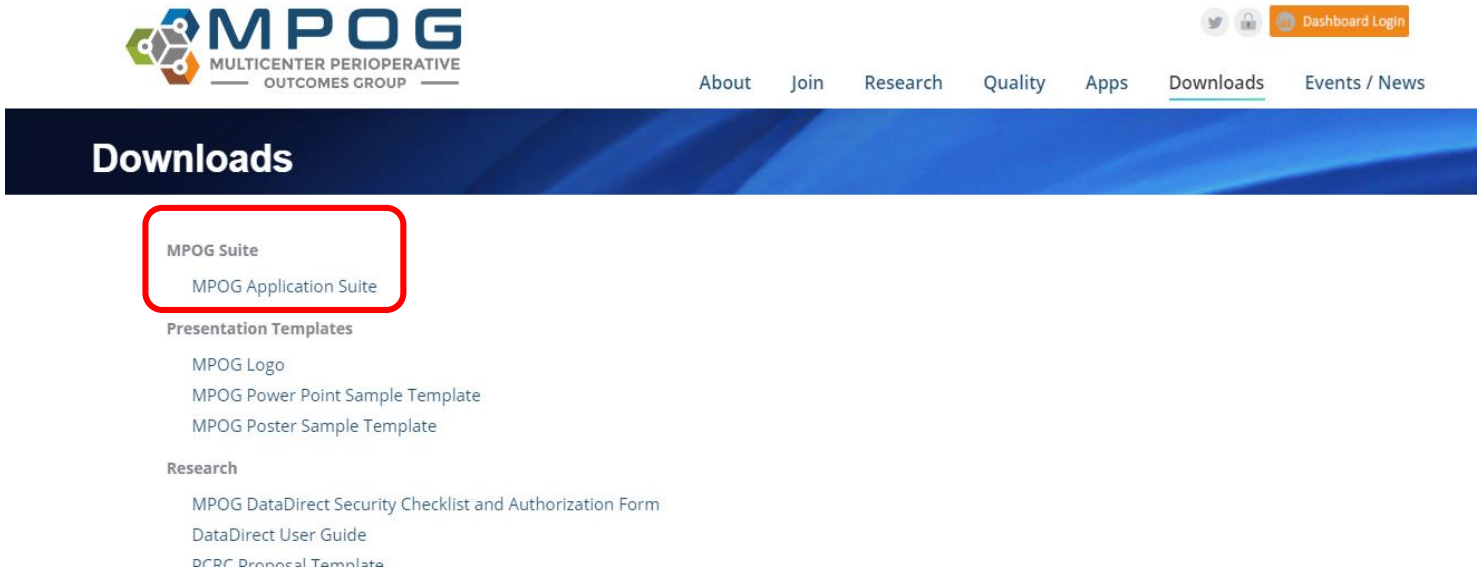
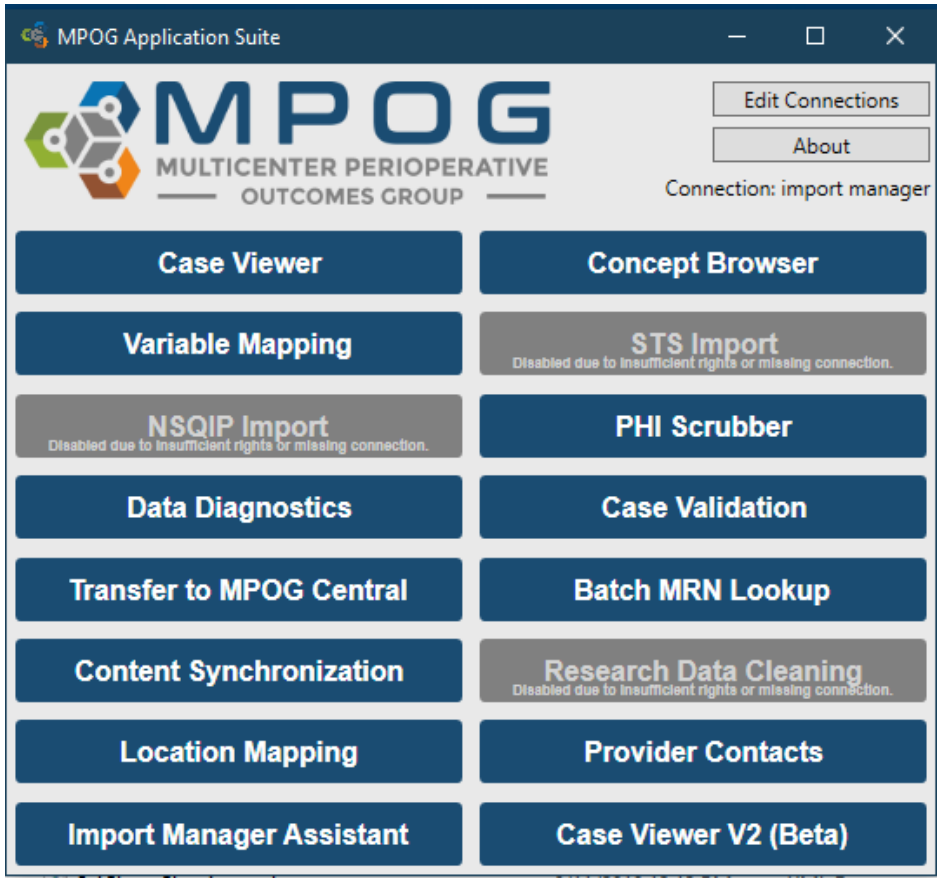
Downloading and Accessing the MPOG Application Suite

- Obtain administrative rights from site's IT department. You will need this level of access to download the MPOG application to your workstation.
- Go to the Downloads Page on the MPOG website to download the app suite

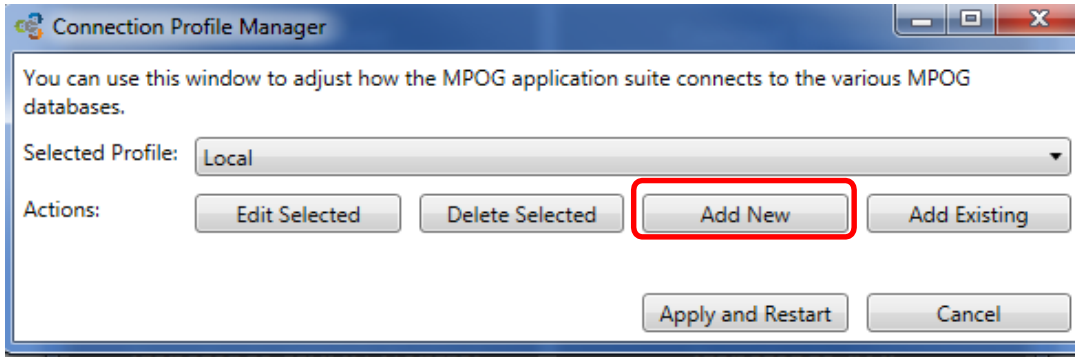


- Follow steps to download the suite to your computer. The MPOG Application Suite should automatically open. *Some tools may display in gray.

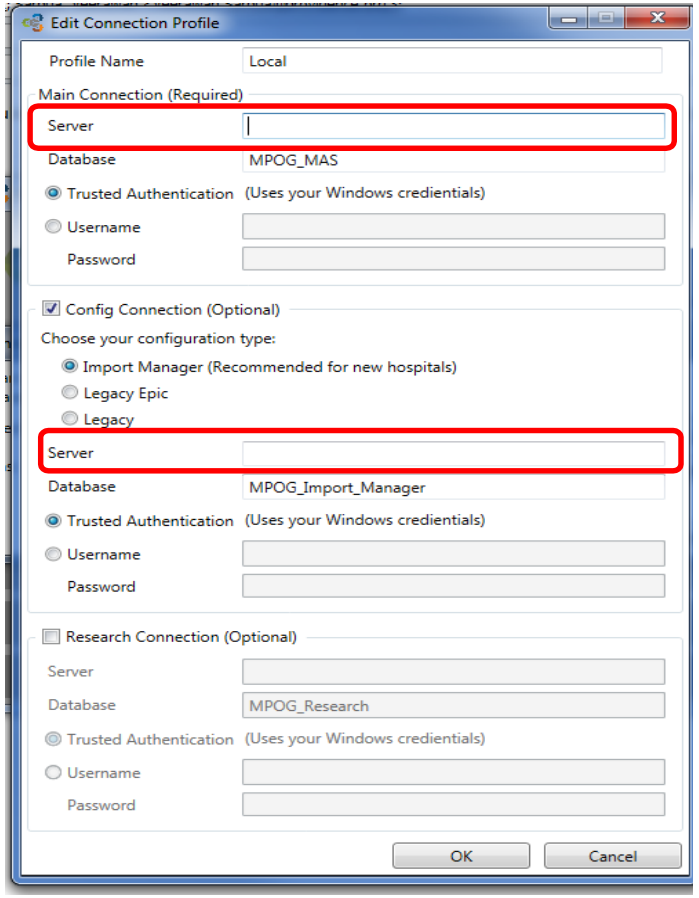


- Next, set up a connection to your local MPOG database by clicking: ‘Edit Connections’

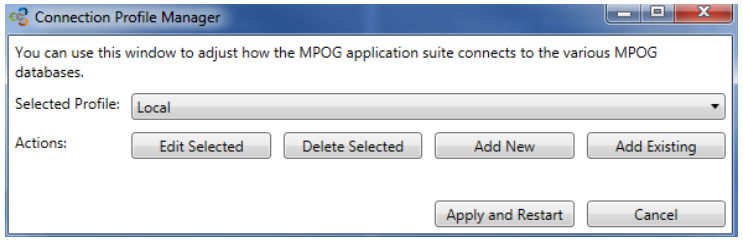
- Click “Add New” if there are no profiles available for connection. Otherwise, choose the appropriate connection- ‘LOCAL,’ ‘Whichever site you plan to map for…’ Click “Edit Selected”:



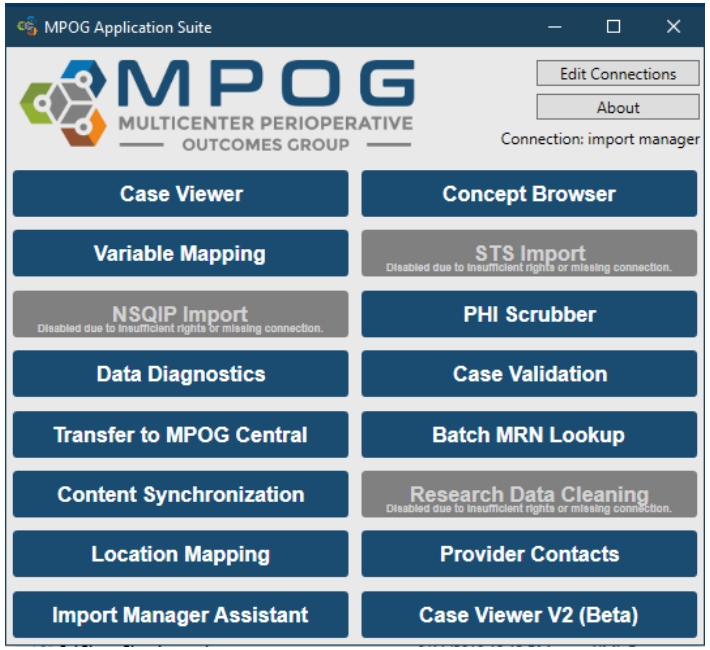
- Fill in the server address in both the top and middle sections of this form.
- Ask the MPOG technical lead at your site for the server connection.
- In the Config Connection section, select ‘Import Manager’ and make sure the database name is listed as MPOG_Import_Manager.
- Click OK



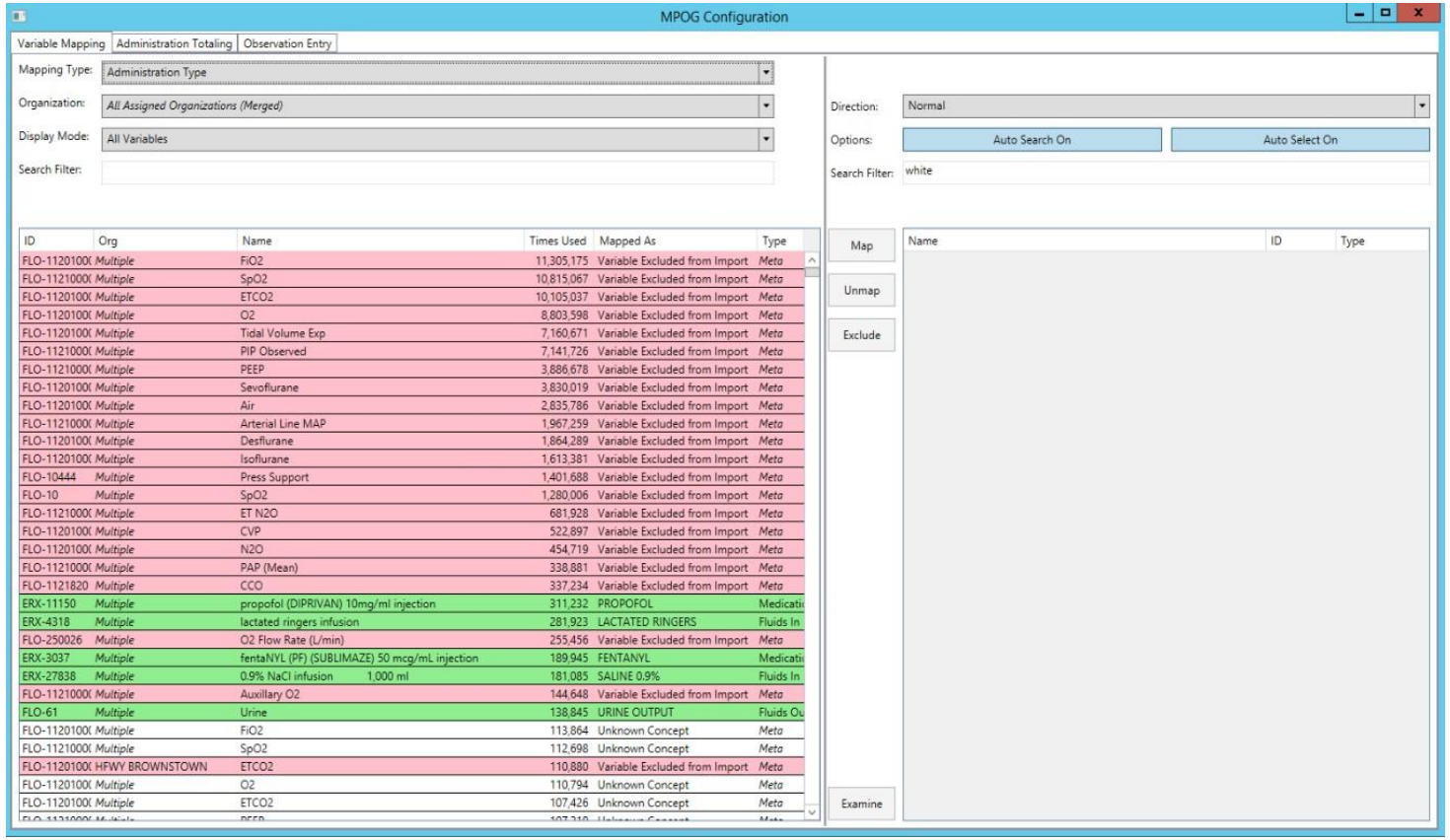
- The ‘Connection Profile Manager’ form will repopulate as follows. Click “Apply and Restart.”



- The MPOG Application should run again and open as follows. *More tools should have turned blue. If not, contact your site technical team to update your database roles.



- Click on ‘Variable Mapping’ to test connection. A utility that looks like this should open up.
- If yes, the MPOG Application is ready to go!



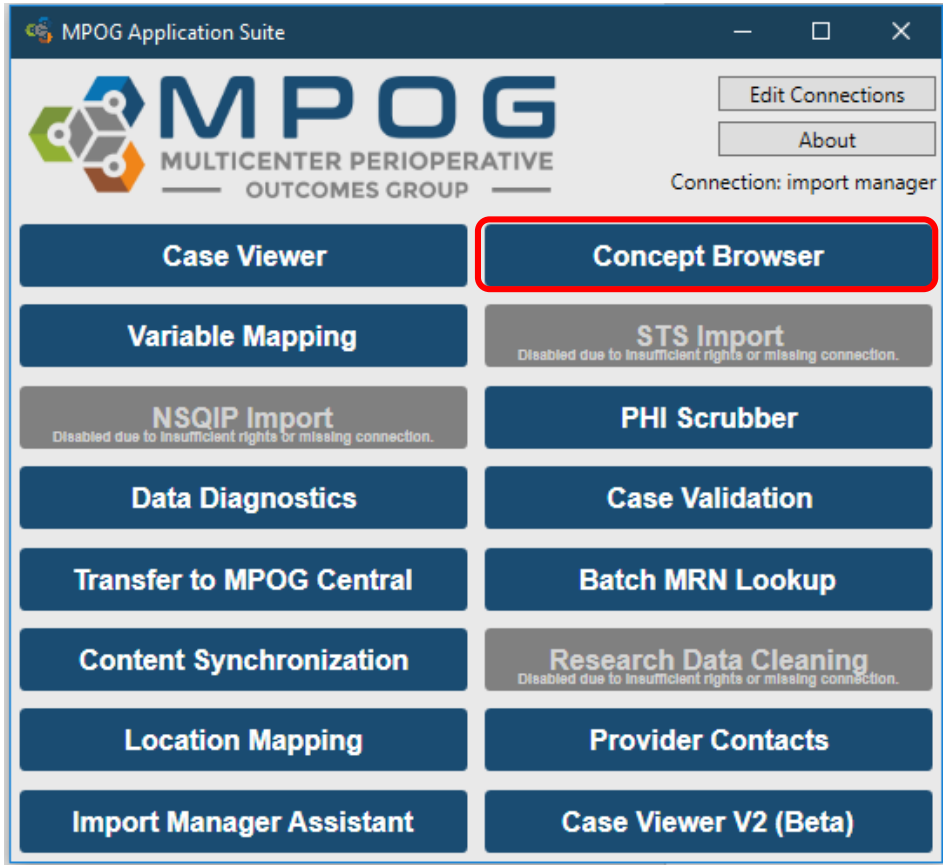
Module 2

Concept Browser

Concept Browser

- Contains a comprehensive list of all available MPOG Concepts.
- Allows you to search the dictionary of MPOG concepts to identify an appropriate MPOG concept for mapping purposes.
- For more information on variable mapping, please refer to Module 3: Variable Mapping.

Access Concept Browser in the MPOG Suite



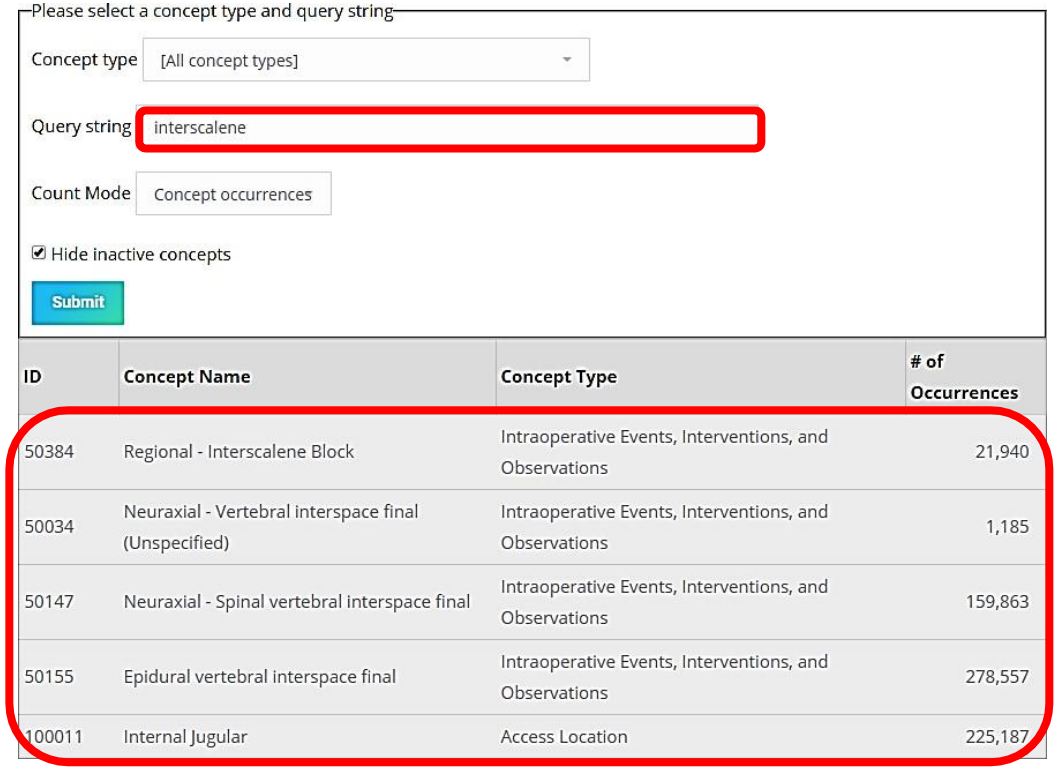
- The MPOG Application Suite will open to the 'Concept Browser' webpage, where you can select specific search criteria
- To search the dictionary of all MPOG concept types, use the 'Query String' field and maintain default settings in all other fields

Each MPOG Concept ID includes:

- **Concept ID Number**: The MPOG Concept ID number associated with each particular concept.
- **Concept Name**: Names associated with the concept (including ICD-9 & ICD-10 Codes)
- **Concept Type**: Indicates the location details associated with the concept (i.e. Access Location, Intraoperative Events, Interventions, and Observations).
- **Concept Occurrences**: Displays the number of concept occurrences that have been submitted to MPOG as well as the, number of unique patients, or number of unique cases associated with each MPOG Concept ID depending on the count mode selected in the last search field.

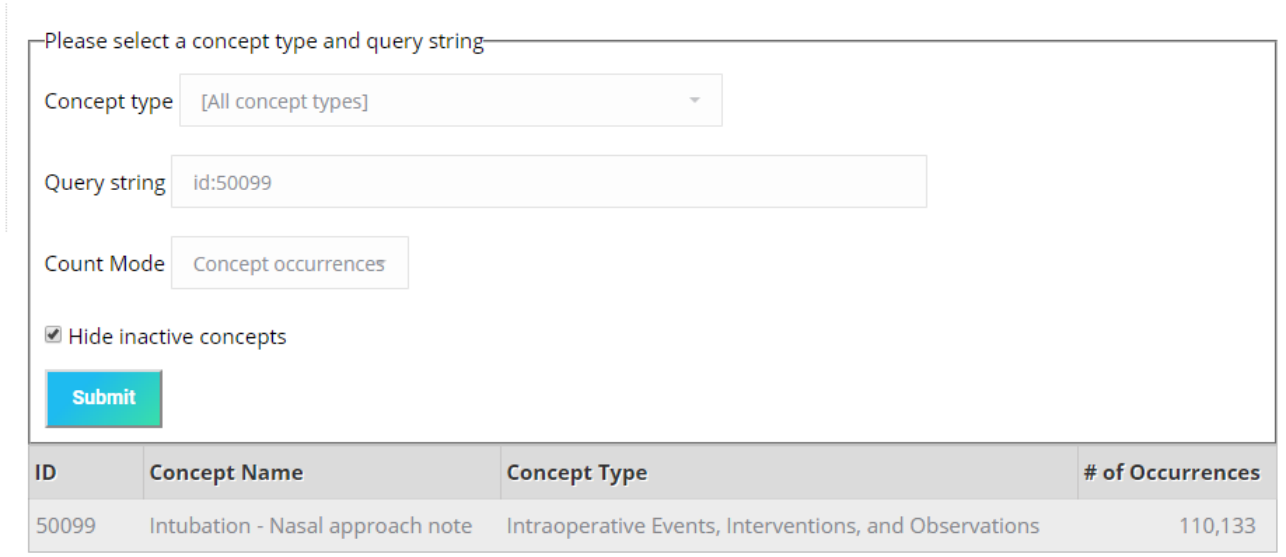
ID	Concept Name	Concept Type	# of Occurrences
50140	Noninvasive blood pressure cuff location	Intraoperative Events, Interventions, and Observations	4,169,149

- Based on your search criteria, scan the results for the most appropriate MPOG concept for mapping purposes.
- You can utilize the ‘Query String’ field to identify a desired MPOG concept:
  - Type the name associated with the MPOG concept you are attempting to identify.
  - For example, you may want to find an MPOG concept ID for an interscalene block. Simply type ‘interscalene’ into the query string field as shown below

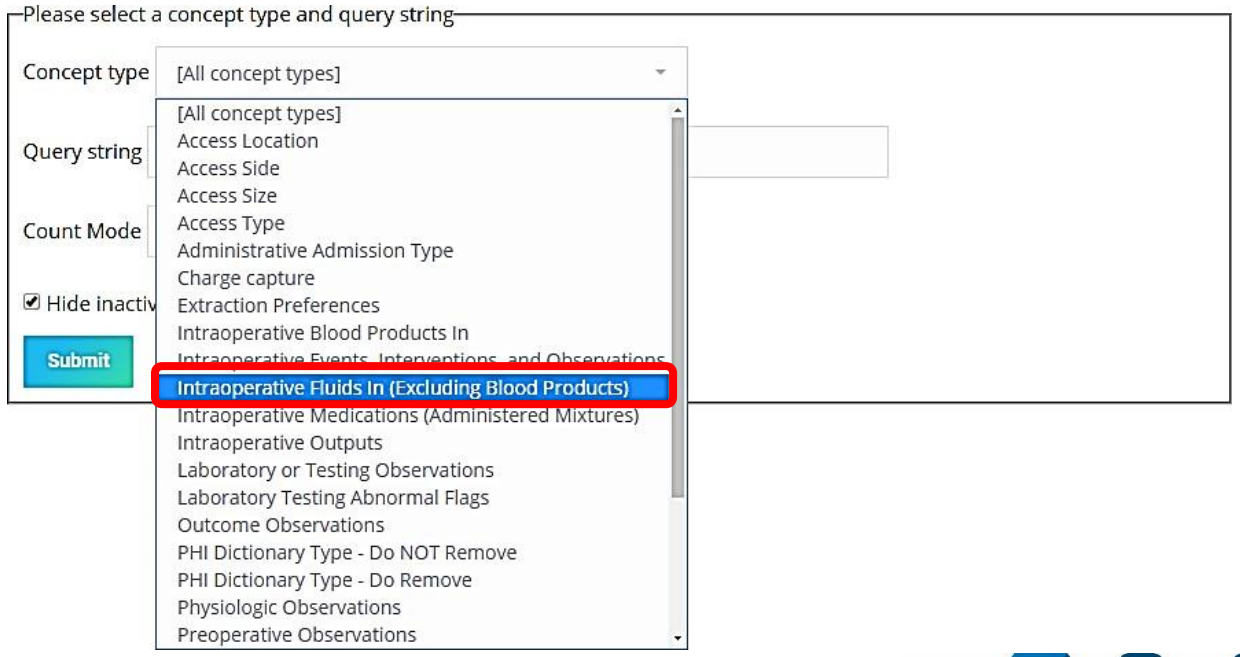


ID	Concept Name	Concept Type	# of Occurrences
50384	Regional - Interscalene Block	Intraoperative Events, Interventions, and Observations	21,940
50034	Neuraxial - Vertebral interspace final (Unspecified)	Intraoperative Events, Interventions, and Observations	1,185
50147	Neuraxial - Spinal vertebral interspace final	Intraoperative Events, Interventions, and Observations	159,863
50155	Epidural vertebral interspace final	Intraoperative Events, Interventions, and Observations	278,557
100011	Internal Jugular	Access Location	225,187

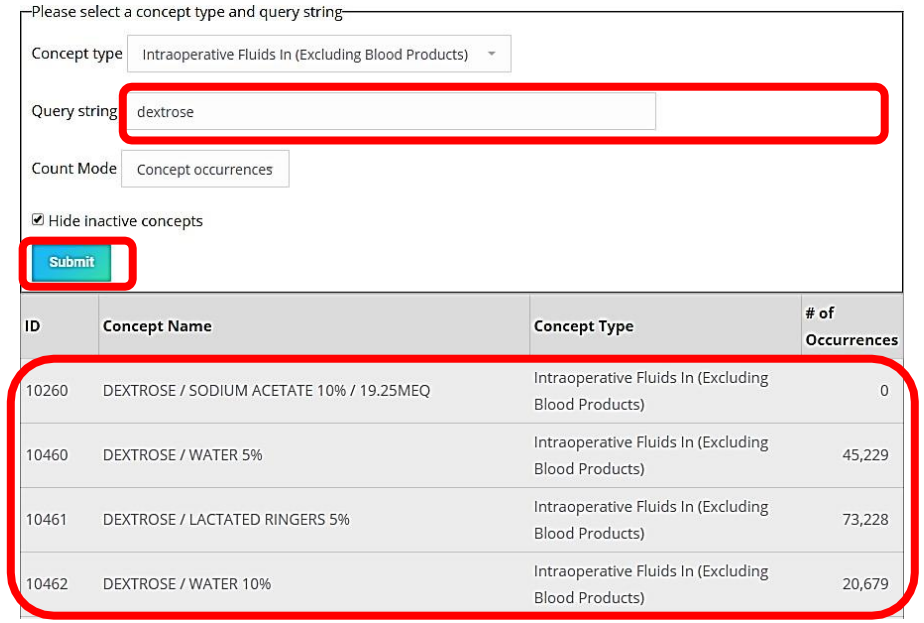
To search by MPOG ID, type “id:” prior the number



- You may also use the ‘Concept type’ search field in addition to the ‘Query string’ when searching for a matching MPOG concept.
- For example, you may want to find an intraoperative fluid such as dextrose or a dextrose mixture. To search all available intraoperative MPOG fluid concepts, select the Intraoperative Fluids concept type.



- Enter ‘dextrose’ into the query string and select ‘submit.’
- A group of intraoperative fluids that include the word ‘dextrose’ will display in the menu below.



ID	Concept Name	Concept Type	# of Occurrences
10260	DEXTROSE / SODIUM ACETATE 10% / 19.25MEQ	Intraoperative Fluids In (Excluding Blood Products)	0
10460	DEXTROSE / WATER 5%	Intraoperative Fluids In (Excluding Blood Products)	45,229
10461	DEXTROSE / LACTATED RINGERS 5%	Intraoperative Fluids In (Excluding Blood Products)	73,228
10462	DEXTROSE / WATER 10%	Intraoperative Fluids In (Excluding Blood Products)	20,679

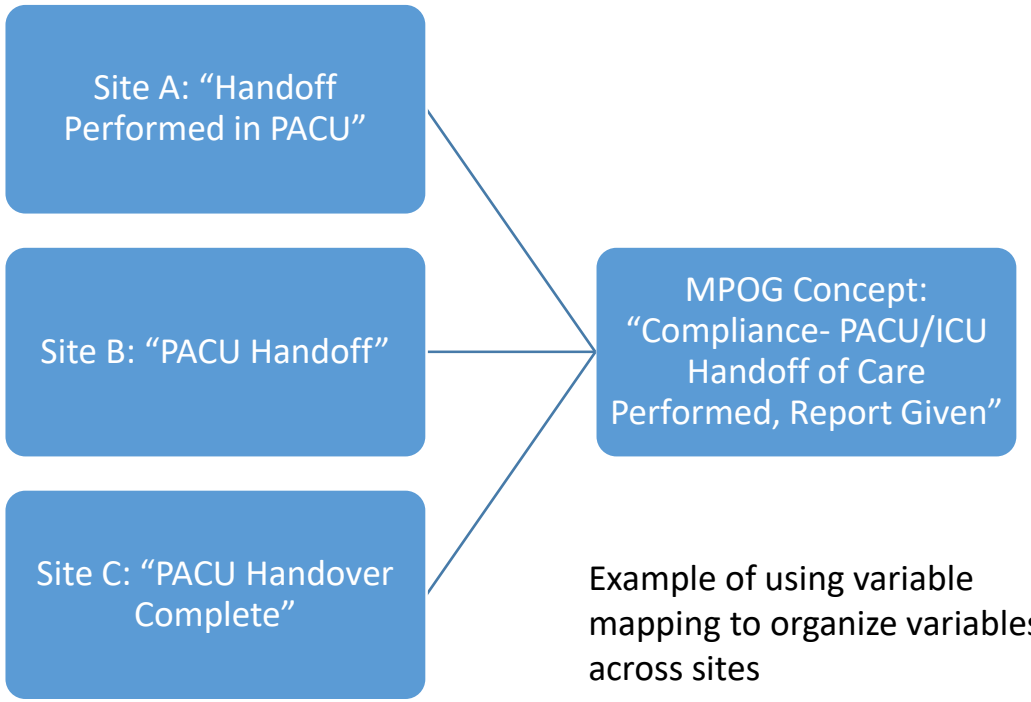
- Once you have identified an appropriate MPOG Concept to match the AIMS variable, you can utilize the MPOG Concept ID for mapping purposes.
- Logging into the MPOG website will also allow you to view other institutions that have used the concepts available in Concept Browser.
- This is helpful for research purposes to know which institutions are using a given concept. To obtain an MPOG website username and password, please contact the Coordinating Center (support@mpog.zendesk.com)

Module 3

Variable Mapping Utility

Variable Mapping

- The Variable Mapping utility provides sites the ability to map electronic health record (EHR) variables to standardized MPOG concepts.
- This process of standardizing terms across multiple EHRs and across multiple sites allows for common data elements to be used for research or quality improvement purposes.



Example of using variable mapping to organize variables across sites

Variable Mapping

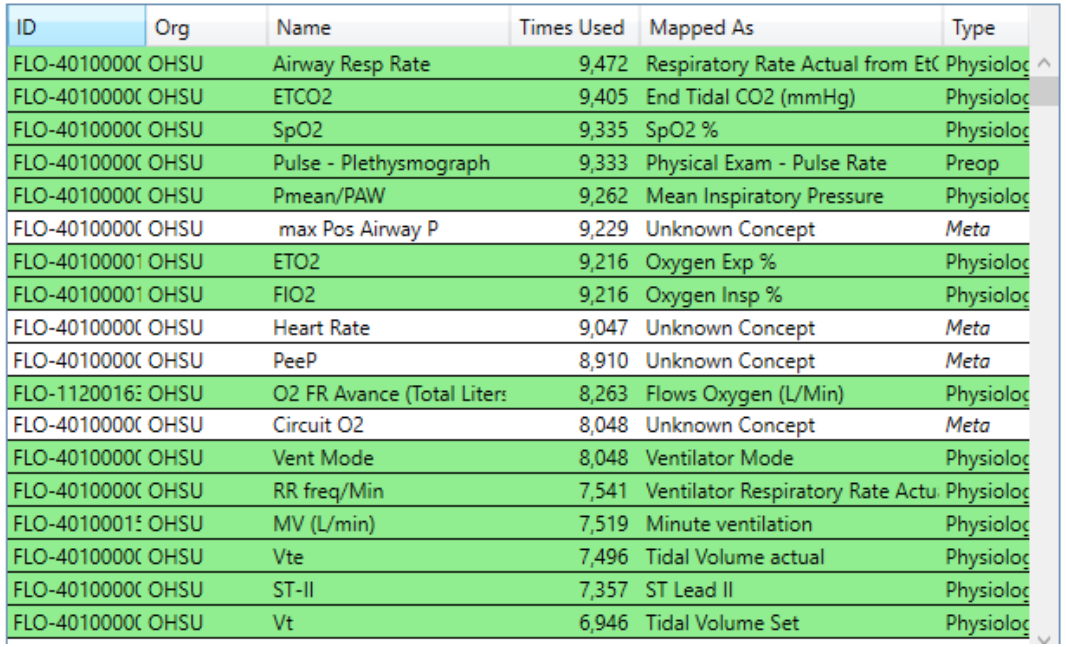
- Once a variable is mapped, source data from the local EHR will always map to the corresponding MPOG concept automatically unless mapping is modified.
- The MPOG Variable Mapping utility simplifies the mapping process by allowing MPOG clinical reviewers to select data variables (source concepts) and match them to corresponding MPOG concepts

Variable Mapping

- **Important Note:** Institutional data needs to be pulled into the MPOG database before mapping can begin.
- Typically, sites begin mapping with a small amount of data (one day to one week) and then load more data after mapping is started.
- Usually sites will automate the process of applying mappings after one month of data is loaded and mapped in the database.
- Automatic updates are typically scheduled to occur each night.

Pre-Mapping

- For new **Epic** sites, a select amount of variables will map automatically prior to beginning manual mapping.
- Your site technical team will be asked to run a script to complete the pre-mapping.
- Once the script is run, pre-mapped variables will show as ‘green’ in the variable mapping utility.

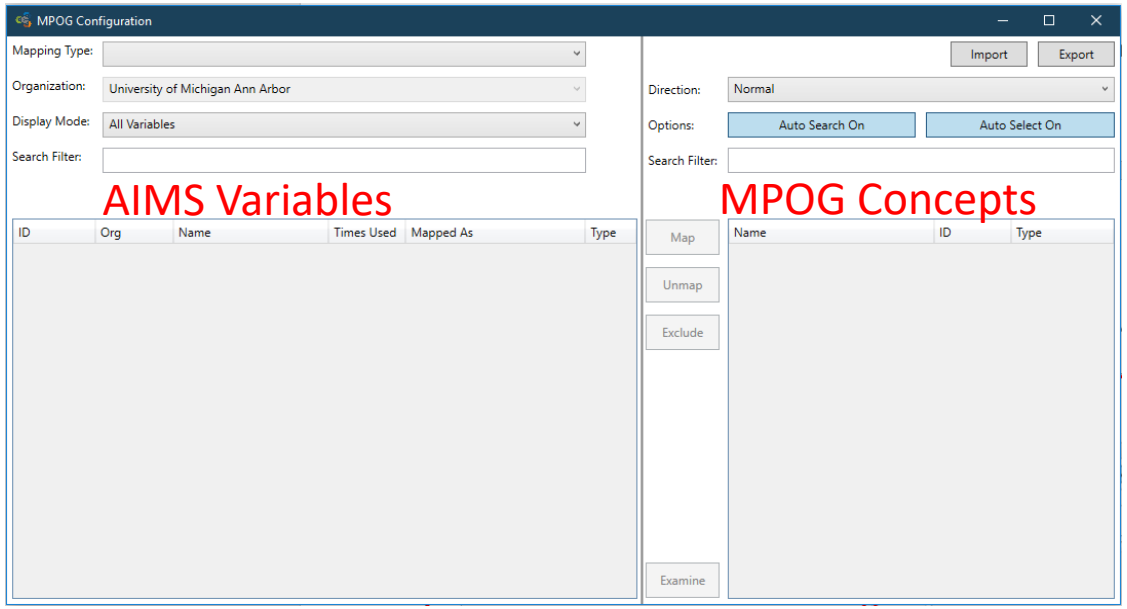


ID	Org	Name	Times Used	Mapped As	Type
FLO-40100000(	OHSU	Airway Resp Rate	9,472	Respiratory Rate Actual from Et(	Physiolog
FLO-40100000(	OHSU	ETCO2	9,405	End Tidal CO2 (mmHg)	Physiolog
FLO-40100000(	OHSU	SpO2	9,335	SpO2 %	Physiolog
FLO-40100000(	OHSU	Pulse - Plethysmograph	9,333	Physical Exam - Pulse Rate	Preop
FLO-40100000(	OHSU	Pmean/PAW	9,262	Mean Inspiratory Pressure	Physiolog
FLO-40100000(	OHSU	max Pos Airway P	9,229	Unknown Concept	*Meta*
FLO-40100001	OHSU	ETO2	9,216	Oxygen Exp %	Physiolog
FLO-40100001	OHSU	FIO2	9,216	Oxygen Insp %	Physiolog
FLO-40100000(	OHSU	Heart Rate	9,047	Unknown Concept	*Meta*
FLO-40100000(	OHSU	PeeP	8,910	Unknown Concept	*Meta*
FLO-1120016:	OHSU	O2 FR Avance (Total Liters	8,263	Flows Oxygen (L/Min)	Physiolog
FLO-40100000(	OHSU	Circuit O2	8,048	Unknown Concept	*Meta*
FLO-40100000(	OHSU	Vent Mode	8,048	Ventilator Mode	Physiolog
FLO-40100000(	OHSU	RR freq/Min	7,541	Ventilator Respiratory Rate Actu	Physiolog
FLO-4010001:	OHSU	MV (L/min)	7,519	Minute ventilation	Physiolog
FLO-40100000(	OHSU	Vte	7,496	Tidal Volume actual	Physiolog
FLO-40100000(	OHSU	ST-II	7,357	ST Lead II	Physiolog
FLO-40100000(	OHSU	Vt	6,946	Tidal Volume Set	Physiolog

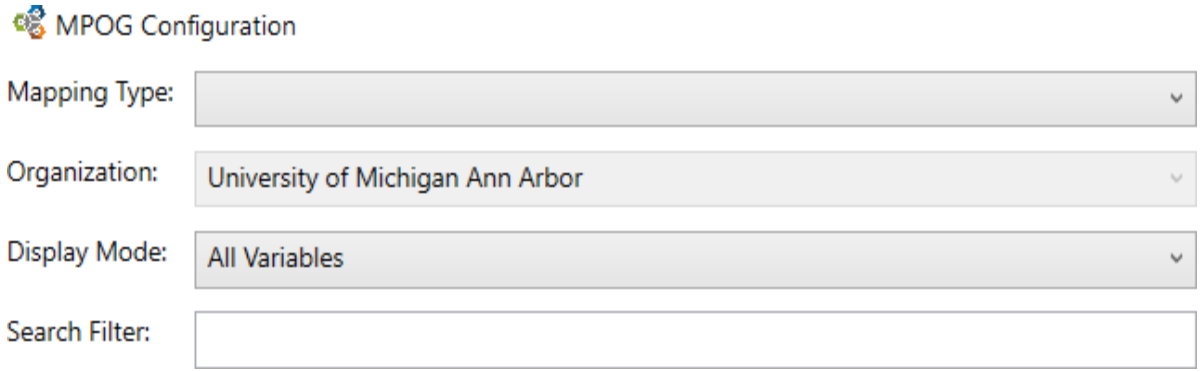
Using the Variable Mapper

- Open the MPOG Suite and select “Variable Mapping”

- The ‘Variable Mapping’ utility should open and look similar to the image below. The left side of the utility will list your institution (AIMS) variables and the right side will list MPOG concepts available to map to.
- You will also notice four fields within the MPOG Configuration that allow you to filter by category. These include Mapping Type, Organization, Display Mode, and Search Filter.

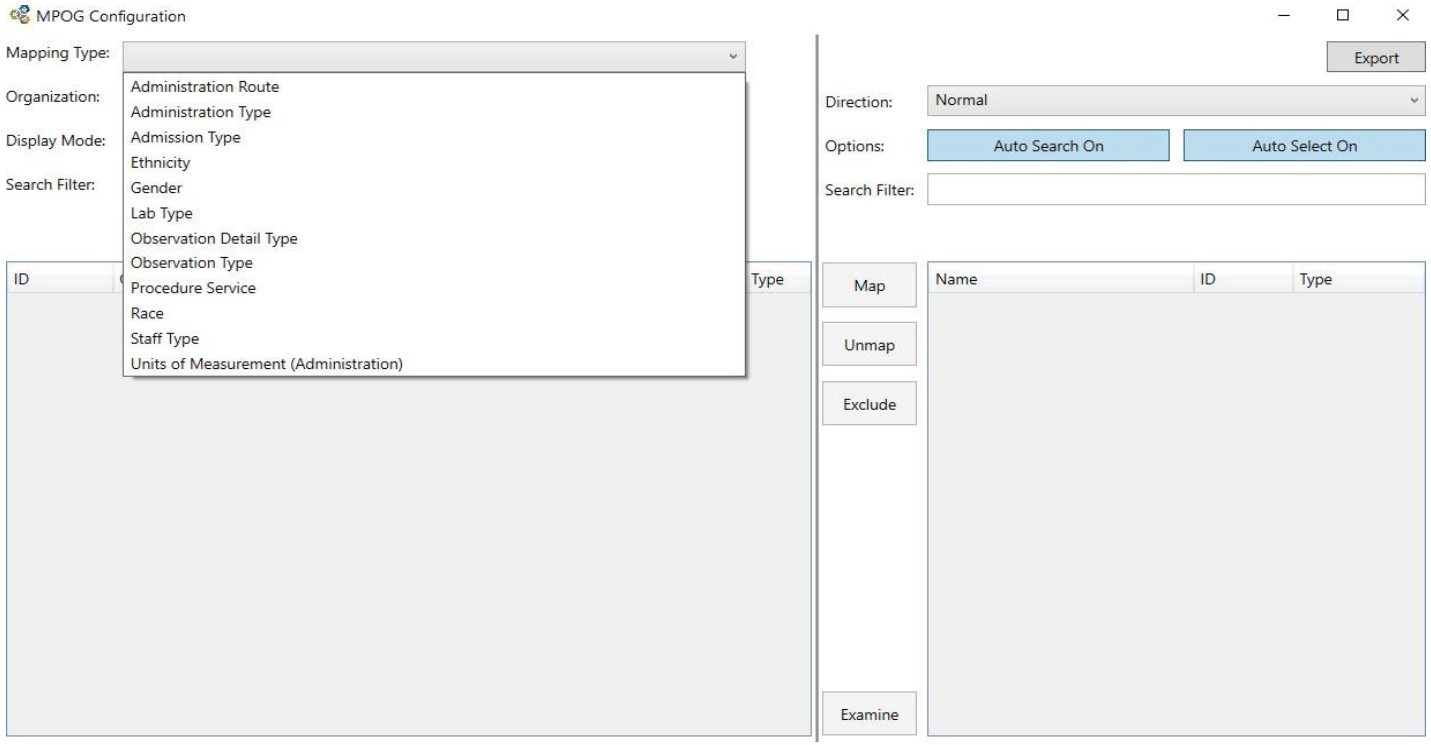


- **Mapping Type:** This is a general mapping category that can be further filtered to subcategories
- **Organization:** This field will be populated with your institutional name.
- **Display Mode:** This feature allows you to filter by ‘All Variables,’ ‘Unmapped Variables,’ or ‘Mapped Variables.’
- **Search Filter:** This function allows you to search for a specific AIMS variable.
    - Can search by original variable ID using prefix “ID” (example “ID:1448”)

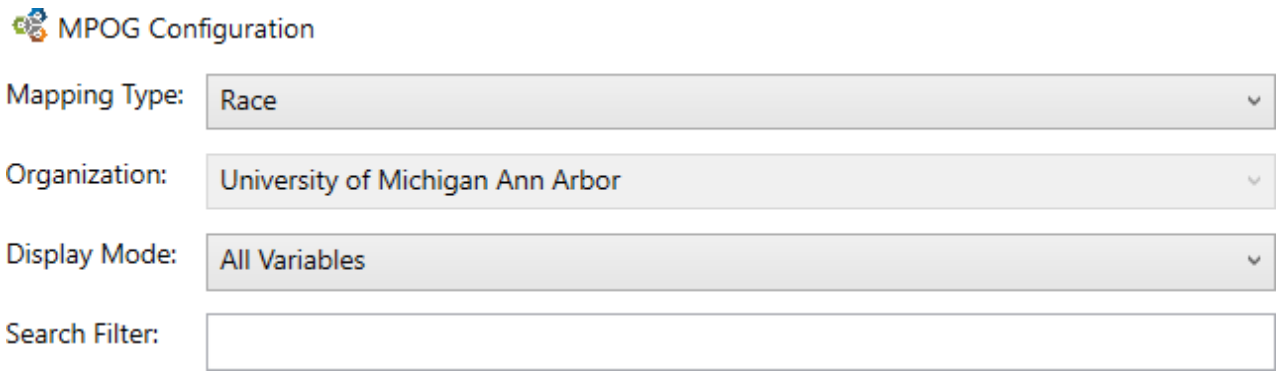


**There may be additional sites in the dropdown menu for multi-site institutions in which you are assigned (i.e. Henry Ford Detroit, Henry Ford West Bloomfield). For institutions with multiple sites, It is recommended that mapping is completed under the Merged Organization.*

- To utilize the category filter option, click on the ‘Mapping Type’ field. A dropdown menu will appear and you may select from the various options
- Select from the desired category from the ‘Mapping Type’ dropdown menu, as shown below

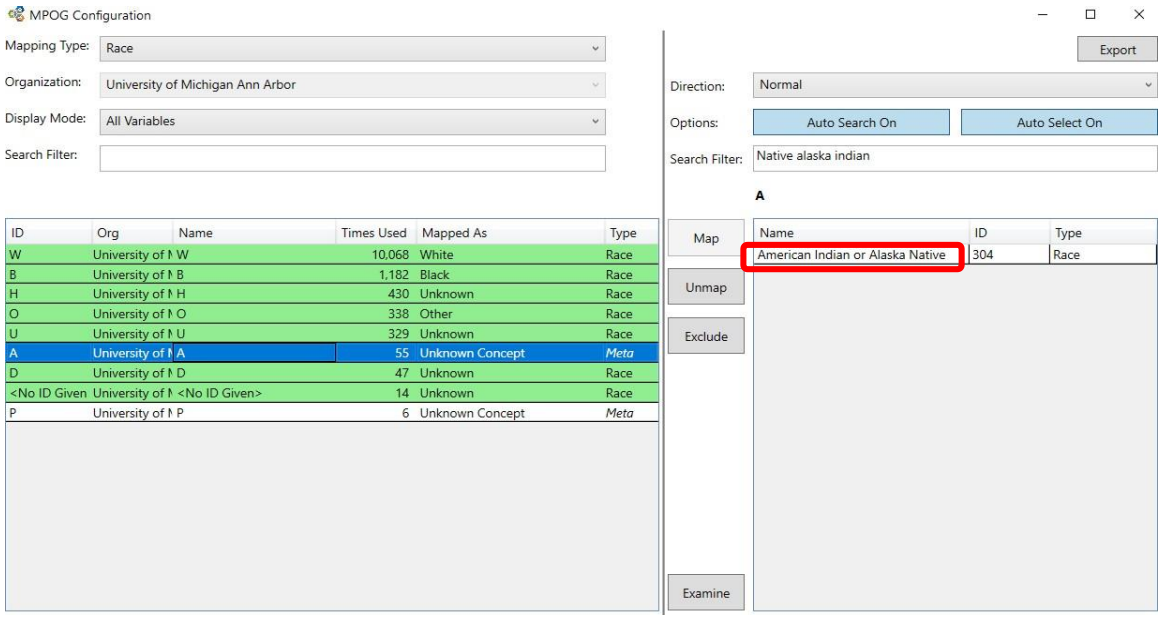


- In the example below, we have selected the Mapping Type ‘Race.’

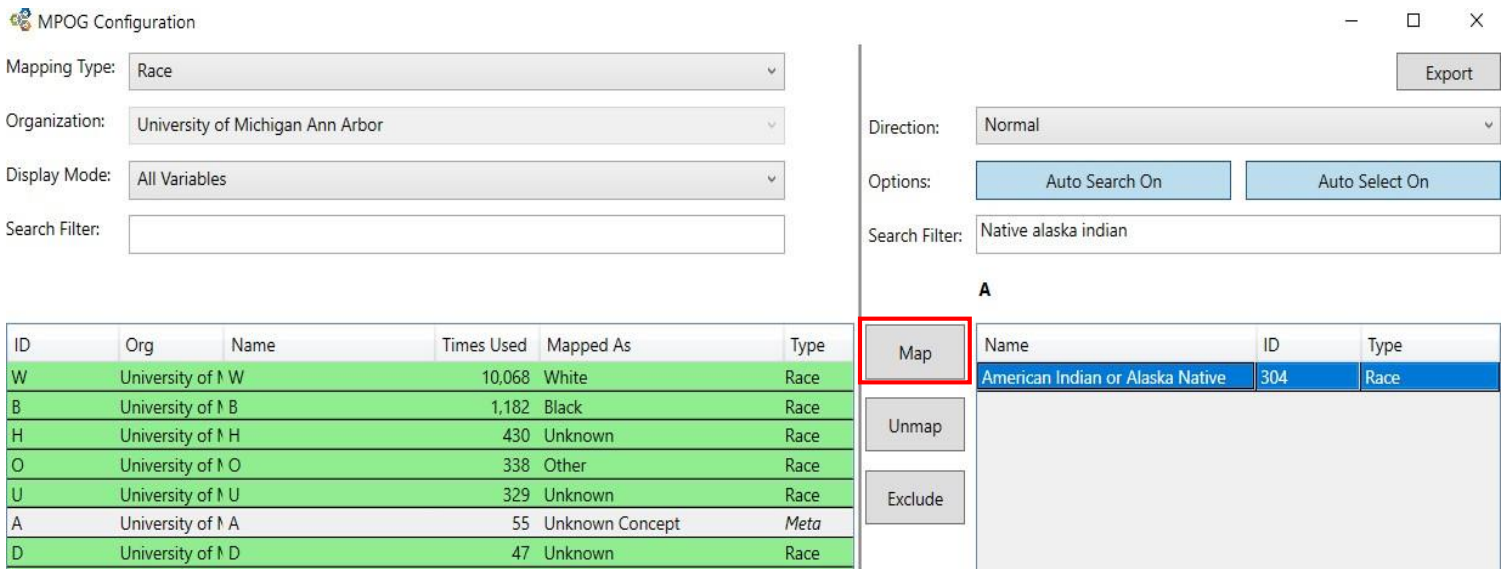


- Once ‘Race’ has been selected from the dropdown menu, you will notice a variety of race related variables populate the window as shown below. You may notice lines of existing variables on the left side of the screen if variables have been populated or mapped by the MPOG Coordinating Center technical team or premapping has been completed

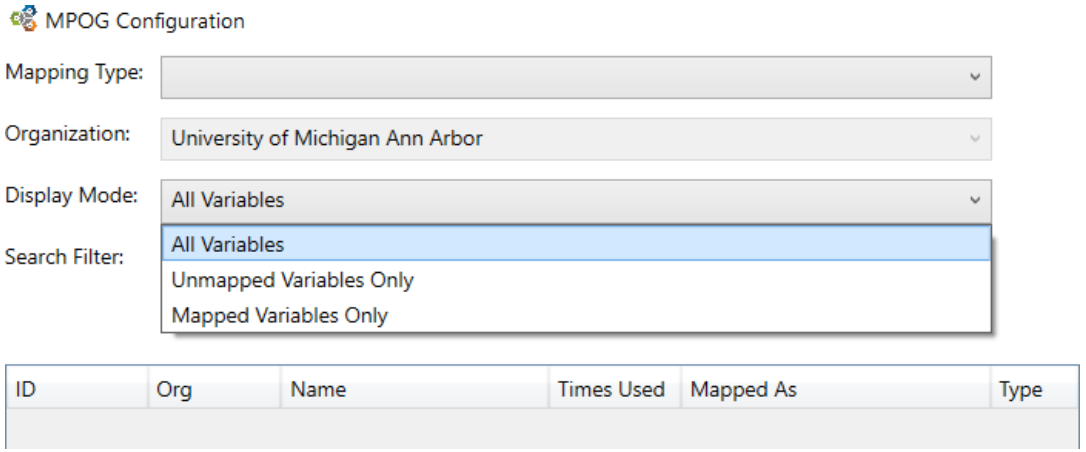
- Click the ‘Race’ variable you wish to map. Once the row has been selected, it will turn blue and a corresponding “guess” MPOG concept will appear in the ‘Description’ field on the right side. If several options appear, you can click on one of the bold terms above the MPOG concept window to narrow the search. If the desired concept does not appear, use the search filter on the right side to modify your search
- In this example, we have selected ‘American Indian/Alaska Native.’



- Click the MPOG Variable you wish to map to. This will highlight it in blue.
- Click “Map”. Your variable is now mapped to an MPOG Concept and will turn green. You can also map by double clicking the MPOG concept. The “Mapped As” column will be updated to reflect this change



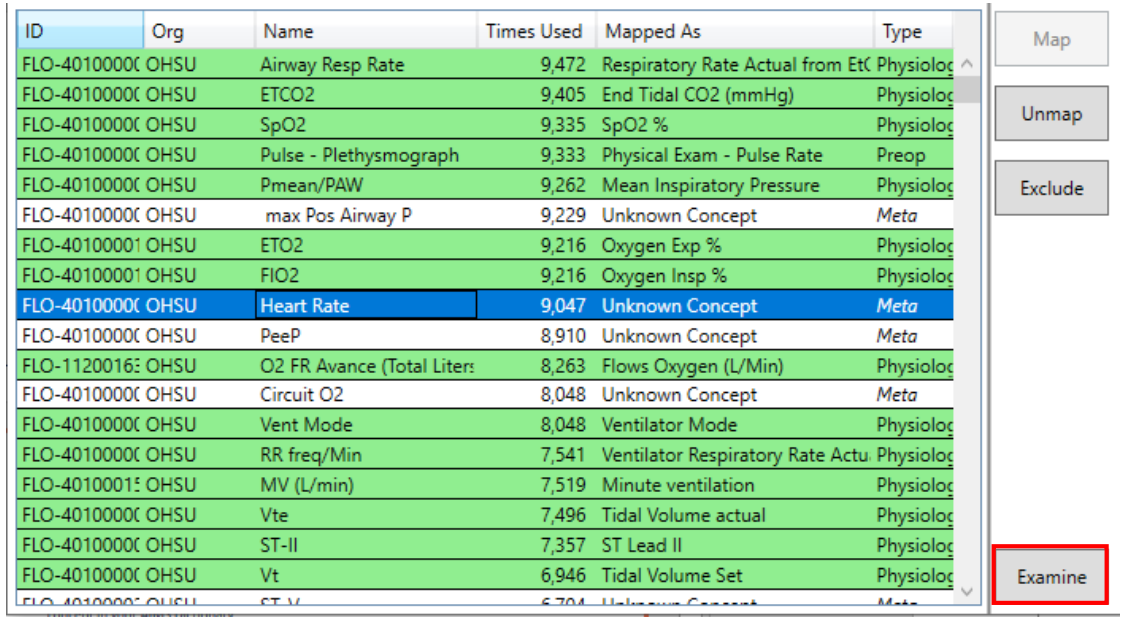
- You may also filter by ‘Display Mode’ to visualize ‘All Variables,’ ‘Unmapped Variables Only,’ or ‘Mapped Variables’ to focus mapping efforts. By selecting from the dropdown menu, only the variables within the selected category will appear.



Additional Functions within Variable Mapping

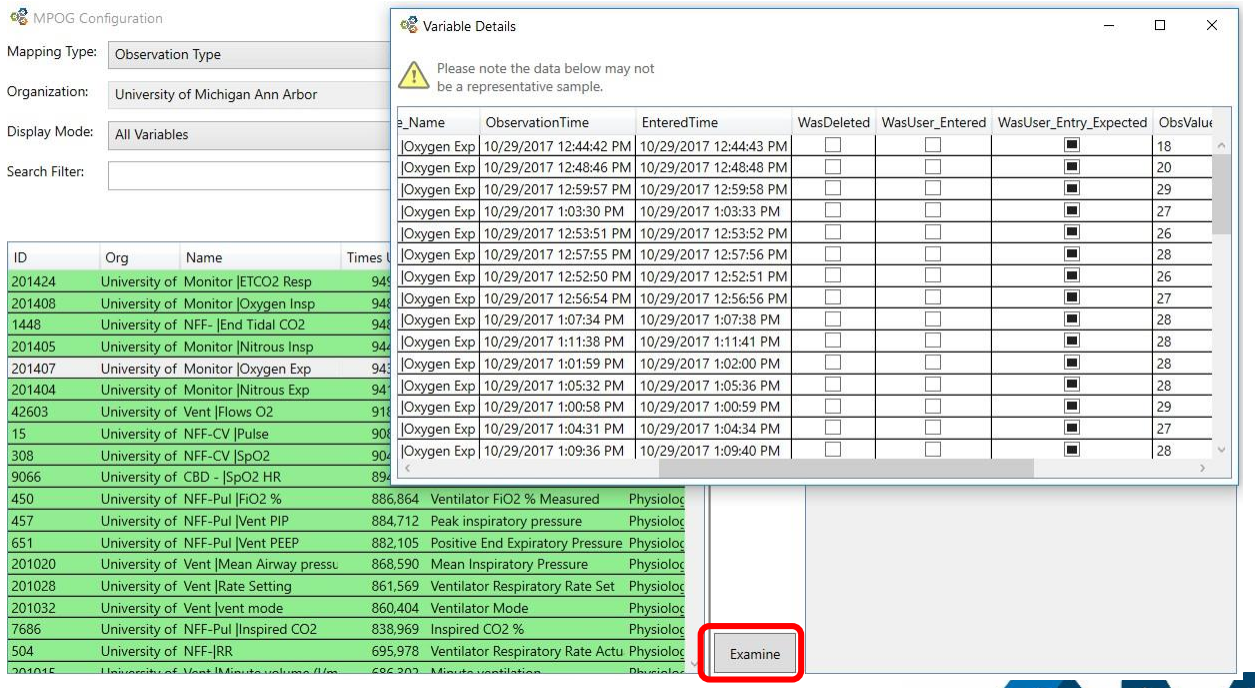
Examine

- The ‘Examine’ function allows you to view the Epic variable in greater detail by values from different cases this variable has been documented. This is beneficial when you desire additional context related to the variable you wish to map.



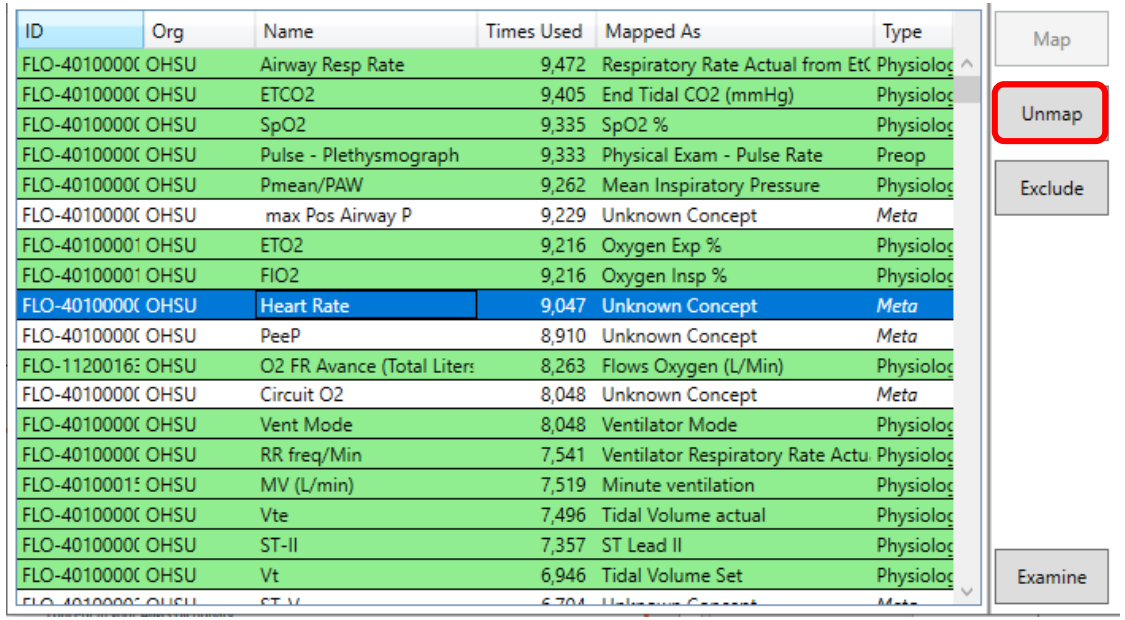
Examine

- Highlight the variable row you wish to examine and click “Examine”.
- A window will open containing detailed information related to the selected variable.



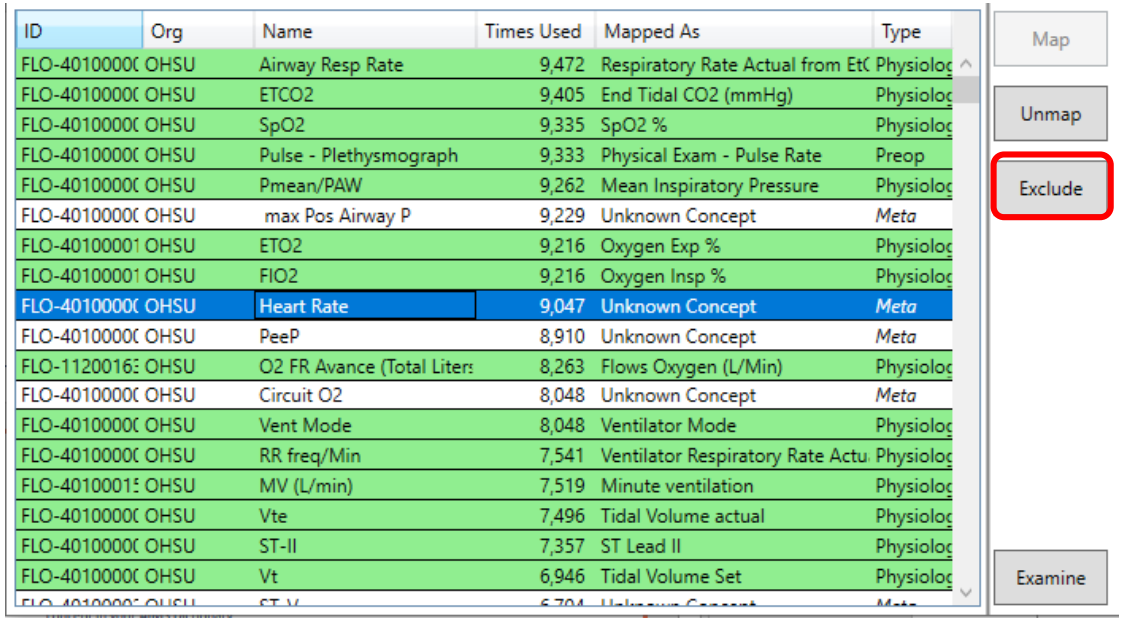
Unmap

- The ‘Unmap’ feature allows you to unmap incorrectly mapped variables at any time. Simply select and highlight the variable in the MPOG side, and click ‘Unmap’. The variable will then turn white.



Exclude

- The ‘Exclude’ function allows you to exclude selected variables from mapping.
- The Coordinating Center will advise you on which variables are appropriate for exclusion.
- Extreme caution must be applied when excluding variables from mapping, especially within the ‘**Administration Route’** mapping type, as ALL data associated with ‘route’ will be excluded



Exclude

- Highlight the variable(s) you wish to exclude from mapping and click “Exclude”
- Excluded variables will turn pink.

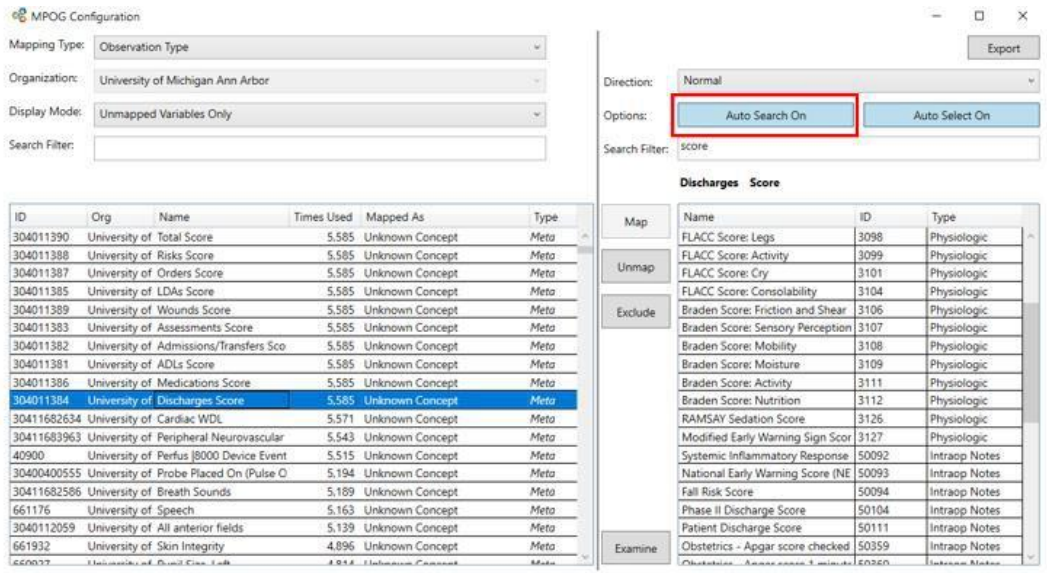
ID	Org	Name	Times Used	Mapped As	Type
29134	University of	Taped at @	134	Intubation Endotracheal Tube S	Intraop N
47910	University of	Blade/View	129	Intubation view note	Intraop N
38178	University of	Concerns	124	Airway - Laryngeal Mask Airway	Intraop N
7758	University of	Stopped indicator	124	Variable Excluded from Import	*Meta*
8559	University of	Paresthesia	120	Neuraxial insertion parasthesia y	Intraop N
8563	University of	Aspiration	118	Neuraxial insertion aspiration of	Intraop N
15814	University of	Skin Depth	116	Epidural catheter withdrawn to c	Intraop N
36891	University of	Position Confirmed by	110	Categorized note - Positioning	Intraop N
15905	University of	Sensory Level	108	Neuraxial technique - Bilateral S	Intraop N
8570	University of	Test Dose	108	Epidural test dose administered	Intraop N
8595	University of	Catheter status	106	Epidural anesthesia catheter pla	Intraop N
40011	University of	Type of Medication	92	Misc – Medication Free Text Enti	Intraop N
47914	University of	Cricoid Pressure	89	Intubation - cricoid pressure ap	Intraop N
36542	University of	Nurse's Name	86	Variable Excluded from Import	*Meta*
36543	University of	Pain Score	86	Pain Score (Generic)	Physiolo
36544	University of	Repositioned	86	Positioning - Patient position	Intraop N
44130	University of	Motor Blockade	82	Regional - Motor response to st	Intraop N
5976	University of	Attempts	82	Neuraxial technique number of	Intraop N

Category Exclusion Rules

Can Exclude	Do Not Exclude
Administration Type	Administration Route
Observation Type	Units of Administration
Observation Type Detail	Room Type
Lab Type	Procedure Type

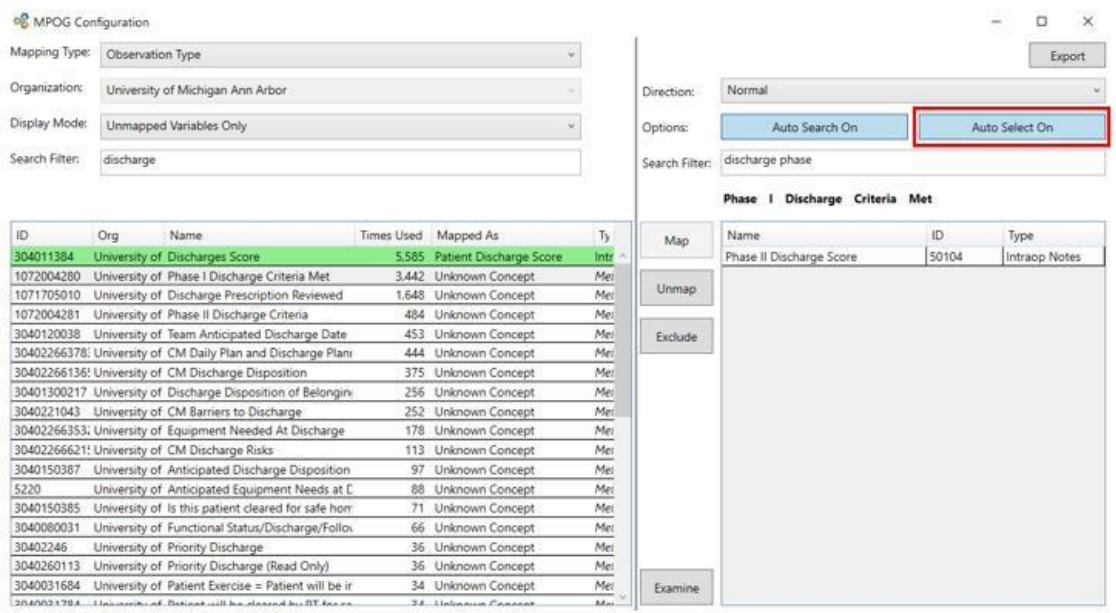
Auto Search

- While auto search is ON, the variable name that is selected on the left hand side will auto populate in the search filter on the right side. Clicking the auto search button will turn this function OFF and will not auto populate the search filter.



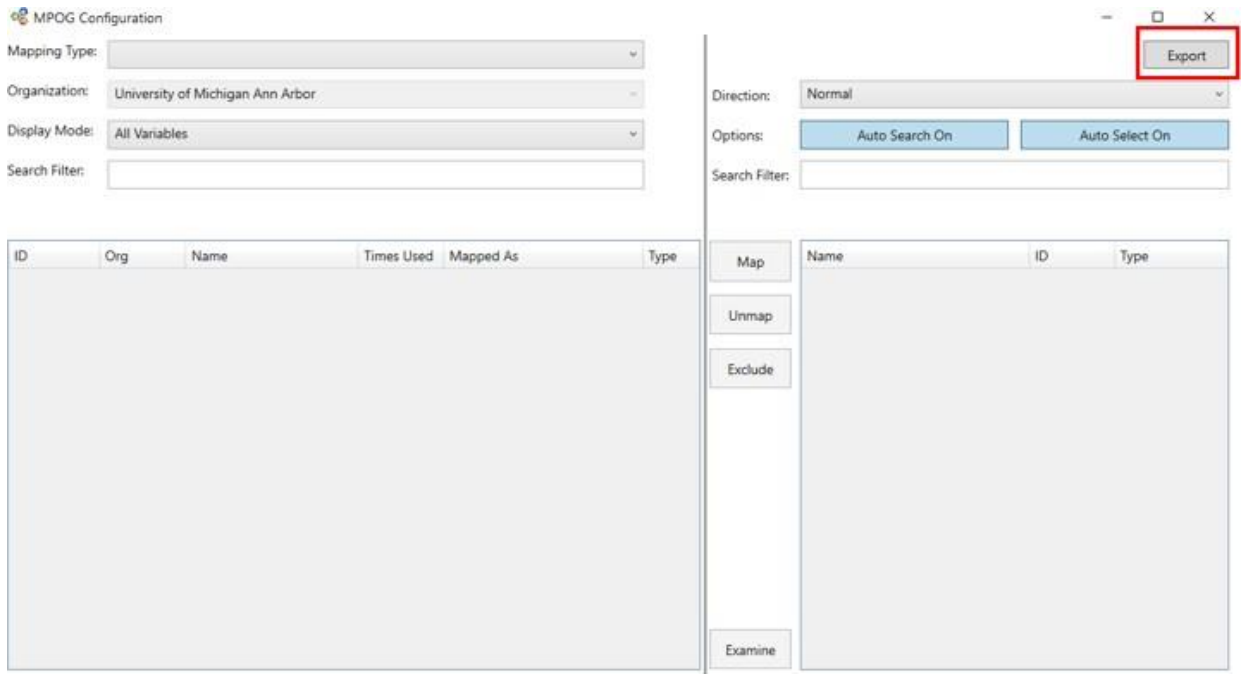
Auto Select

- After mapping a variable on the left hand side, having auto select ON will automatically jump to the next variable. To turn this function OFF, click the “auto select” button.



Export

- You can export all variables and their mappings to an excel spreadsheet through the export button

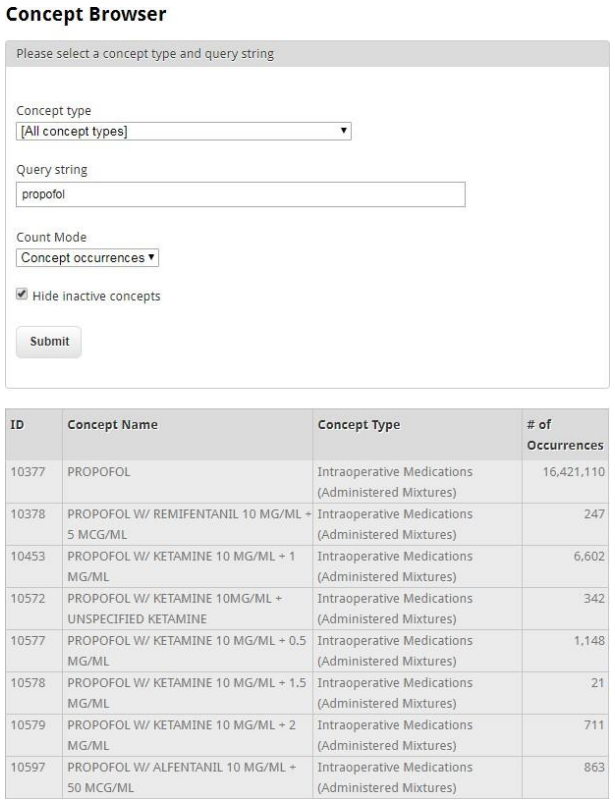


Tips for Mapping Success

- Focus on mapping variables with high row counts ('Times Used').
- Once you have mapped the majority of high row count variables, you can begin to focus your attention to mapping the lower row count variables that may be relevant for anesthesia research or quality purposes.

ID	Org	Name	Times Used	Mapped As
1600000310	University of	Heart Rate Source	14,656	Unknown Concept
40877	University of	Perfus |Stockert Air Needl	13,003	Unknown Concept
40876	University of	Perfus |Stockert Air Needl	13,003	Unknown Concept
40886	University of	Perfus |Stockert CP RPM	13,003	Unknown Concept
40890	University of	Perfus |Stockert LV Vent(n	13,002	Unknown Concept
40895	University of	Perfus |Stockert Pump Su	13,002	Unknown Concept
40889	University of	Perfus |Stockert LV Vent R	13,002	Unknown Concept
40894	University of	Perfus |Stockert Pump Su	13,002	Unknown Concept
16011780	University of	BP Method	10,304	Unknown Concept
3040103232	University of	Pulse Oximetry Type	9,689	Unknown Concept

- Utilizing the MPOG Concept Browser utility will facilitate efficient identification of corresponding MPOG concepts. Please reference *Module 2: Concept Browser* for more information



Concept Browser

Please select a concept type and query string

Concept type
[All concept types]

Query string
propofol

Count Mode
Concept occurrences

Hide inactive concepts

Submit

ID	Concept Name	Concept Type	# of Occurrences
10377	PROPOFOL	Intraoperative Medications (Administered Mixtures)	16,421,110
10378	PROPOFOL W/ REMIFENTANIL 10 MG/ML + 5 MCG/ML	Intraoperative Medications (Administered Mixtures)	247
10453	PROPOFOL W/ KETAMINE 10 MG/ML + 1 MG/ML	Intraoperative Medications (Administered Mixtures)	6,602
10572	PROPOFOL W/ KETAMINE 10MG/ML + UNSPECIFIED KETAMINE	Intraoperative Medications (Administered Mixtures)	342
10577	PROPOFOL W/ KETAMINE 10 MG/ML + 0.5 MG/ML	Intraoperative Medications (Administered Mixtures)	1,148
10578	PROPOFOL W/ KETAMINE 10 MG/ML + 1.5 MG/ML	Intraoperative Medications (Administered Mixtures)	21
10579	PROPOFOL W/ KETAMINE 10 MG/ML + 2 MG/ML	Intraoperative Medications (Administered Mixtures)	711
10597	PROPOFOL W/ ALFENTANIL 10 MG/ML + 50 MCG/ML	Intraoperative Medications (Administered Mixtures)	863

Groups to Map First

- **DO NOT EXCLUDE IN ANY OF THESE CATEGORIES**
  - Race
  - Gender
  - Ethnicity
  - Procedure Service
  - Admission Type
  - Staff Type

Groups to Map Last

- *Lab Type*
  - Map variables that are important to surgical/anesthesia care i.e. Hgb/Hct/Creatinine/Troponin/Glucose. Focus on mapping labs that MPOG has concepts for an exclude the rest
- *Administration Type*
  - This category includes IN's and OUT's such as fluids, medications, blood products, EBL and urine output.
  - Exclude "volume (mL)" medication variables.
  - ****Exclude all physiologic and gas flow variables from this mapping group**

Groups to Map Last

- *Administration Route*
  - Do Not Exclude in this category – map unspecified concepts to “Other”
- *Units of Measurement Administration*
  - Do not exclude in this category – leave those variables without a corresponding MPOG concept unmapped
- *Observation Detail Type*
  - These are observation Details. Map Observation Type first.
- *Observation Type (procedure notes)*

Variable Type Mapping Guide- **EPIC Sites Only**

Variable Type	Description	Notes
LEV-* variables	Timed Event Notes	Most reliable when looking for timing of events (i.e. intubation/extubation)
EAP/HLX-* variables	Procedure Note Documentation	Provides the details associated with a procedure: size, number of attempts etc. Observed time is not always populated. If no time associated with EAP/HLX note, map related LEV note as well.

Variable Type Mapping Guide - **EPIC Sites Only**

Variable Type	Description	Notes
FLO-* variables	Data from flowsheet	Data from flowsheet. LDA documentation corresponding to placement, removal etc. Usually duplicate doc
CT-* variables	Case Tracking Variables	Exclude these if multiple variables show for event times. *If you do not have an LEV variable for a certain concept you will need to include the CT variable.
AT-* variables	Attestations	Exclude or leave unmapped

Airway Variable Mapping

- ETT/LMA/Intubation/Extubation, regional and neuraxial
- Map LEV/HLX/EAP variables
  - Exclude FLO variables associated with these concepts ***if*** both an HLX/EAP and LEV variable exists.
- If duplicate variables exist for critical times such as anesthesia start/end, surgery start/end, In room times, etc.- can exclude the CT variables as these come from nursing. If there are only nursing (CT) variables, keep them and map (Phase I, Phase II in/out times, etc.). Bottom line: Anesthesia documentation is preferred but adopt nursing documentation if anesthesia documentation is not available for critical times/events.

How Mapping Translates to MPOG Case Viewer

The **'type'** of MPOG concept you map to an AIMS variable will determine where the data within that variable will display in Case Viewer.

- Those mapped to *'Physiologic'* and *'Intraop Note'* type concepts will populate in the **Chart** section of case viewer
- Those mapped to *'Preop'* type concepts will populate in the **H&P** section of case viewer
- Those mapped to *'Outcomes'* type concepts will populate in the **Outcomes** section of case viewer

Name	ID	Type
BP Combined Invasive Unspecified Site 3	3706	Physiologic
BP Combined Aorta	3707	Physiologic
BP Combined Invasive Unspecified Site 5	3708	Physiologic
Unmapped Intraoperative Note Concept	50000	Intraop Notes
AACD Time Room Ready Date/Time	50001	Intraop Notes
AACD Anesthesia Start Date/Time	50002	Intraop Notes
Respiratory - Oral steroids required	71230	Preop
Respiratory - Prior intubation for pulmonary t	71235	Preop
Respiratory - Most recent exacerbation (Date	71240	Preop
Unmapped Outcome Concept	90000	Outcomes
Intraoperative observed quality assurance eve	90001	Outcomes
Postoperative visit patient pain score	90002	Outcomes

MPOG MULTICENTER PERIOPERATIVE OUTCOMES GROUP

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Module 4
Location Mapping

MPOG
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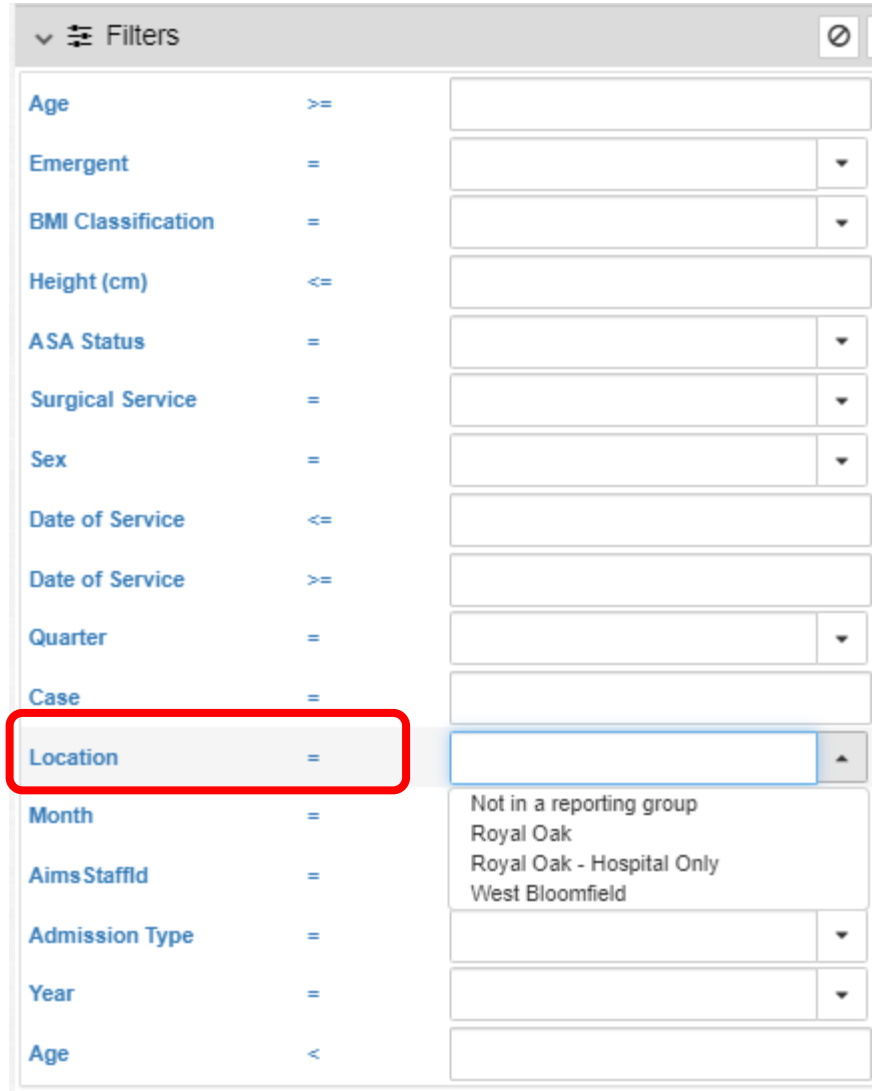
Location Mapping

- Provides sites the ability to establish a hierarchy of facilities and procedure room locations as they exist within the health system
- Allows providers to filter performance data by operating locations
- Provides the opportunity to filter and group locations that may have similar case types, though not physically located in the same building.

Location Mapping

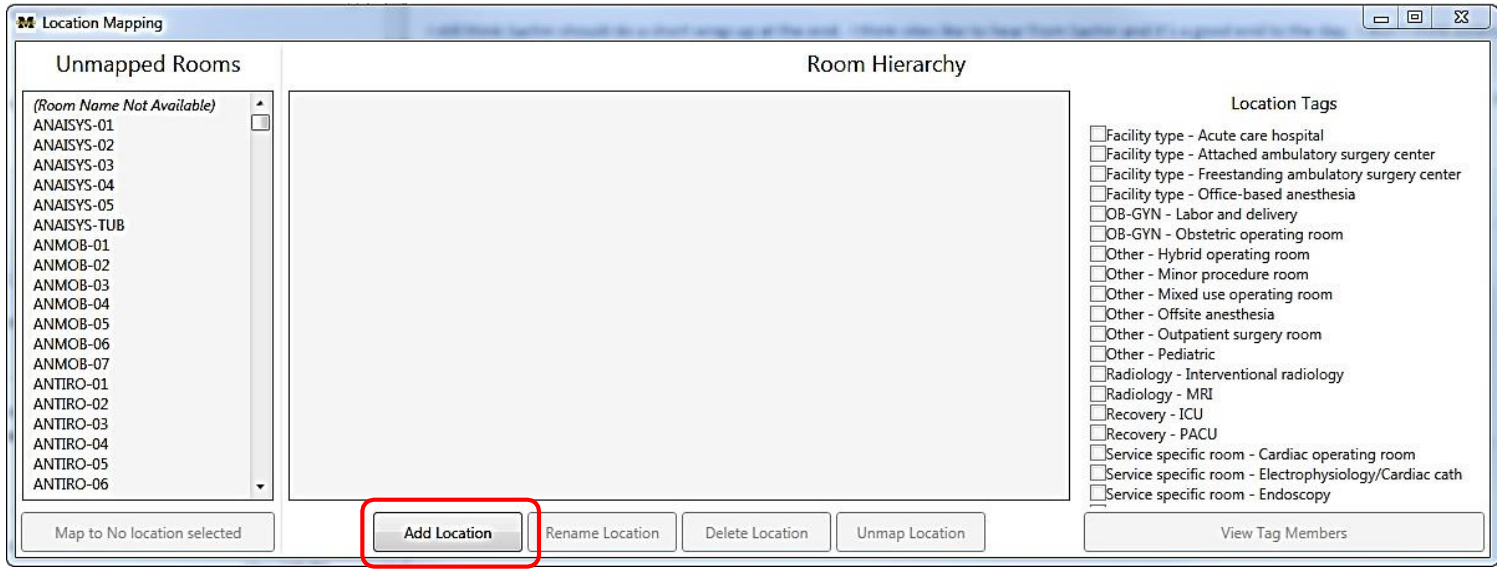
- Example for use: a site may have several outpatient surgery centers and would want to "group" the data from these locations to examine performance at outpatient facilities.
- Mapping of locations is usually completed when a site initially joins MPOG but should be maintained as new rooms are added.



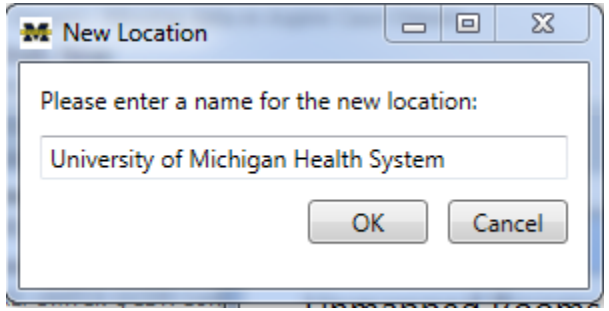
MPOG MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Access ‘Location Mapping’ on the MPOG Suite

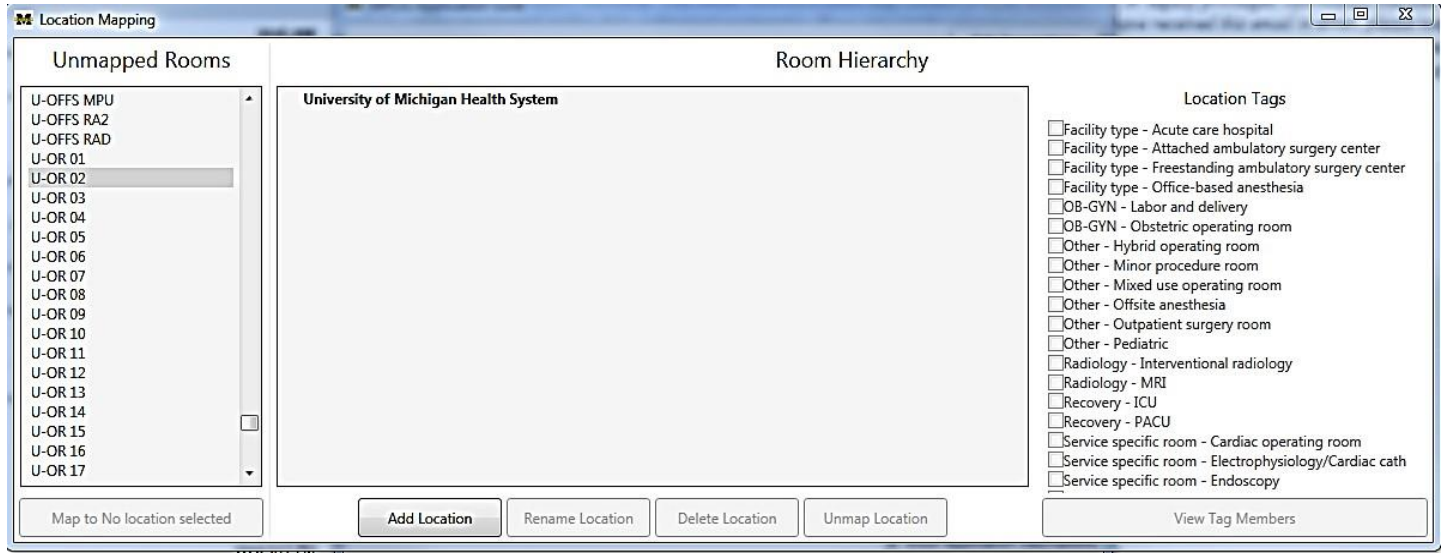
Select ‘Add Location’ from the bottom of the display box.



A text box will appear. Type the name of the primary site at your organization. For example: University of Michigan Health System, all other sites will be categorized under the primary location. Click “Ok.”



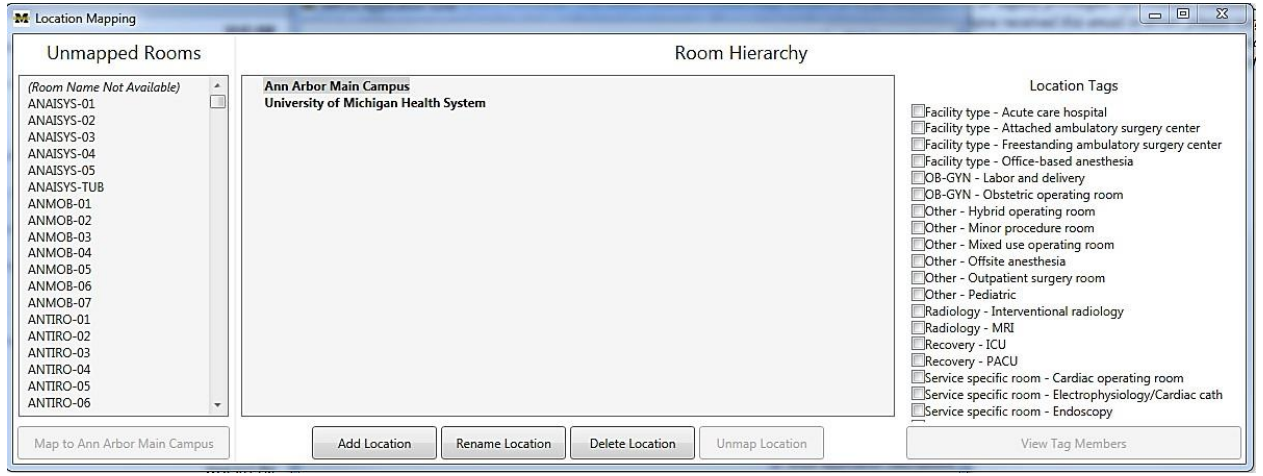
The new location will populate the middle portion of the display box to begin the Room Hierarchy process



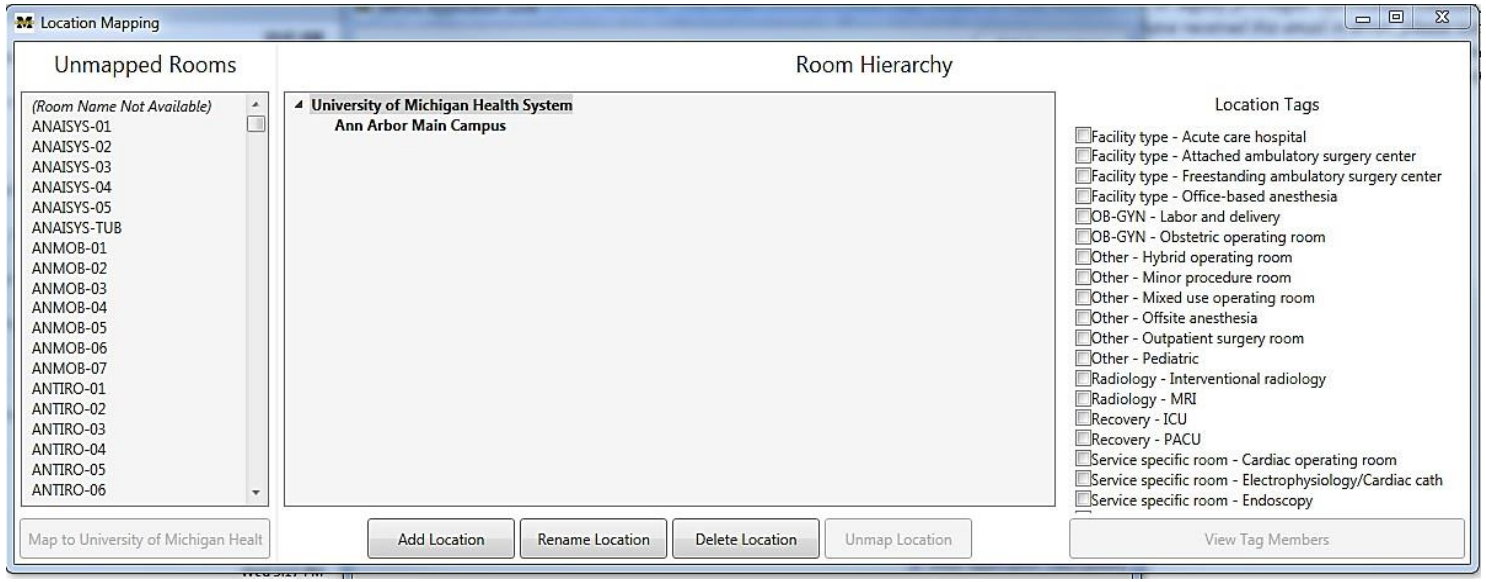
If your organization has multiple campuses or hospitals, continue to add those locations by selecting “Add Location.”

As new locations are added, you can ‘click and drag’ to list secondary sites under primary locations.

For example, ‘Ann Arbor Main Campus’ is currently listed as another primary location but belongs under the Health System title.

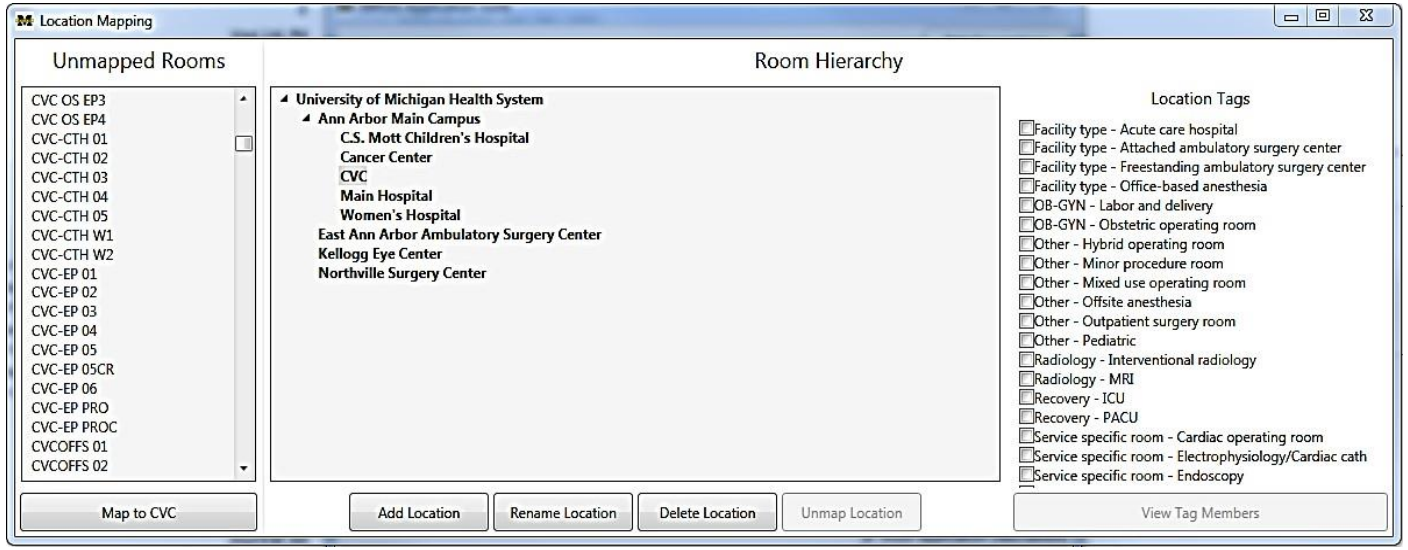


Clicking on ‘Ann Arbor Main Campus’ and dragging it over the ‘University of Michigan Health System’ title will indent the secondary site to be listed under the primary

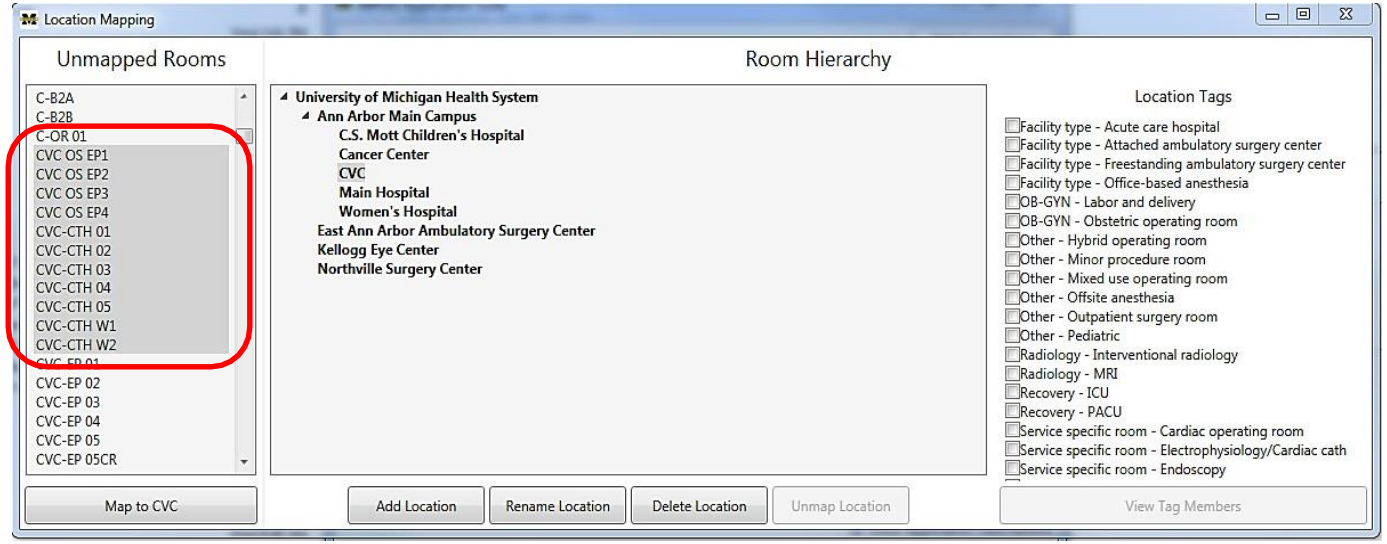


Continue to sort by clicking and dragging titles to properly reflect sites and locations at your facility. See example below.

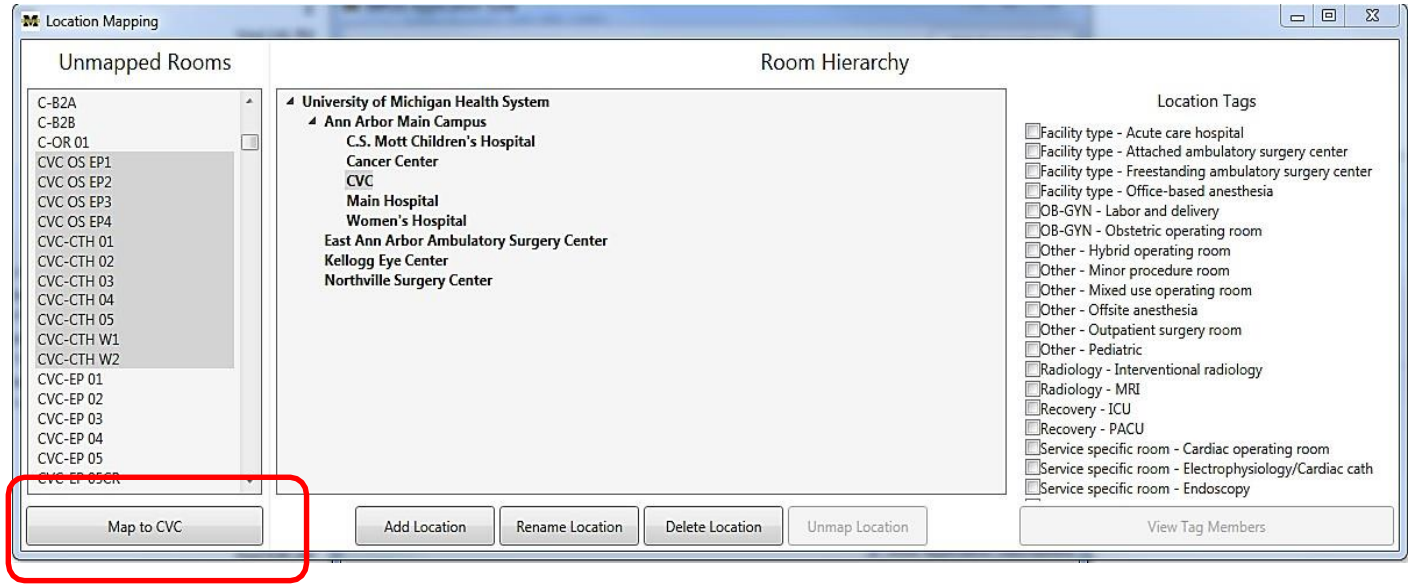
Click on the site in the middle of the screen that you would like to assign operating rooms. In the example below, ‘CVC’ is selected.



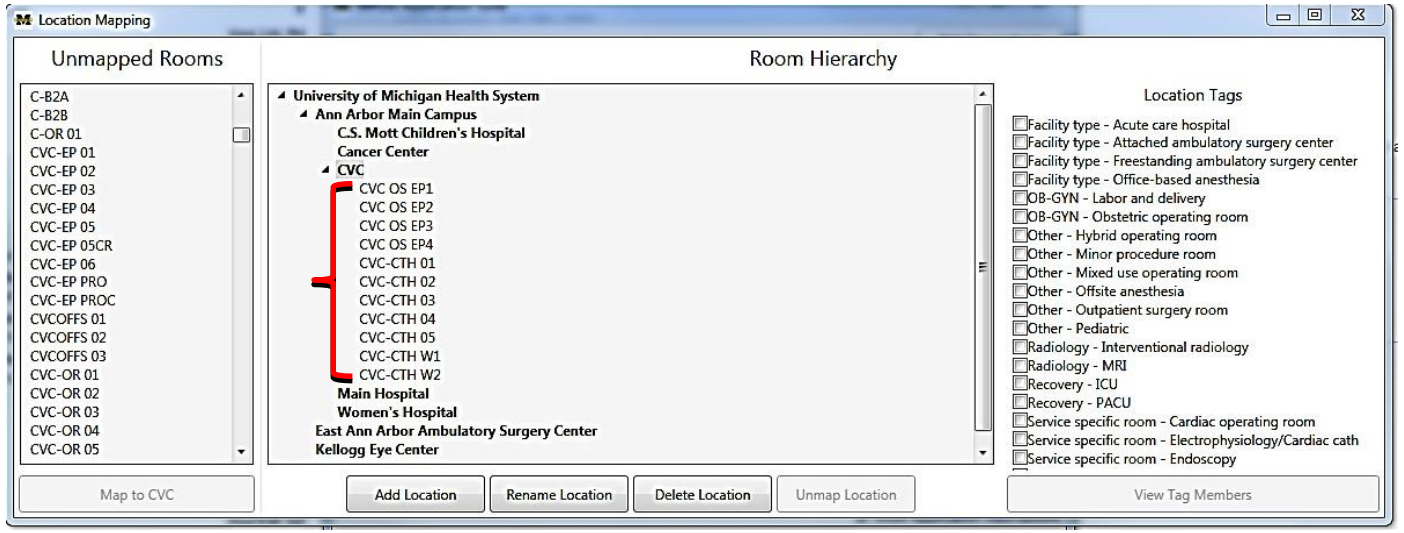
Select operating rooms from the left side of the screen. You can map one room at a time or select a group of rooms by holding the ‘shift’ key down and selecting all rooms applicable. It is also possible to click and drag rooms to sites within the hierarchy.



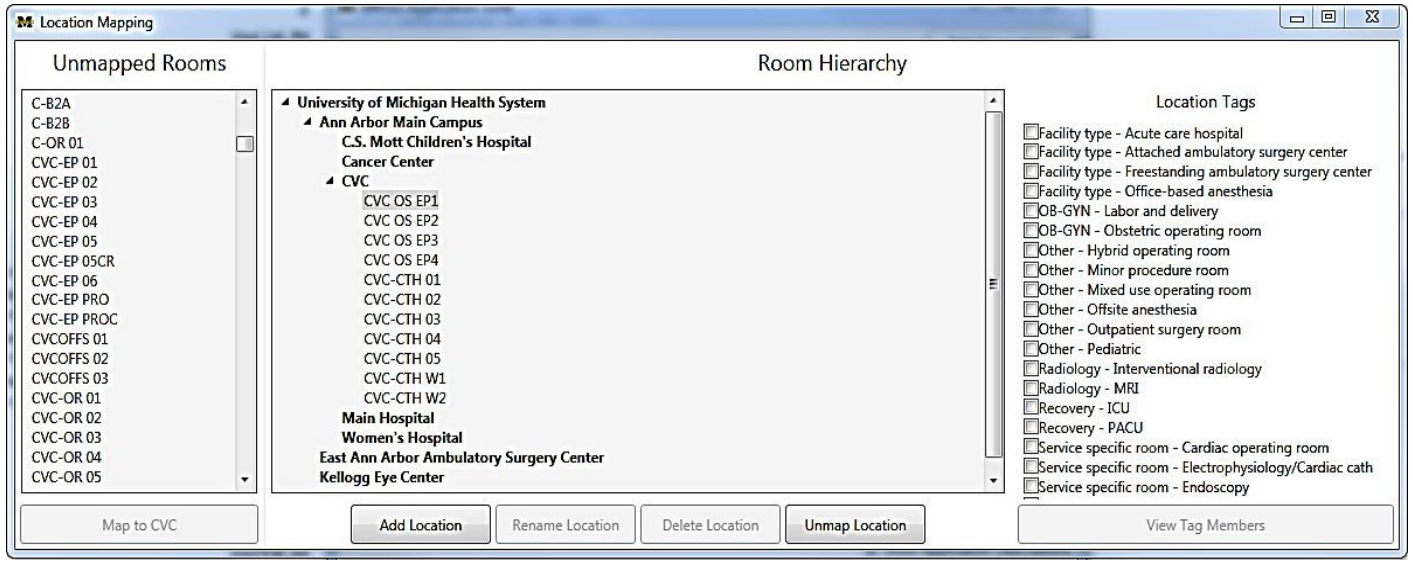
Now select the “Map to CVC’ button in the bottom left corner. All of the selected anesthetizing locations will move under the CVC title in the middle portion of the display box.



Continue mapping all unmapped rooms from the left column to the appropriate locations in the middle ‘Room Hierarchy’ column. **Epic Sites:** ‘Unspecified Room’ will remain in the unmapped rooms category and should not be mapped to a location as the ‘unspecified room’ designation is typically used across a variety of sites within the organization.

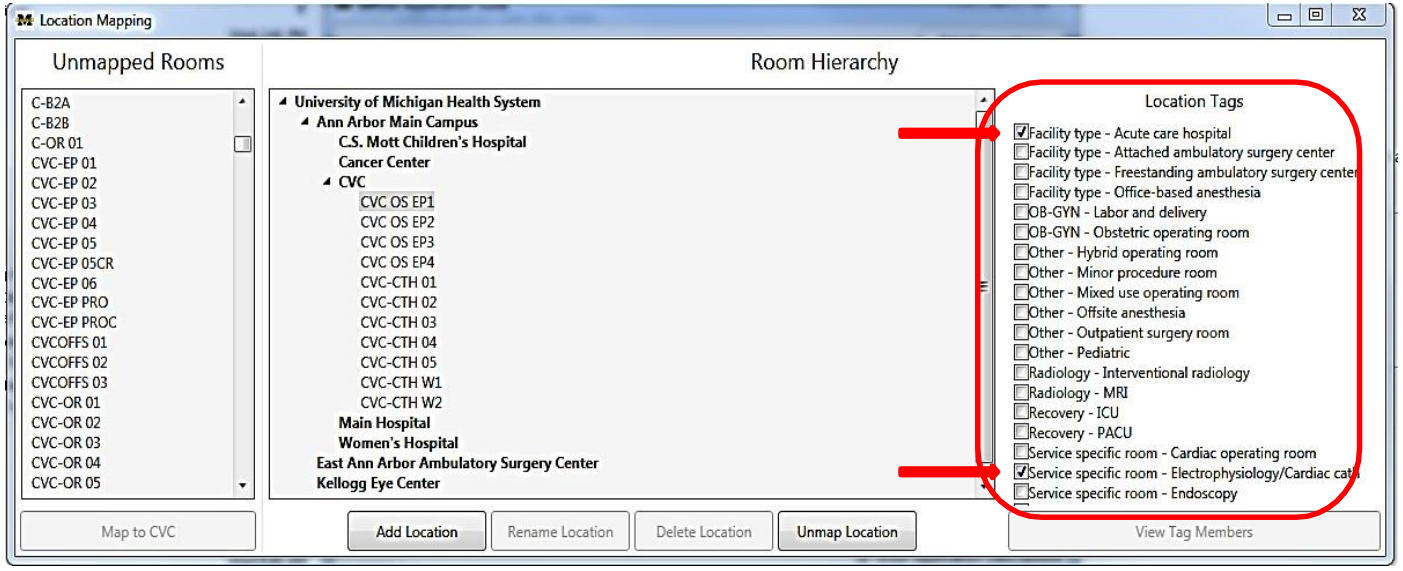


Each room can now be ‘tagged’ to indicate the type of room or type of procedures performed in each OR/procedure area. Select a room from the ‘Room Hierarchy’ list.

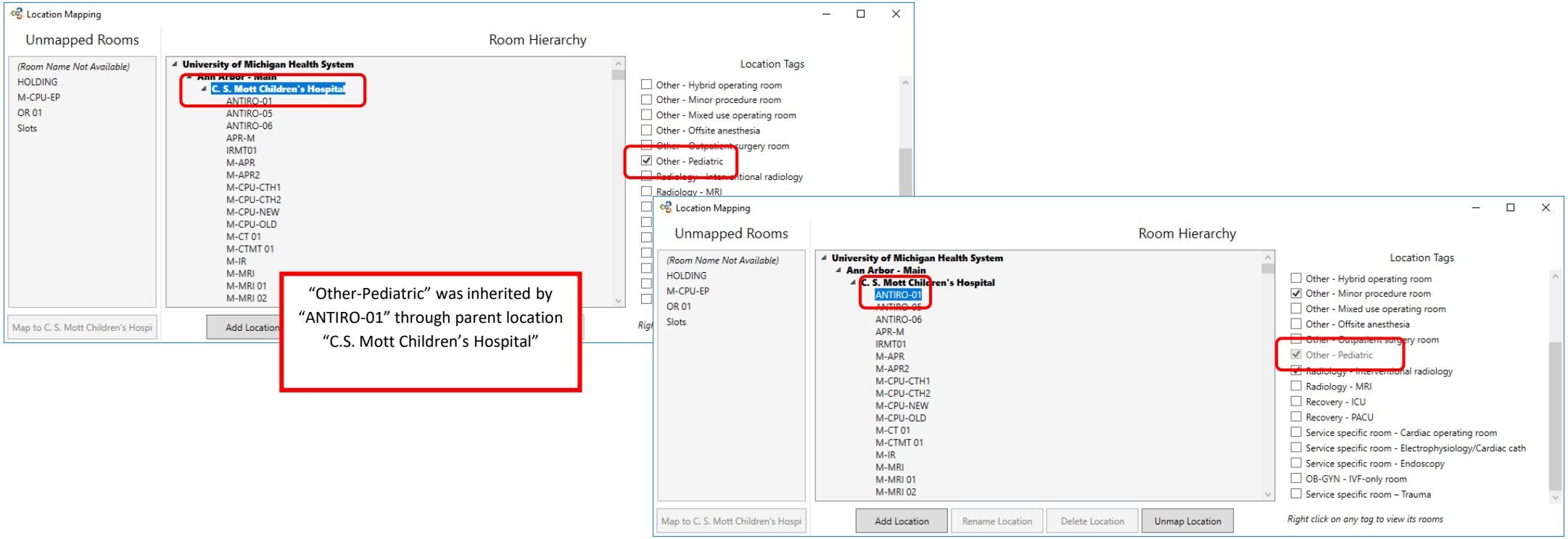


While the room is highlighted, click the appropriate ‘location tags’ from the right side of the display box to designate what procedures occur in the selected room.

In the example below, the tags of ‘*Facility type- Acute care hospital*’ and ‘*Service specific room- Electrophysiology/Cardiac Cath*’ are applied to the CVC OS EP1 room. Use Ctrl + Shift to select multiple rooms at a time



When assigning tags to ‘Parent’ Locations, all ‘Children’ listed under the ‘Parent’ inherit that tag(s). When the ‘child’ location is selected, tags attributed through the ‘parent’ will appear greyed out. This can only be changed by changing the ‘parent’ location tag



Location Mapping Tips

- Right click on any Location Tag to see rooms assigned to the tag.
- Continue assigning the proper location tags for all rooms in the room hierarchy. There is no need to save any changes to room locations or tags. **Any changes made are automatically saved**.
- To update the location mappings, the MPOG/ASPIRE programmer for your site will need to run the following script: EXEC Locations_UpdateCaseLocations. **It is recommended that this script be programmed to run automatically** on a schedule basis before diagnostics to capture any mapping changes that may occur in the future.
- Note: It is possible to rename, delete, or unmap locations as necessary using the buttons at the bottom of the display box. However, if an operating room or location is no longer in use, it is best to leave mapped as historical data will still rely upon this hierarchy.

MPOG
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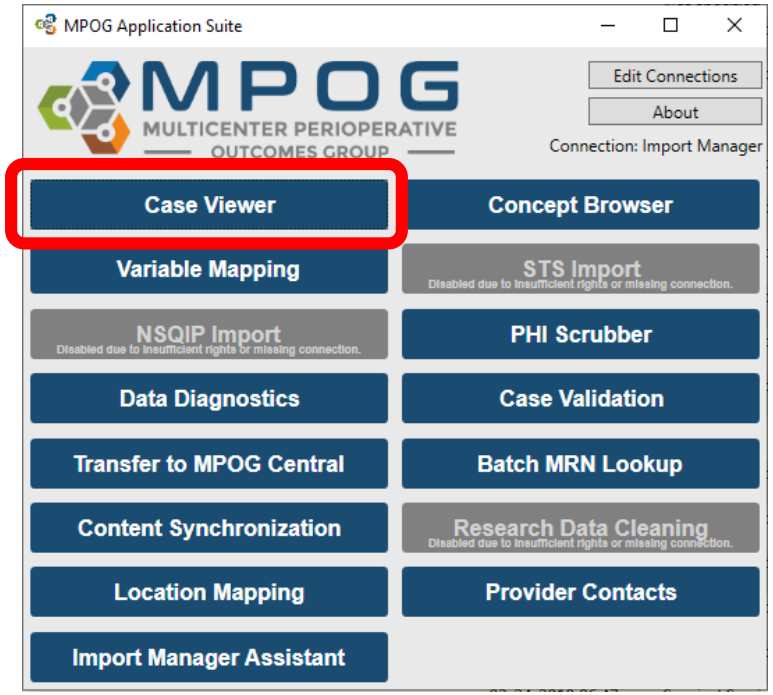
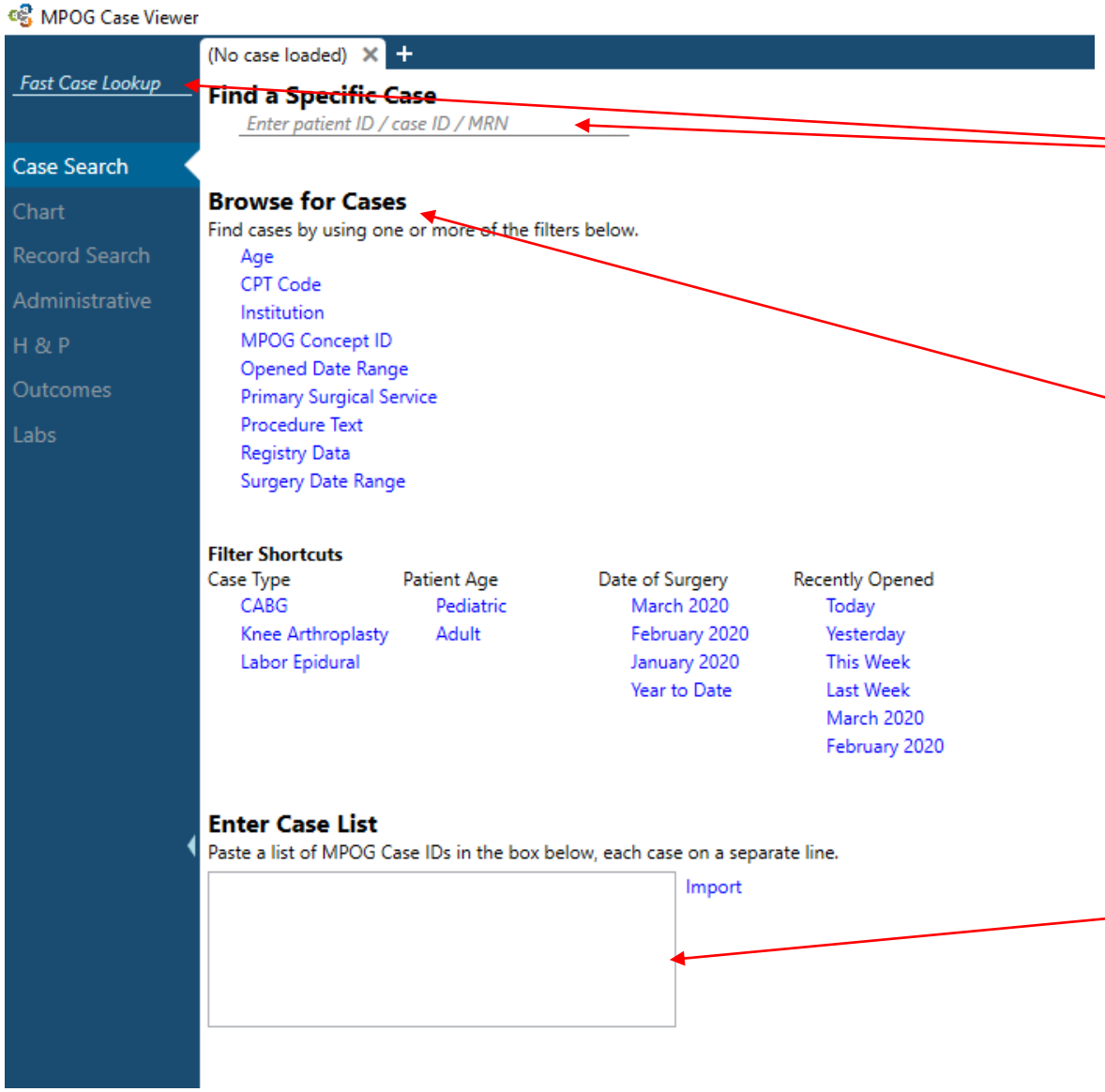
Module 5
Case Viewer

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Case Viewer Overview

The MPOG Case Viewer application displays individual case data just as an anesthesia information management system (AIMS) would display.





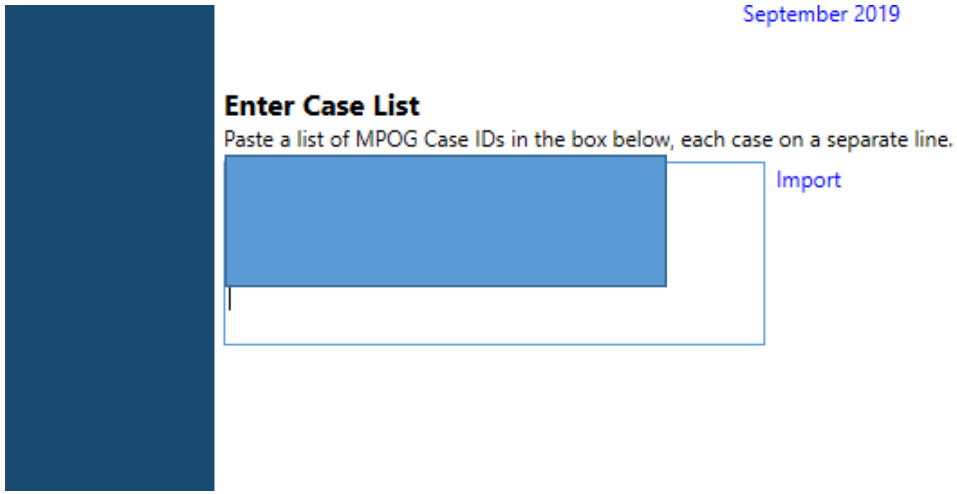
To open a case, search by MPOG Patient ID, MPOG Case ID, or MRN in either location

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

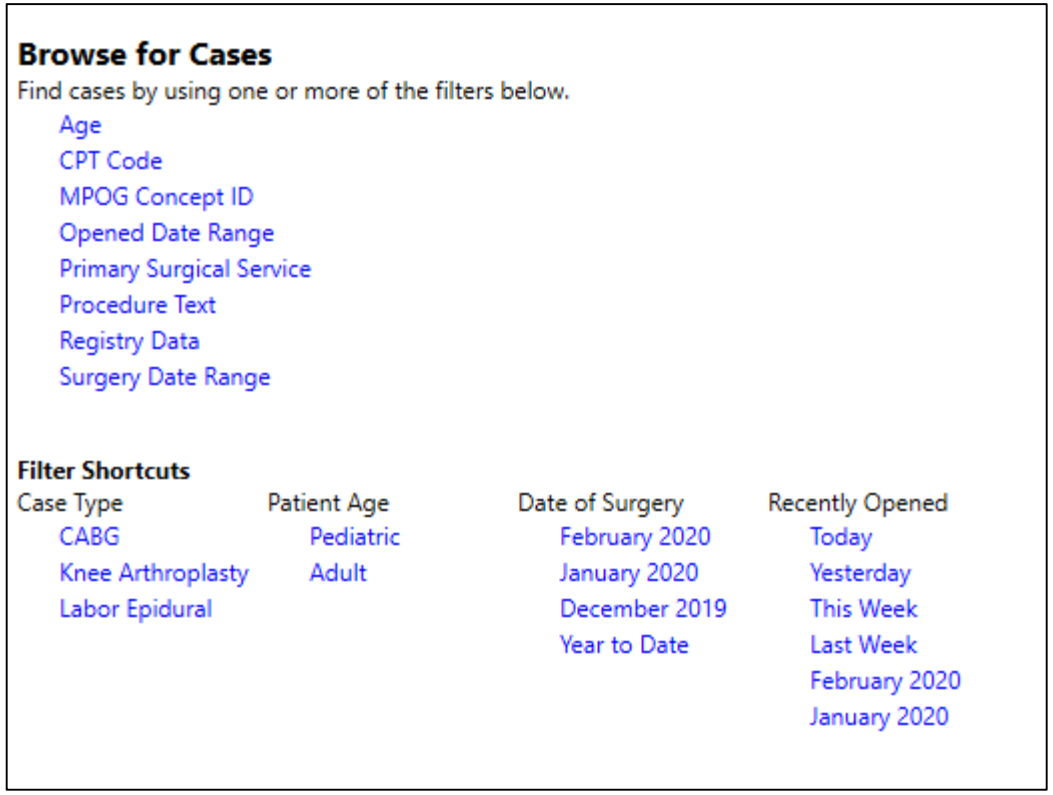
Enter a list of MPOG Case IDs in the box, one per line, and click “Import”. A case will open.



Using the Case List

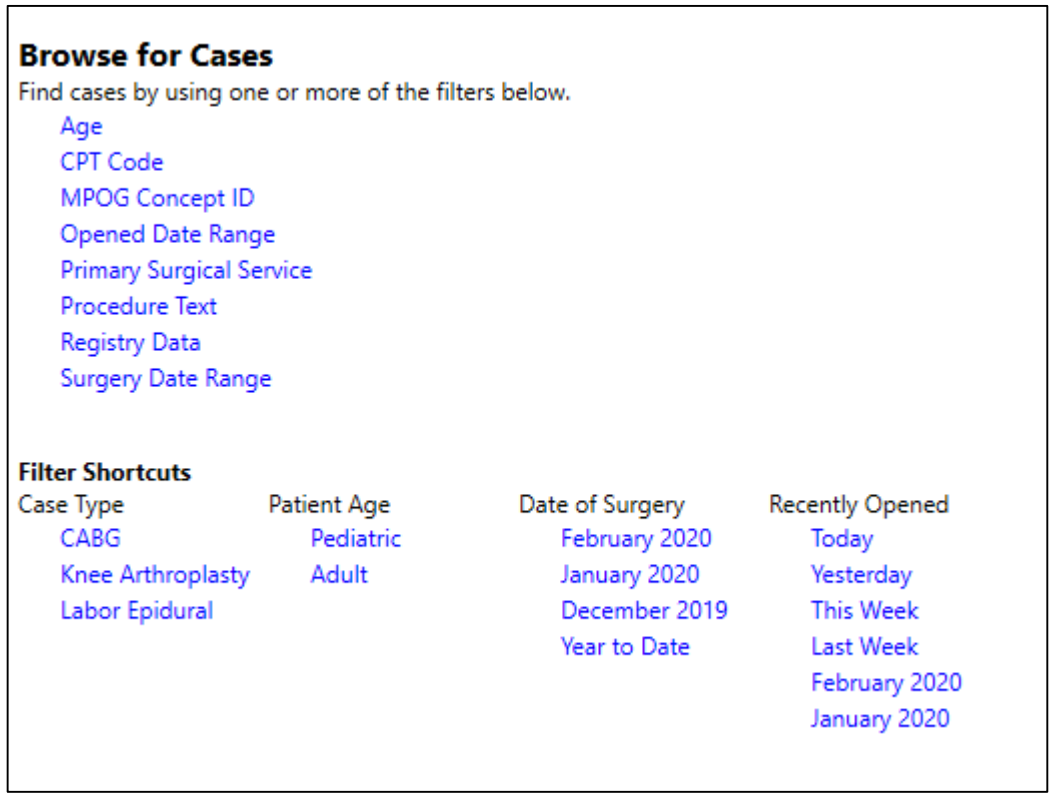
- Arrows appear along the bottom of the left hand column to scroll between cases. If a case number is known (ex: you want to go to case 50 of 100), use the text field to type the desired case number.
- When scrolling through cases using this feature, any ‘Sections’ opened in the case view (see ‘Sections’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

Search by Filter

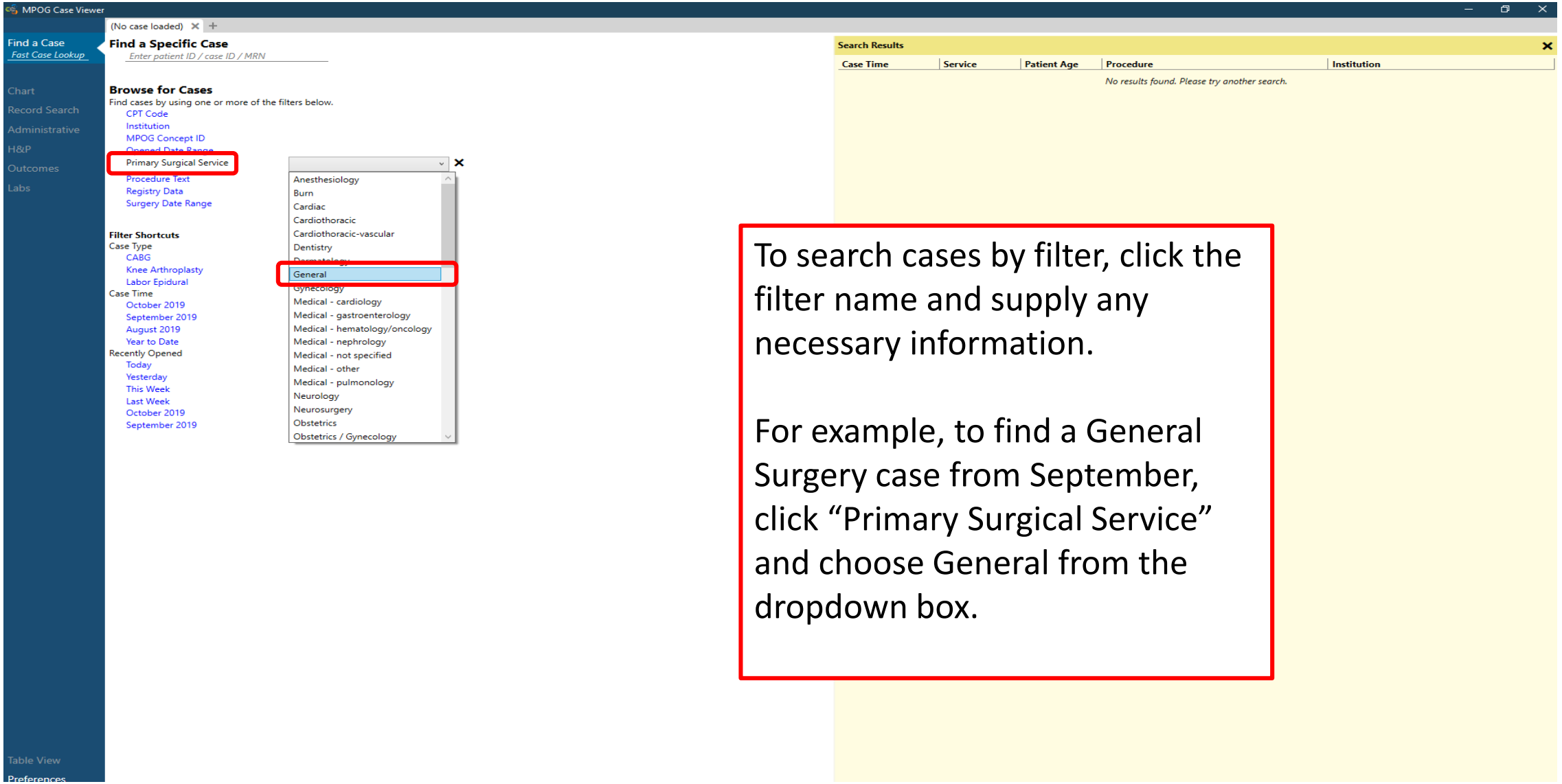


- **Age-** Search for cases by specific age ranges
- **CPT code-** Search for cases that include a specific CPT code.
- **MPOG Concept ID** – Lists all cases that have a specific MPOG concept documented.
  - Without other filters, searching by MPOG Concept ID may take awhile. Consider adding a date range 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

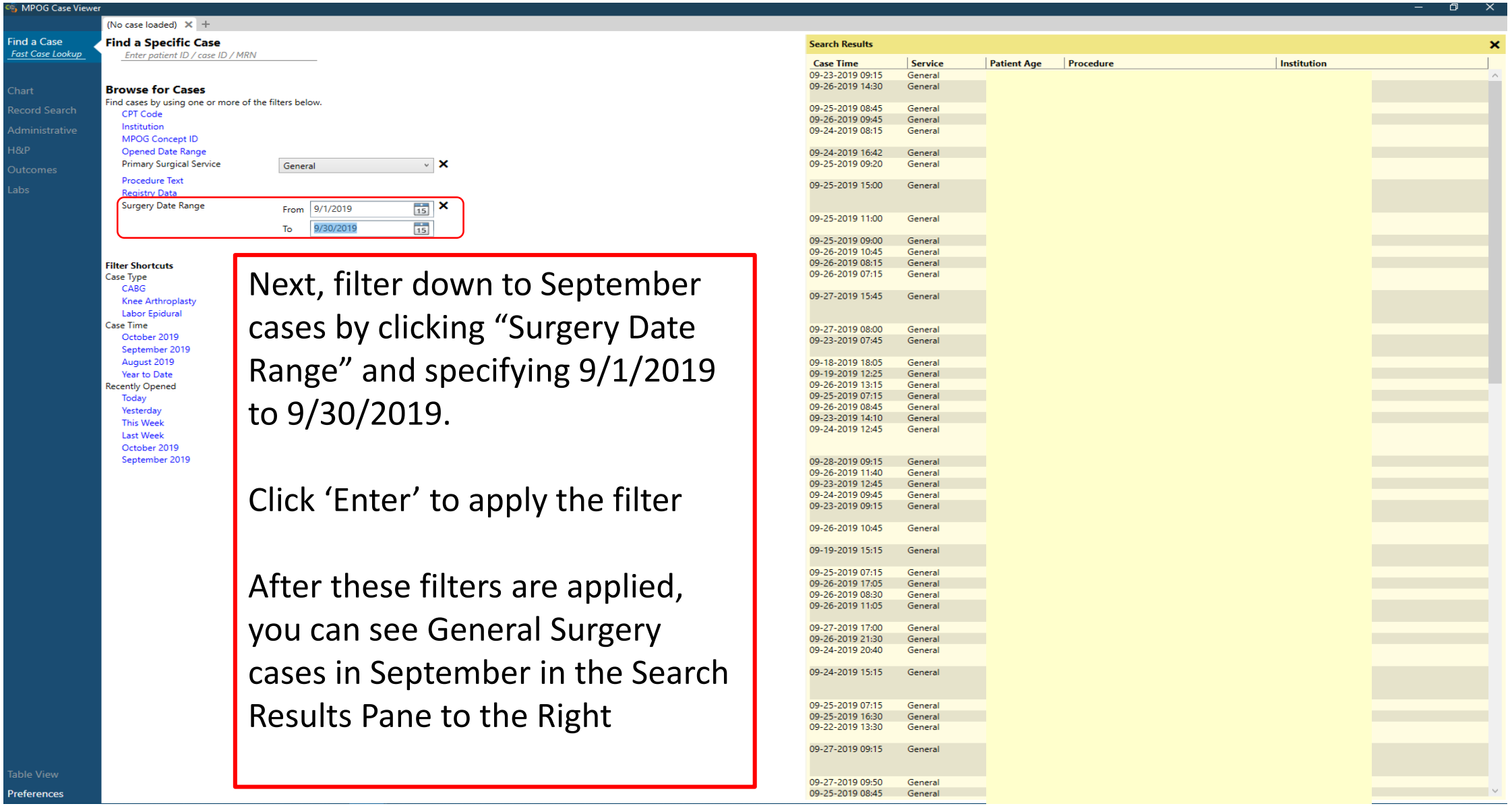


Multiple filters may be applied at a time to narrow down a case list. The “Search Results” pane will automatically update a list of cases as filters are added.



To search cases by filter, click the filter name and supply any necessary information.

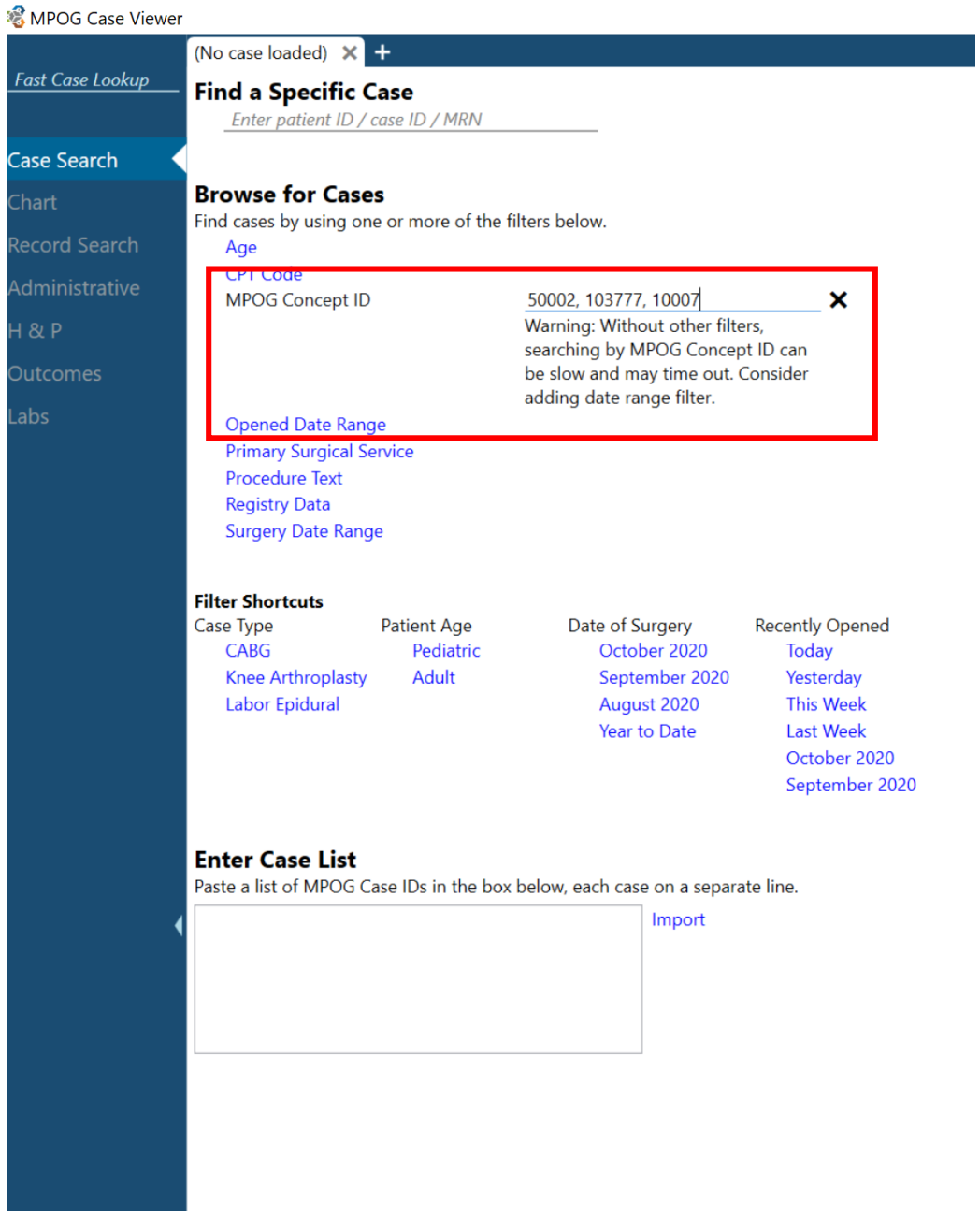
For example, to find a General Surgery case from September, click “Primary Surgical Service” and choose General from the dropdown box.



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



"MPOG Concept ID" filter allows for finding cases based on one or multiple concepts being present on the case

To search by multiple concept IDs, use a comma between IDs

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.

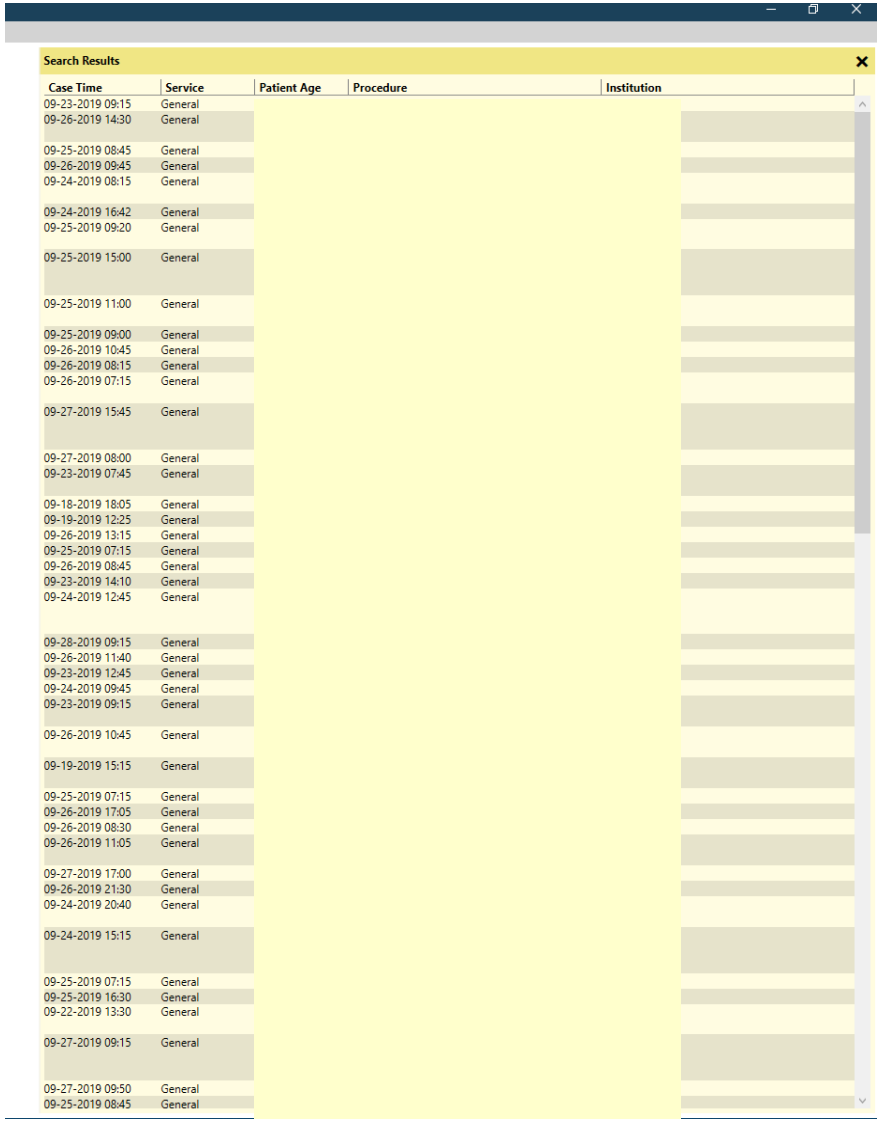
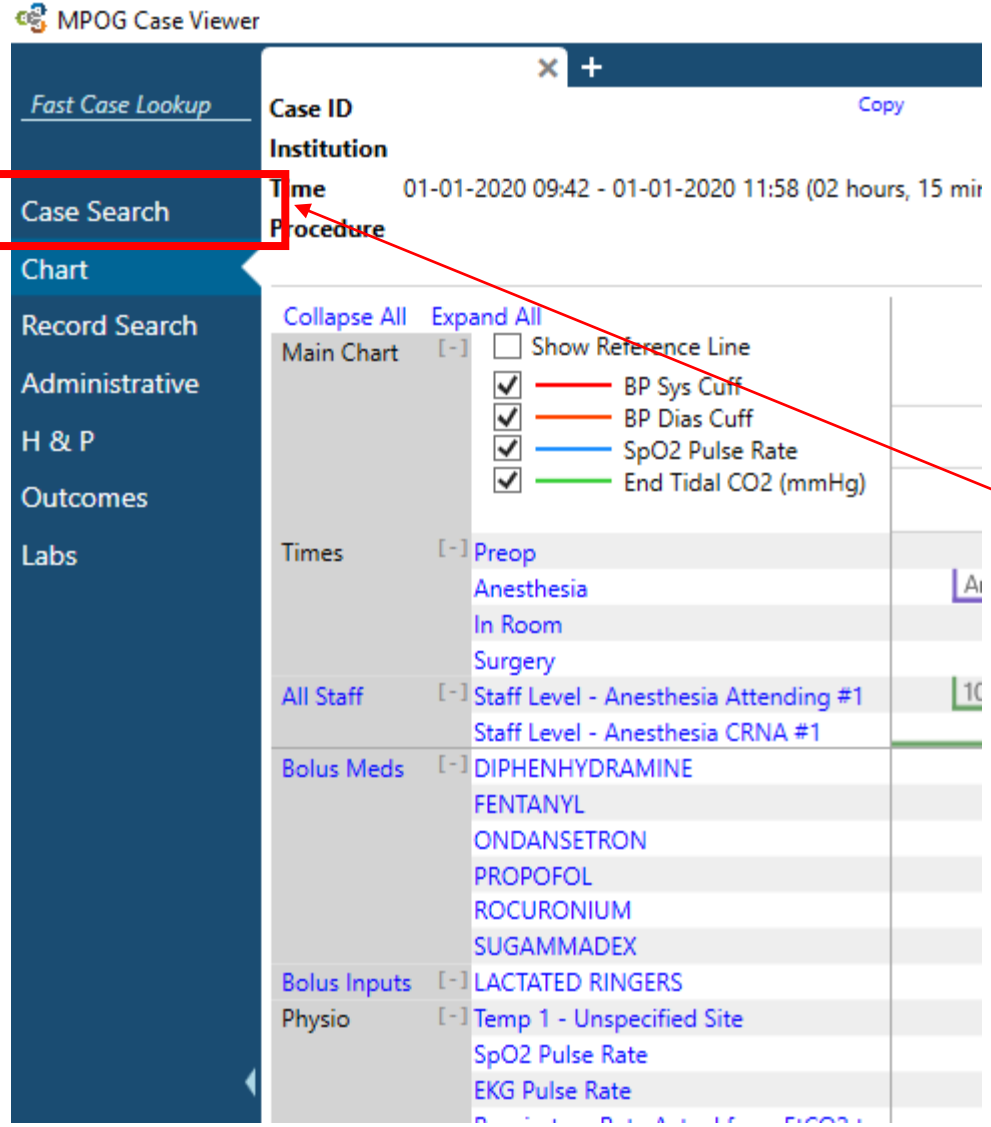
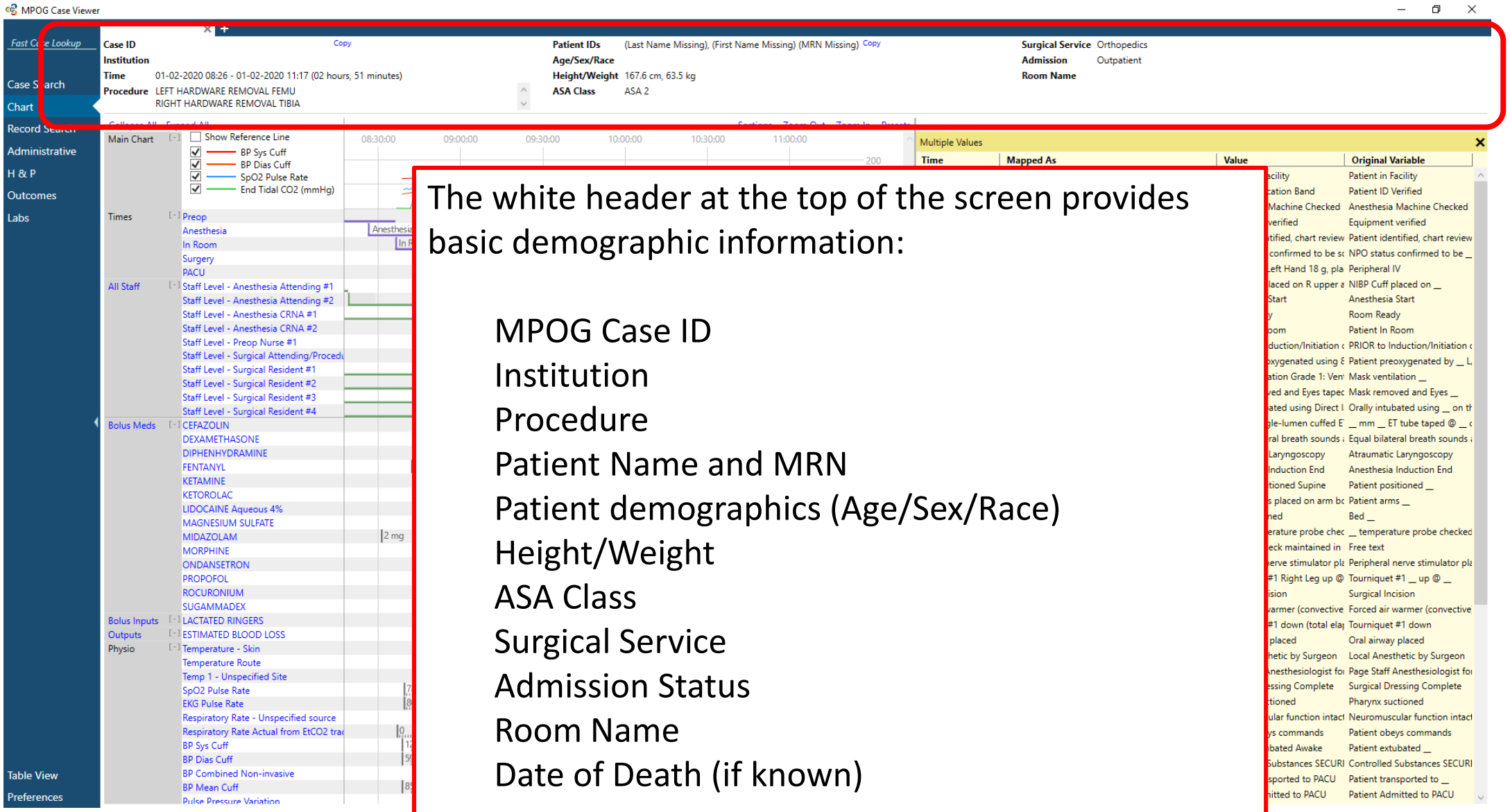


Chart View



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)

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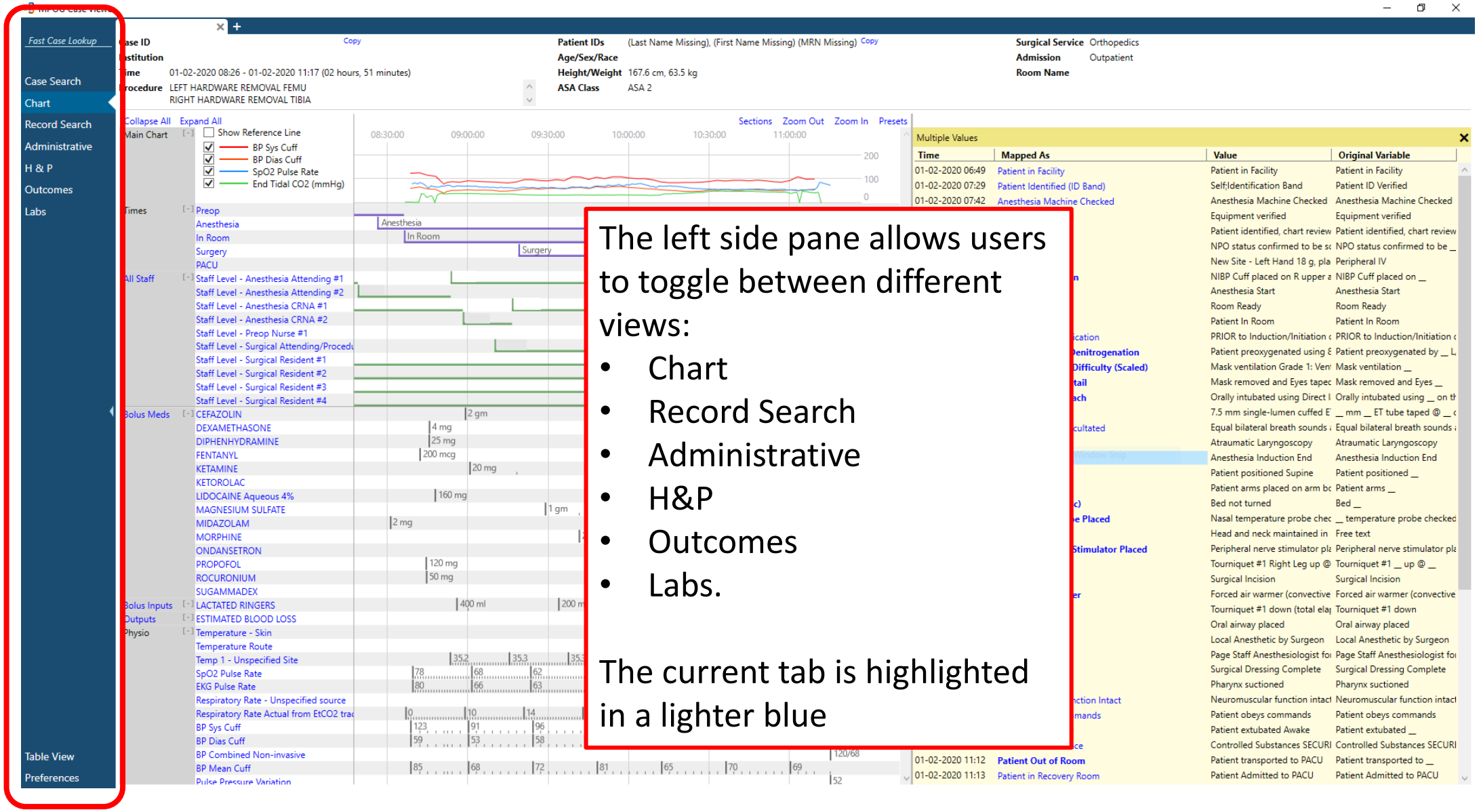
Chart View

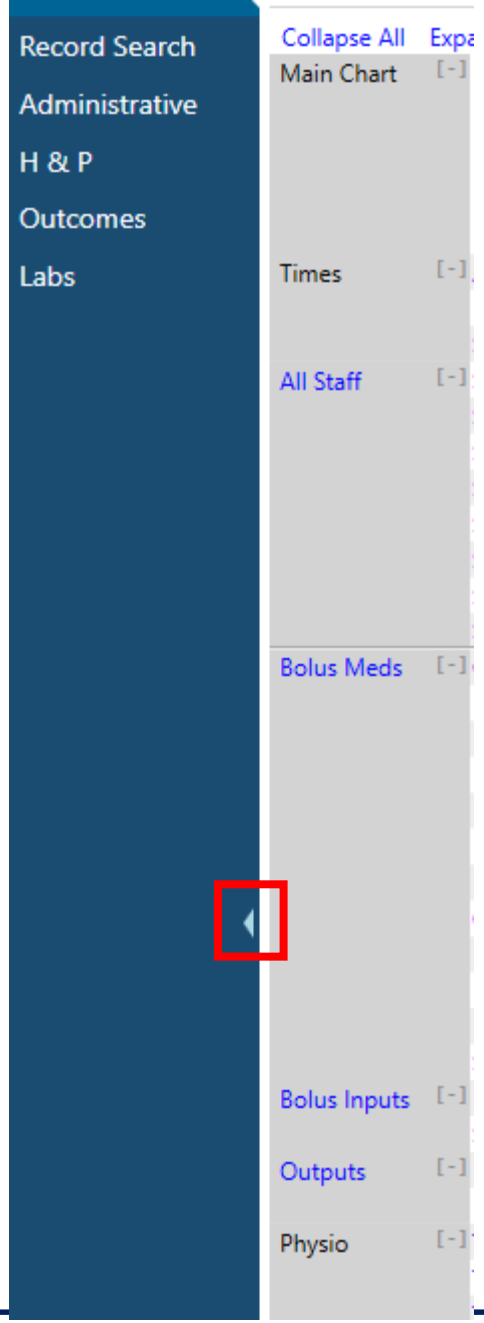
The MRN and MPOG Case ID can be copied using the ‘Copy’ button



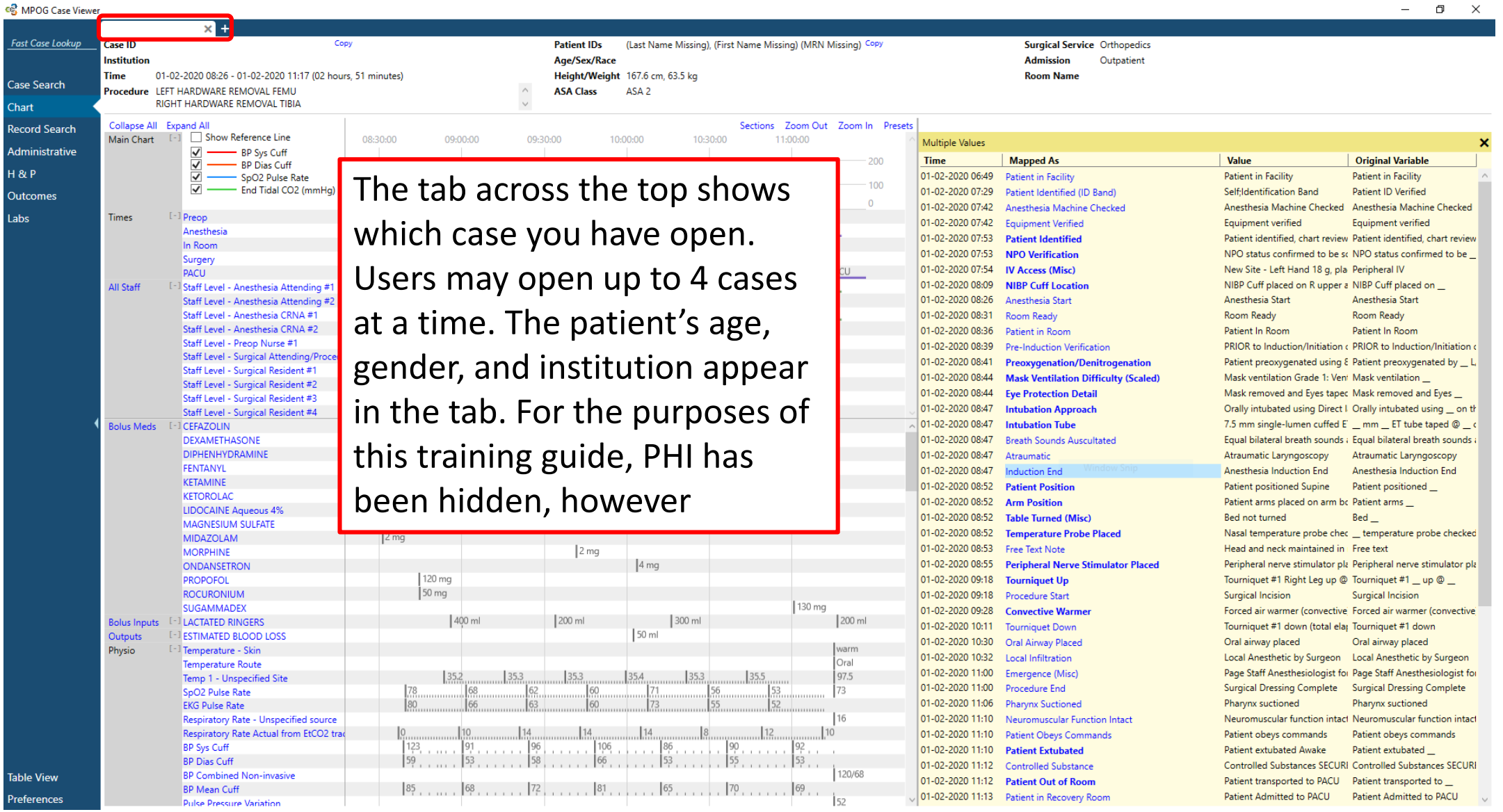
The left side pane allows users to toggle between different views:

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

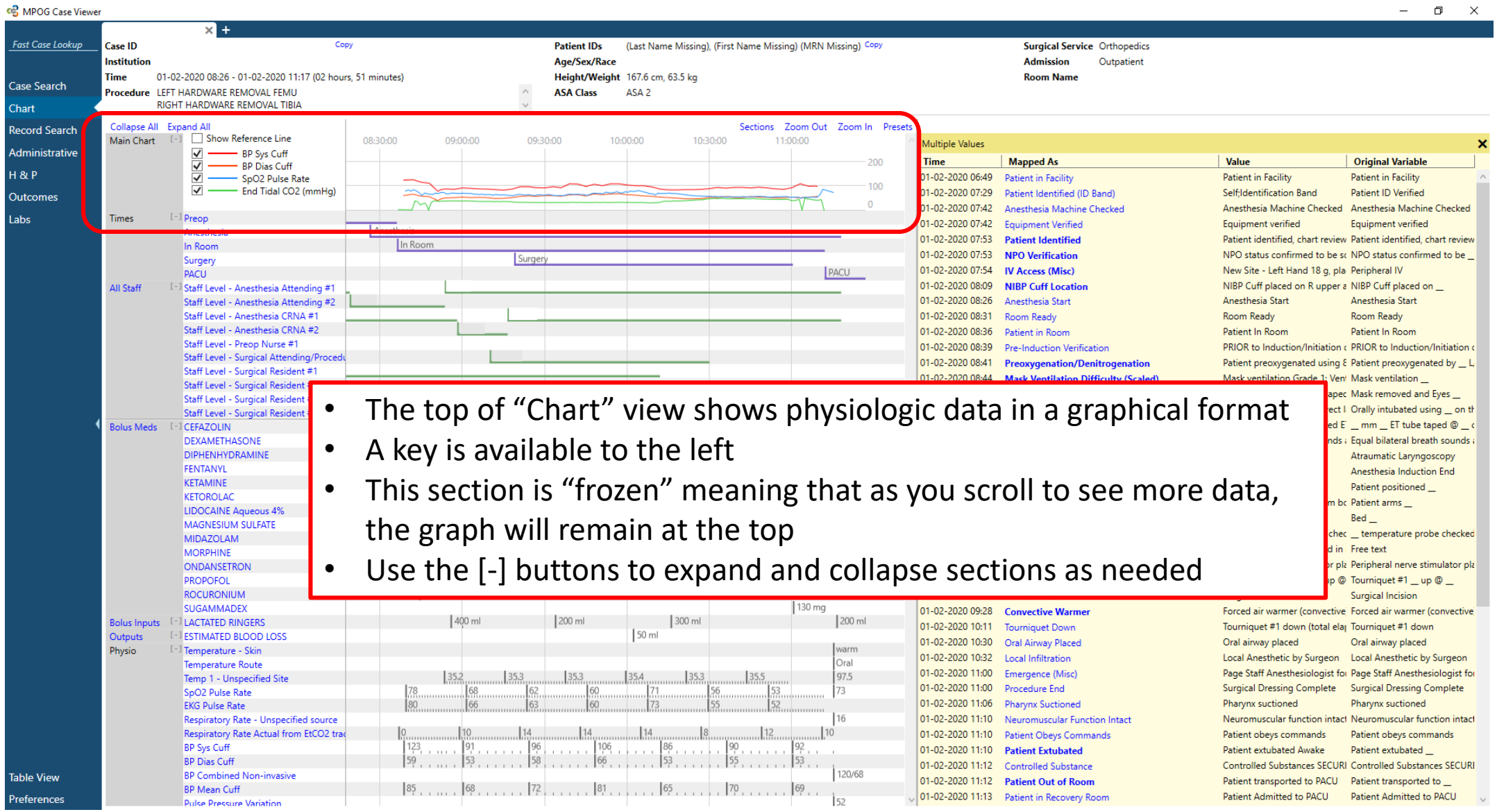
The current tab is highlighted in a lighter blue



- For viewing on smaller laptop screens, the blue panel can be collapsed to save space by using the small arrow

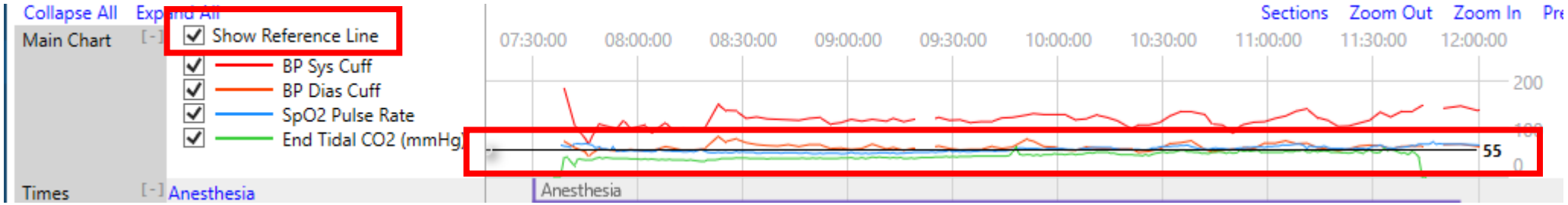


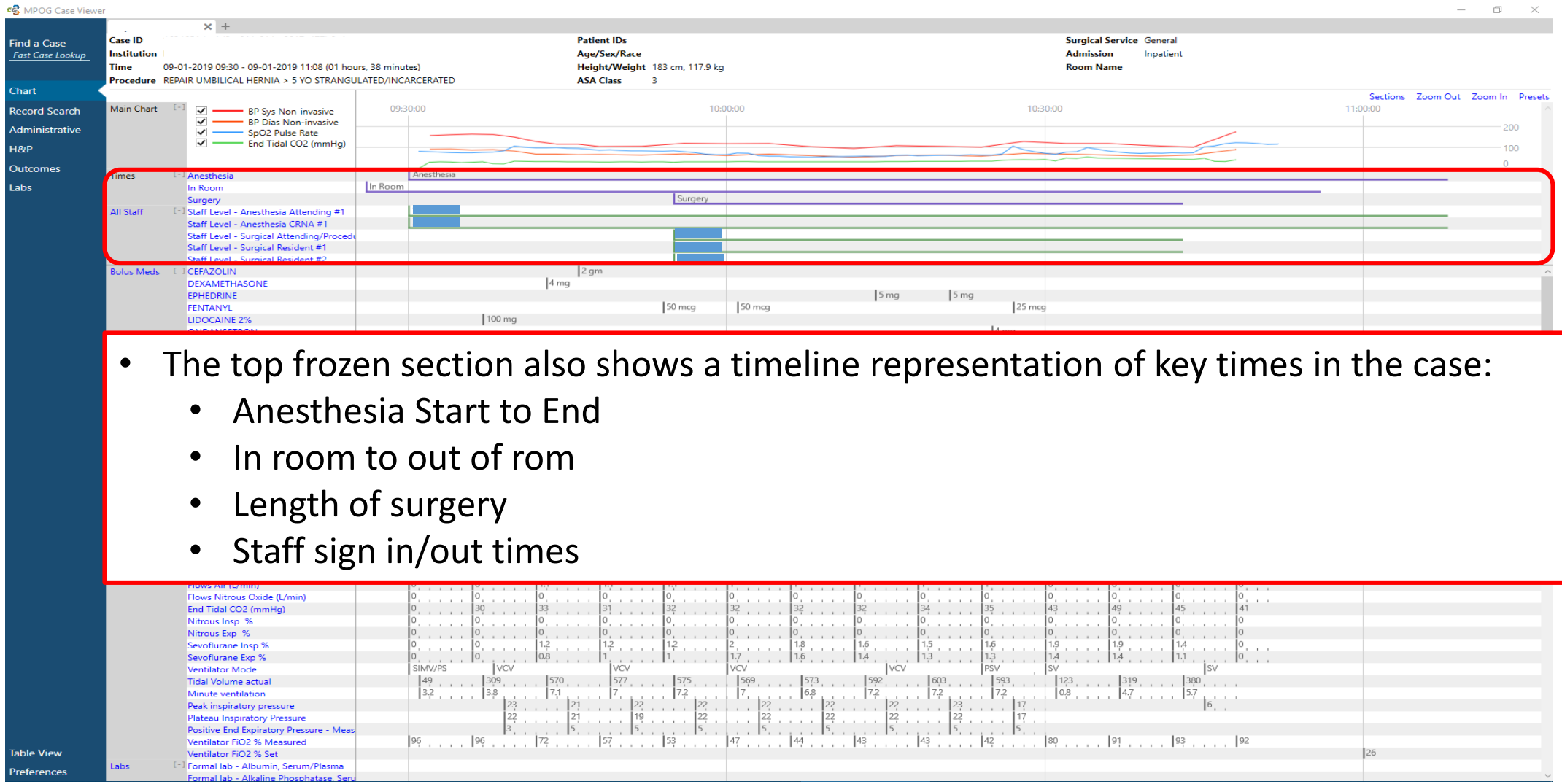
The tab across the top shows which case you have open. Users may open up to 4 cases at a time. The patient's age, gender, and institution appear in the tab. For the purposes of this training guide, PHI has been hidden, however



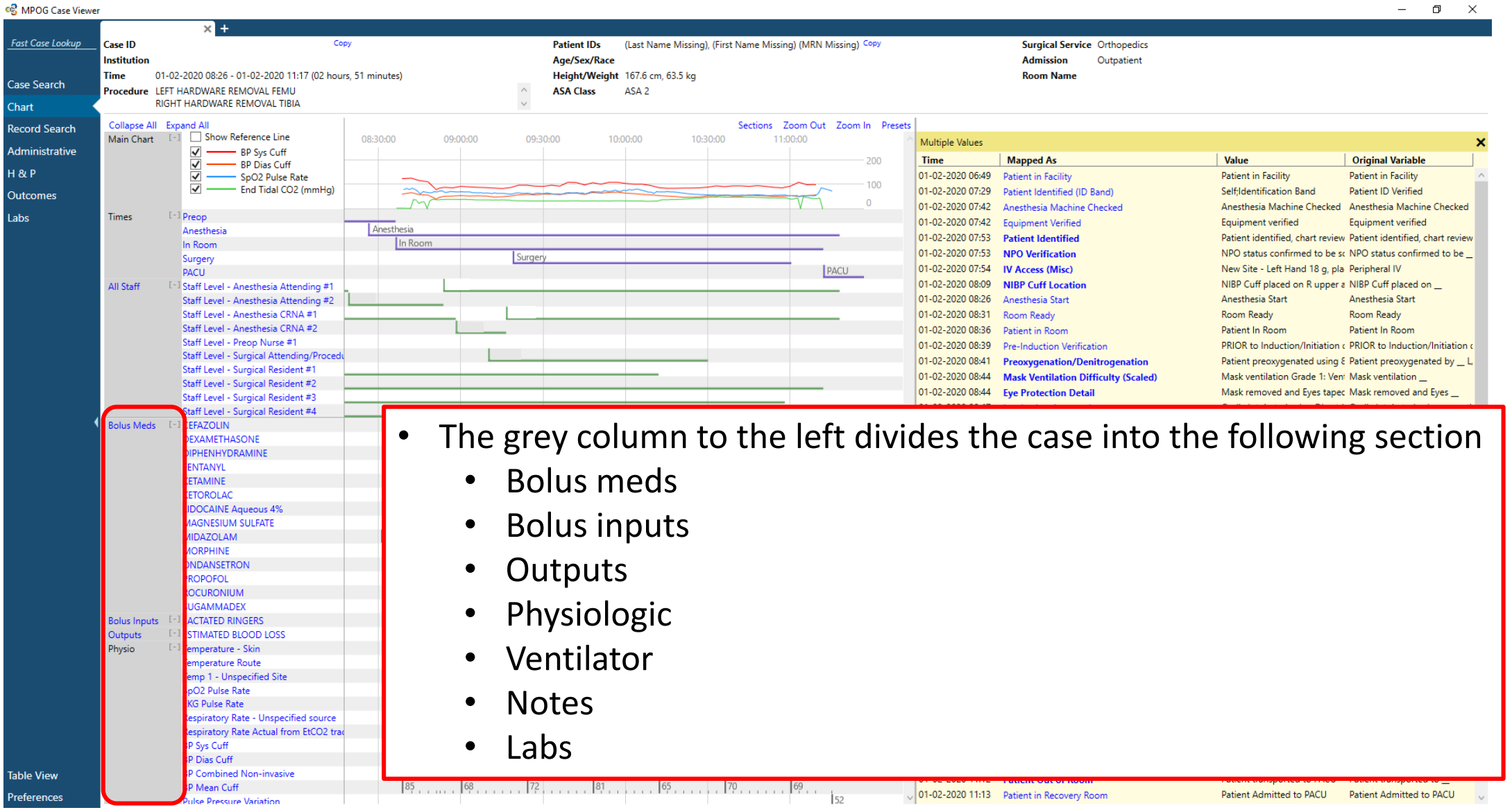
- The top of “Chart” view shows physiologic data in a graphical format
- A key is available to the left
- This section is “frozen” meaning that as you scroll to see more data, the graph will remain at the top
- Use the [-] buttons to expand and collapse sections as needed

- Choosing “Show Reference Line” adds an adjustable horizontal line across the grid
- This can be adjusted by clicking moving up or down

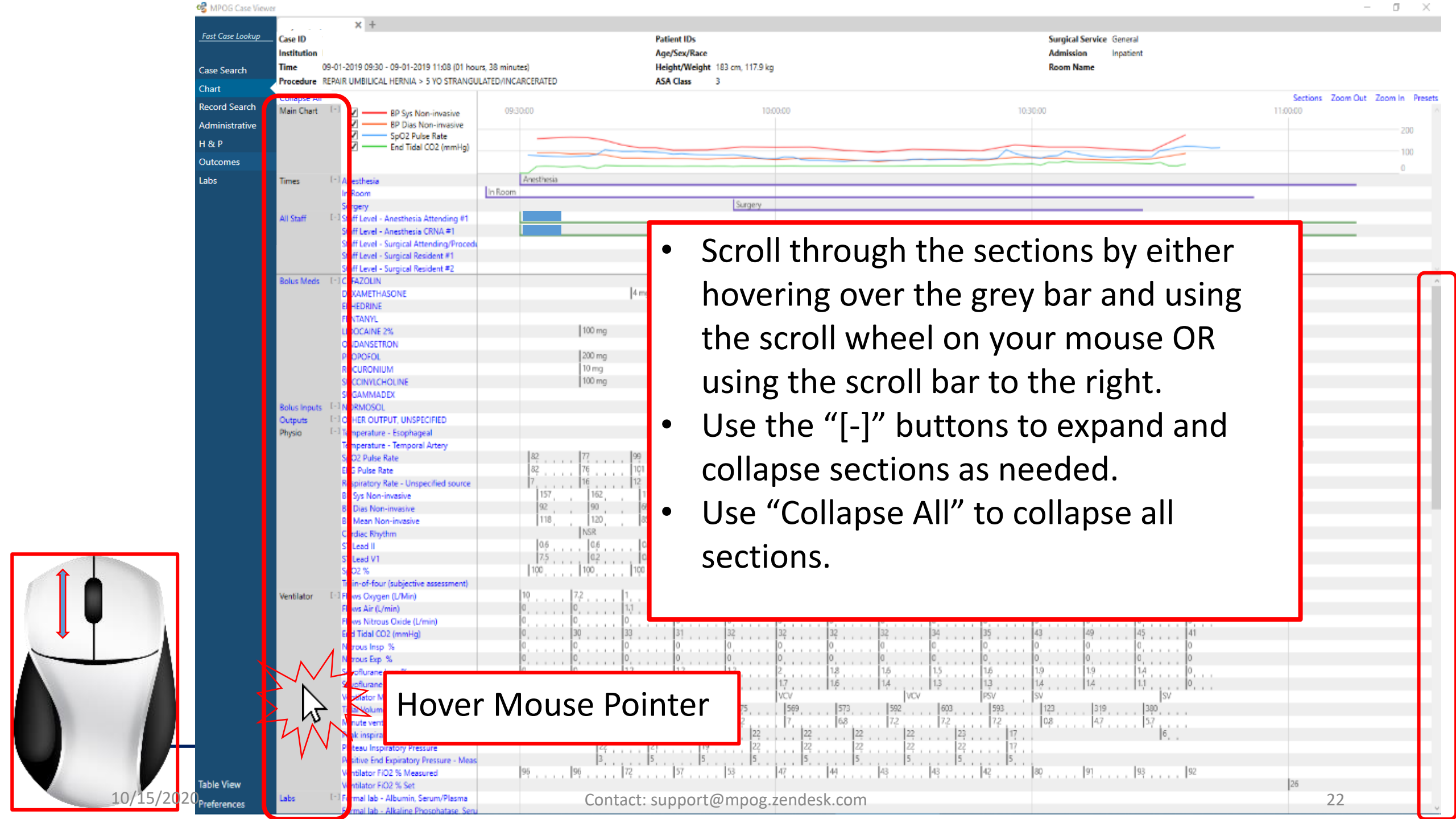




- The top frozen section also shows a timeline representation of key times in the case:
  - Anesthesia Start to End
  - In room to out of rom
  - Length of surgery
  - Staff sign in/out times

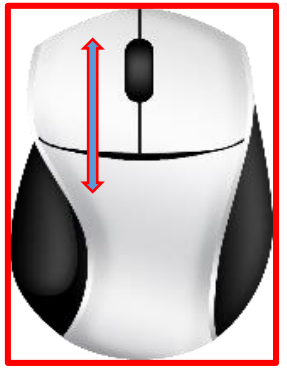


- The grey column to the left divides the case into the following section
  - Bolus meds
  - Bolus inputs
  - Outputs
  - Physiologic
  - Ventilator
  - Notes
  - Labs



- 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.

Use scroll wheel to zoom in and out



Hover Mouse Pointer

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

Click and drag mouse left or right

Click Mouse

Tick marks on the flowsheet let users know that more information is available if you scroll in.

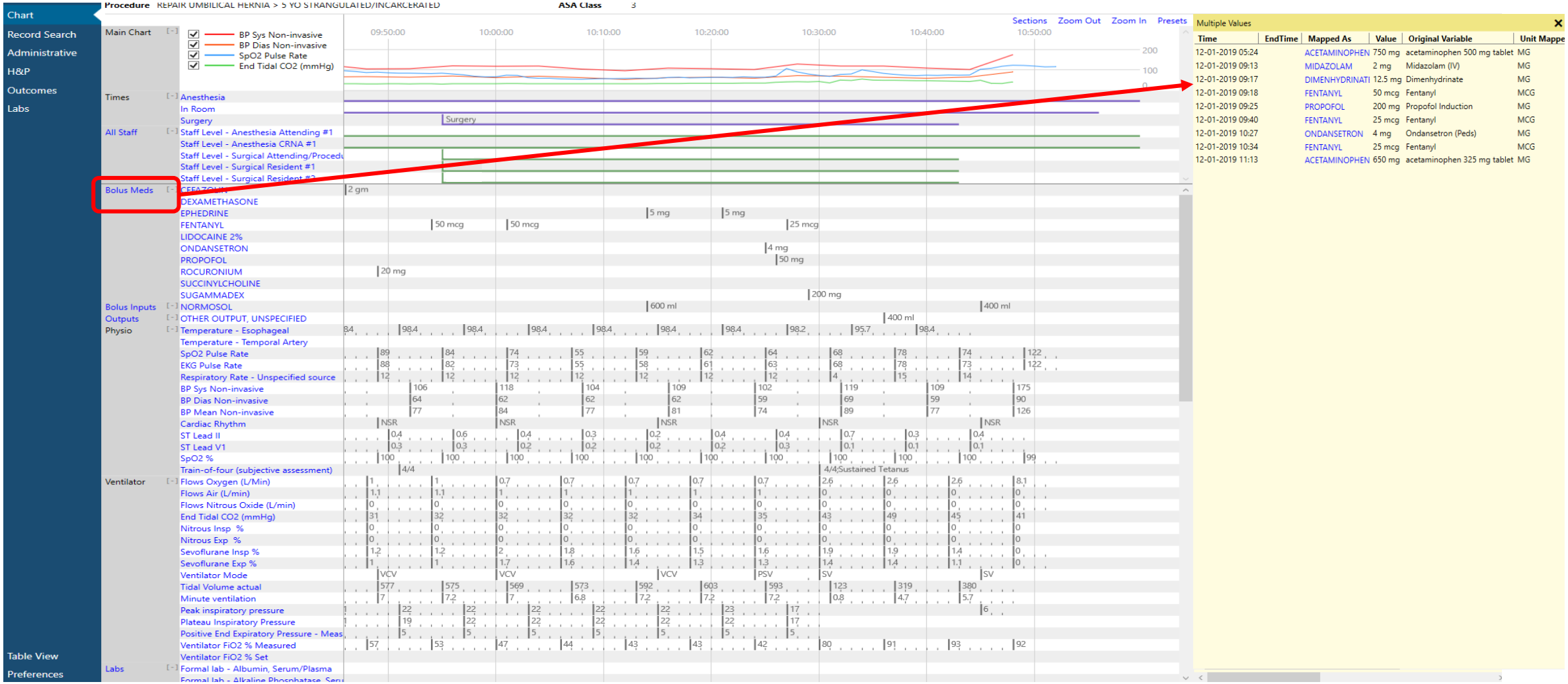
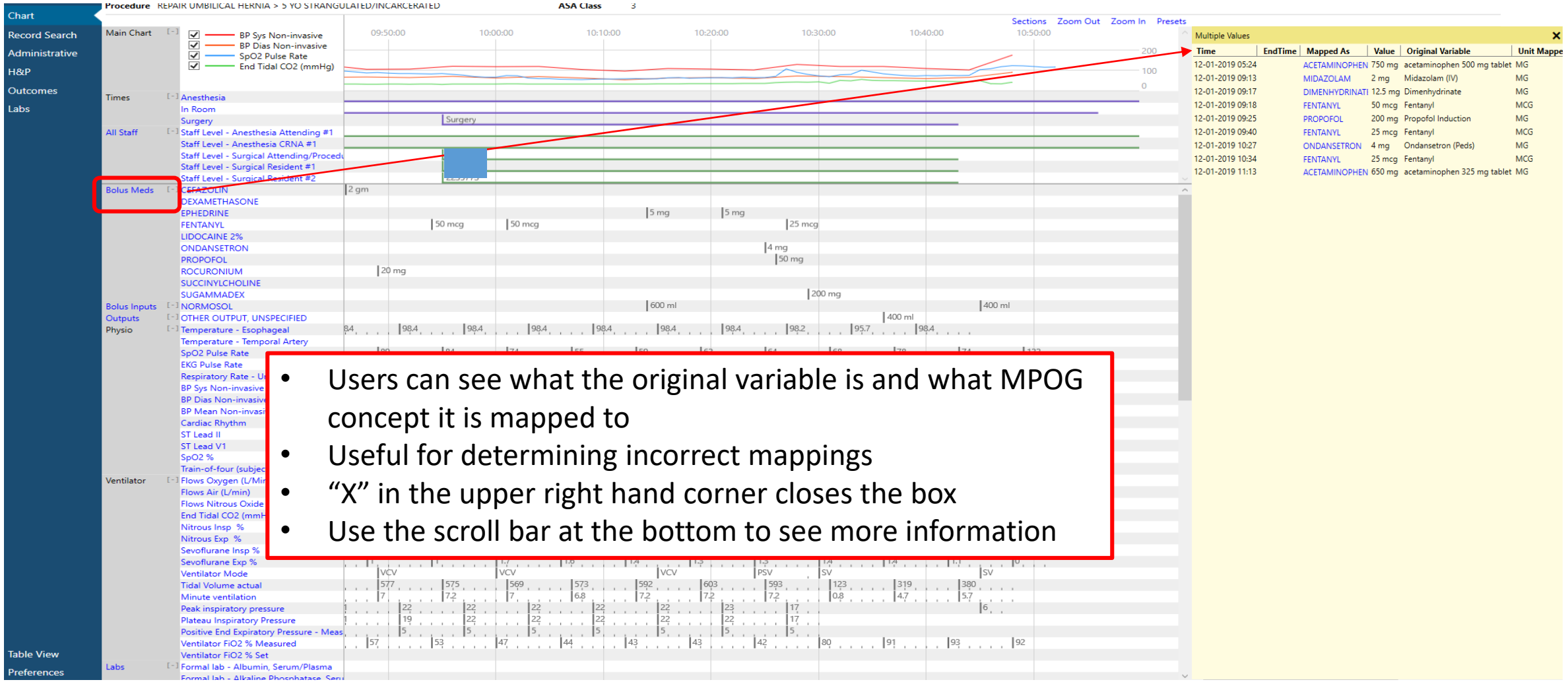
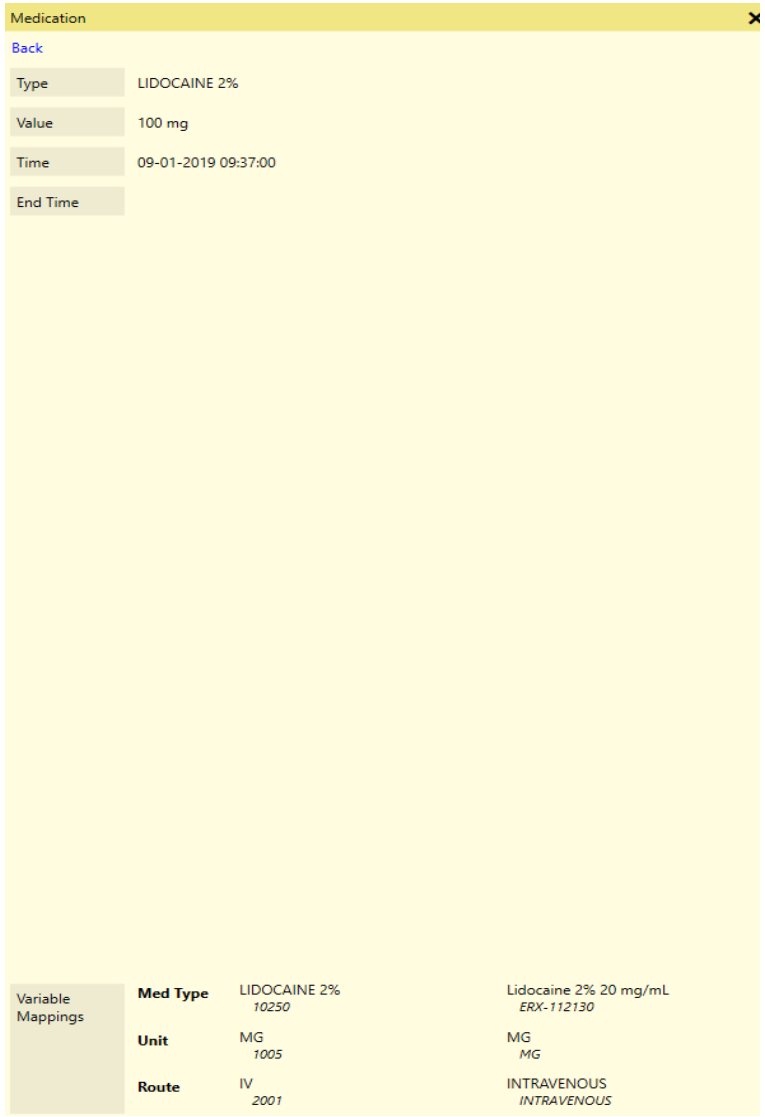


Chart
Record Search
Administrative
H&P
Outcomes
Labs
Table View
Preferences
Procedure REPAIR UMBILICAL HERNIA > 5 YO STRANGULATED/INCARCERATED
ASA Class 3
Sections Zoom Out Zoom In Presets
Main Chart
BP Sys Non-invasive
BP Dias Non-invasive
SpO2 Pulse Rate
End Tidal CO2 (mmHg)
Times
Anesthesia
In Room
Surgery
All Staff
Staff Level - Anesthesia Attending #1
Staff Level - Anesthesia CRNA #1
Staff Level - Surgical Attending/Proced
Staff Level - Surgical Resident #1
Staff Level - Surgical Resident #2
Bolus Meds
CEFAZOLIN
DEXAMETHASONE
EPHEDRINE
FENTANYL
LIDOCAINE 2%
ONDANSETRON
PROPOFOL
ROCURONIUM
SUCCINYLCHOLINE
SUGAMMADEX
Bolus Inputs
NORMOSOL
Outputs
OTHER OUTPUT, UNSPECIFIED
Physio
Temperature - Esophageal
Temperature - Temporal Artery
SpO2 Pulse Rate
EKG Pulse Rate
Respiratory Rate - Unspecified source
BP Sys Non-invasive
BP Dias Non-invasive
BP Mean Non-invasive
Cardiac Rhythm
ST Lead II
ST Lead V1
SpO2 %
Train-of-four (subjective assessment)
Ventilator
Flows Oxygen (L/Min)
Flows Air (L/min)
Flows Nitrous Oxide (L/min)
End Tidal CO2 (mmHg)
Nitrous Insp %
Nitrous Exp %
Sevoflurane Insp %
Sevoflurane Exp %
Ventilator Mode
Tidal Volume actual
Minute ventilation
Peak inspiratory pressure
Plateau Inspiratory Pressure
Positive End Expiratory Pressure - Meas
Ventilator FiO2 % Measured
Ventilator FiO2 % Set
Labs
Formal lab - Albumin, Serum/Plasma
Surgery
2 gm
5 mg
50 mcg
25 mcg
4 mg
20 mg
200 mg
600 ml
400 ml
4/4;Sustained Tetanus
VCV
PSV
SV
Multiple Values
Time | EndTime | Mapped As | Value | Original Variable | Unit Mappe
12-01-2019 05:24 | ACETAMINOPHEN | 750 mg | acetaminophen 500 mg tablet | MG
12-01-2019 09:13 | MIDAZOLAM | 2 mg | Midazolam (IV) | MG
12-01-2019 09:17 | DIMENHYDRINATI | 12.5 mg | Dimenhydrinate | MG
12-01-2019 09:18 | FENTANYL | 50 mcg | Fentanyl | MCG
12-01-2019 09:25 | PROPOFOL | 200 mg | Propofol Induction | MG
12-01-2019 09:40 | FENTANYL | 25 mcg | Fentanyl | MCG
12-01-2019 10:27 | ONDANSETRON | 4 mg | Ondansetron (Peds) | MG
12-01-2019 10:34 | FENTANYL | 25 mcg | Fentanyl | MCG
12-01-2019 11:13 | ACETAMINOPHEN | 650 mg | acetaminophen 325 mg tablet | MG



- 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

Click header

Multiple Values

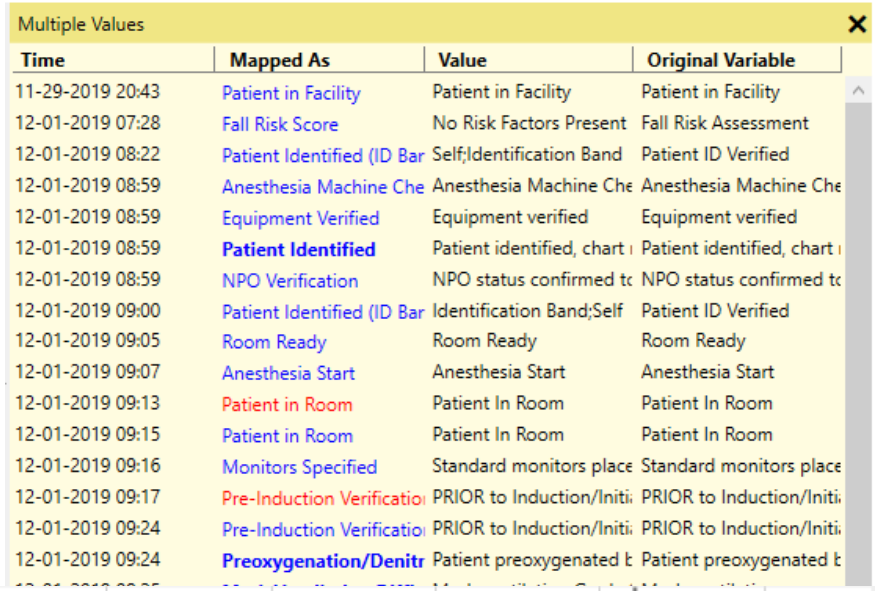
Time	Mapped As	Value	Original Variable
12-01-2019 06:10	BP Sys Non-invasive	114	2100310150
12-01-2019 08:08	BP Sys Non-invasive	109	7
12-01-2019 08:12	BP Sys Non-invasive	109	7
12-01-2019 08:15	BP Sys Non-invasive	118	7
12-01-2019 08:18	BP Sys Non-invasive	84	7
12-01-2019 08:21	BP Sys Non-invasive	88	7
12-01-2019 08:24	BP Sys Non-invasive	93	7
12-01-2019 08:27	BP Sys Non-invasive	93	7
12-01-2019 08:30	BP Sys Non-invasive	105	7
12-01-2019 08:33	BP Sys Non-invasive	107	7
12-01-2019 08:36	BP Sys Non-invasive	97	7
12-01-2019 08:39	BP Sys Non-invasive	106	7

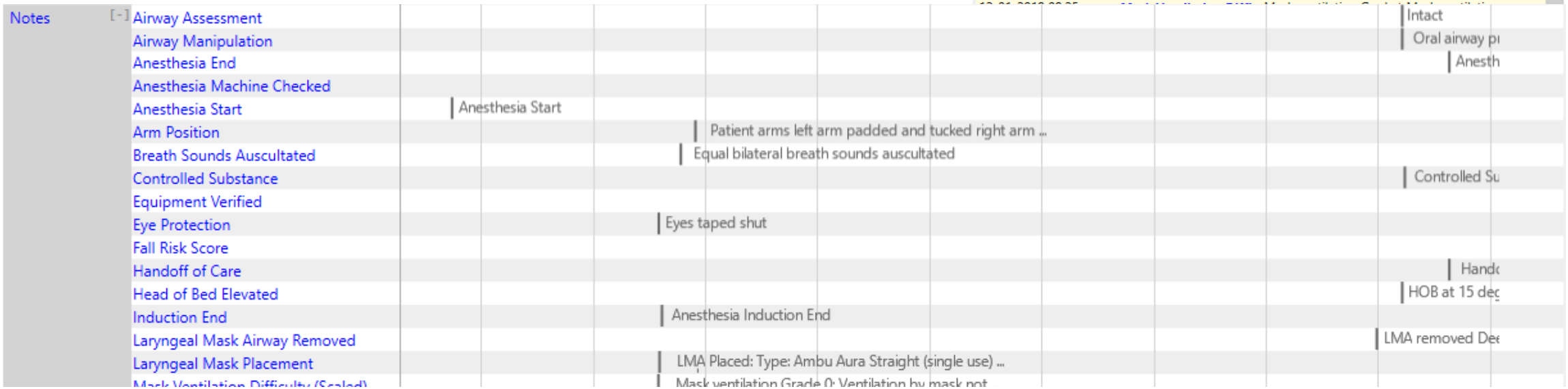
Multiple Values

Time	Mapped As	Value	Original Variable
12-01-2019 08:18	BP Sys Non-invasive	84	7
12-01-2019 08:21	BP Sys Non-invasive	88	7
12-01-2019 08:24	BP Sys Non-invasive	93	7
12-01-2019 08:27	BP Sys Non-invasive	93	7
12-01-2019 08:36	BP Sys Non-invasive	97	7
12-01-2019 08:30	BP Sys Non-invasive	105	7
12-01-2019 08:39	BP Sys Non-invasive	106	7
12-01-2019 08:33	BP Sys Non-invasive	107	7
12-01-2019 08:08	BP Sys Non-invasive	109	7
12-01-2019 08:12	BP Sys Non-invasive	109	7
12-01-2019 06:10	BP Sys Non-invasive	114	2100310150
12-01-2019 08:48	BP Sys Non-invasive	115	7
12-01-2019 09:00	BP Sys Non-invasive	115	7

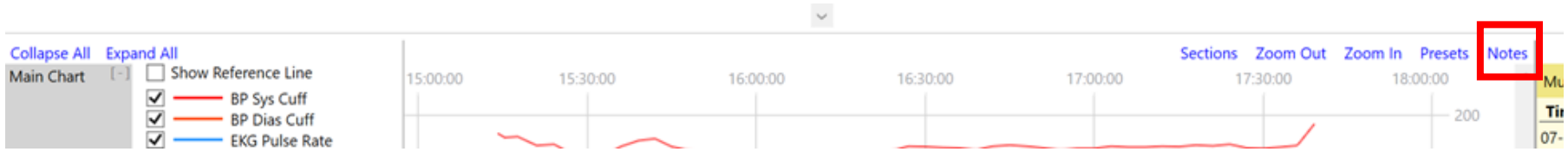
Values sorted in order

- 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



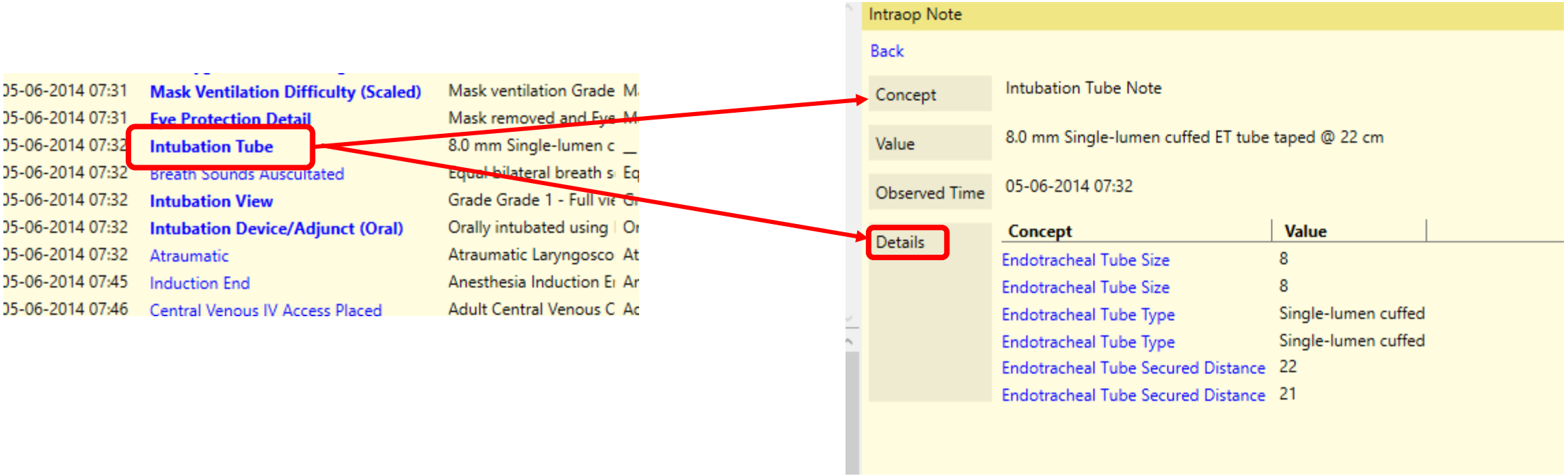


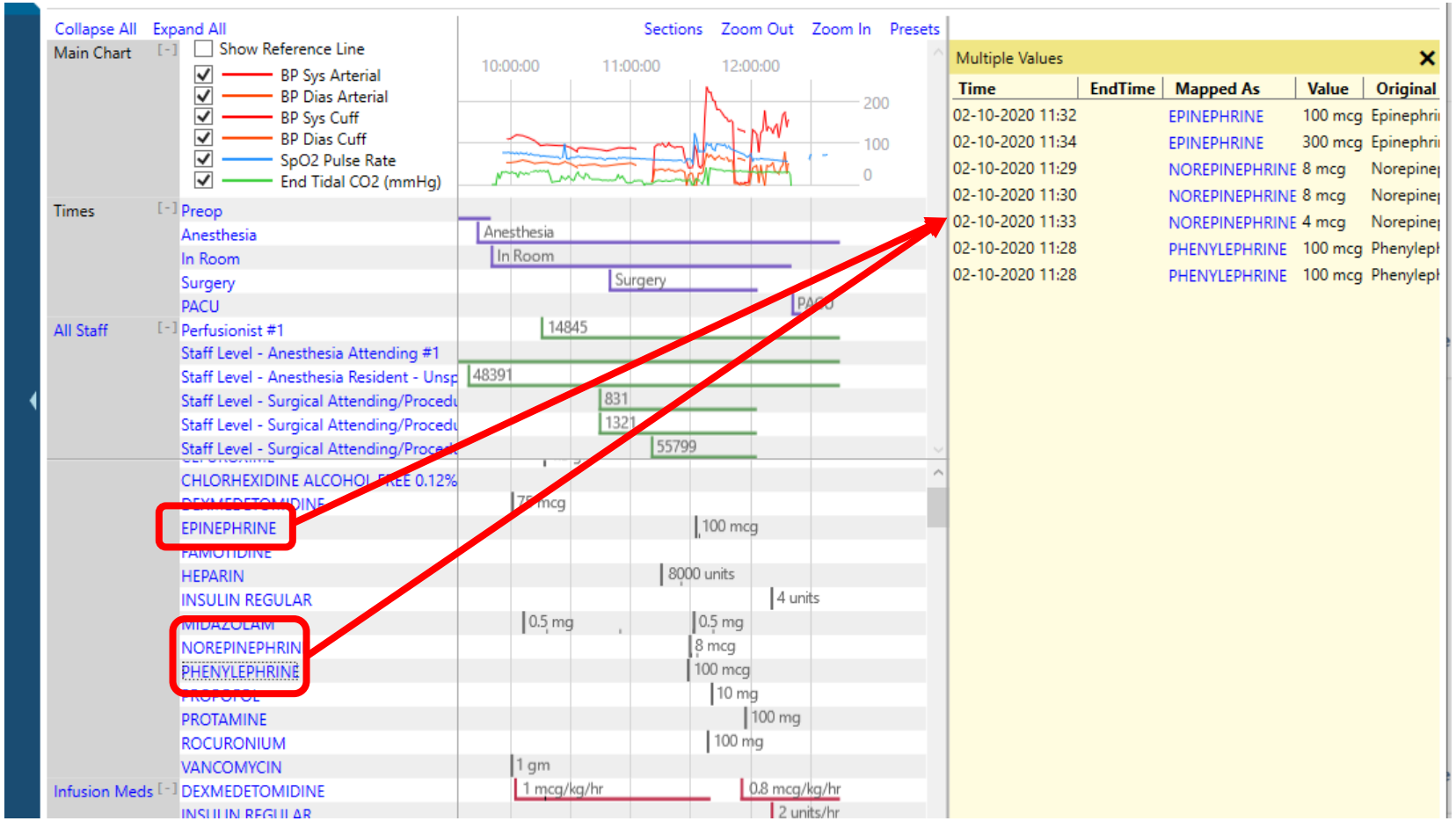
- The notes pane can be quickly re-opened via the “notes” shortcut in the upper right hand corner



- 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

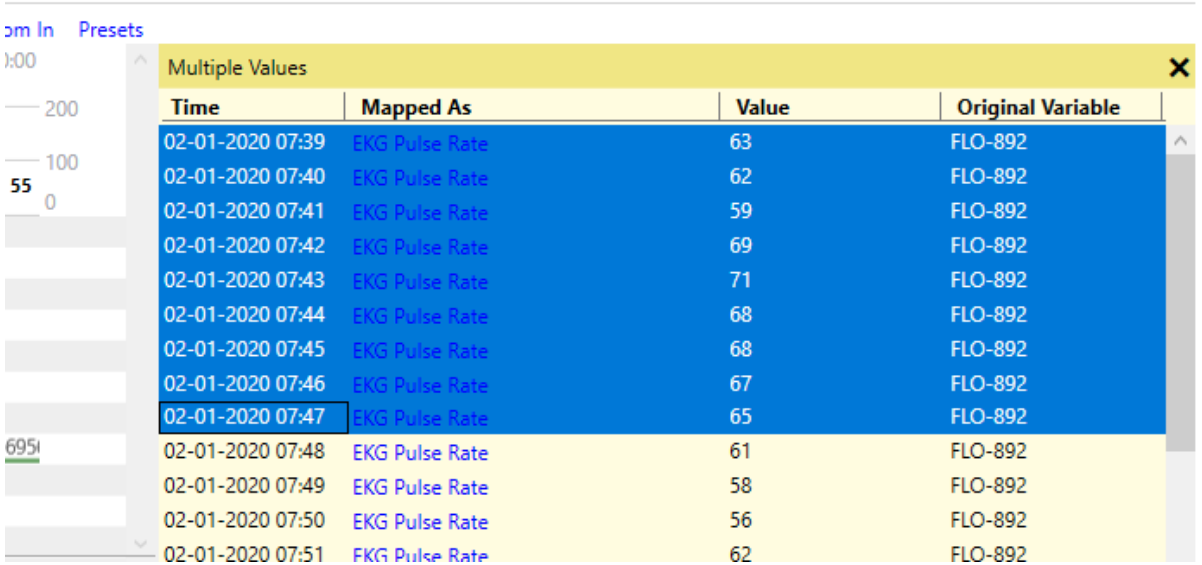
- Bolded “parent” notes have associated “child” detail notes. Clicking on a bolded note will give the additional details as well

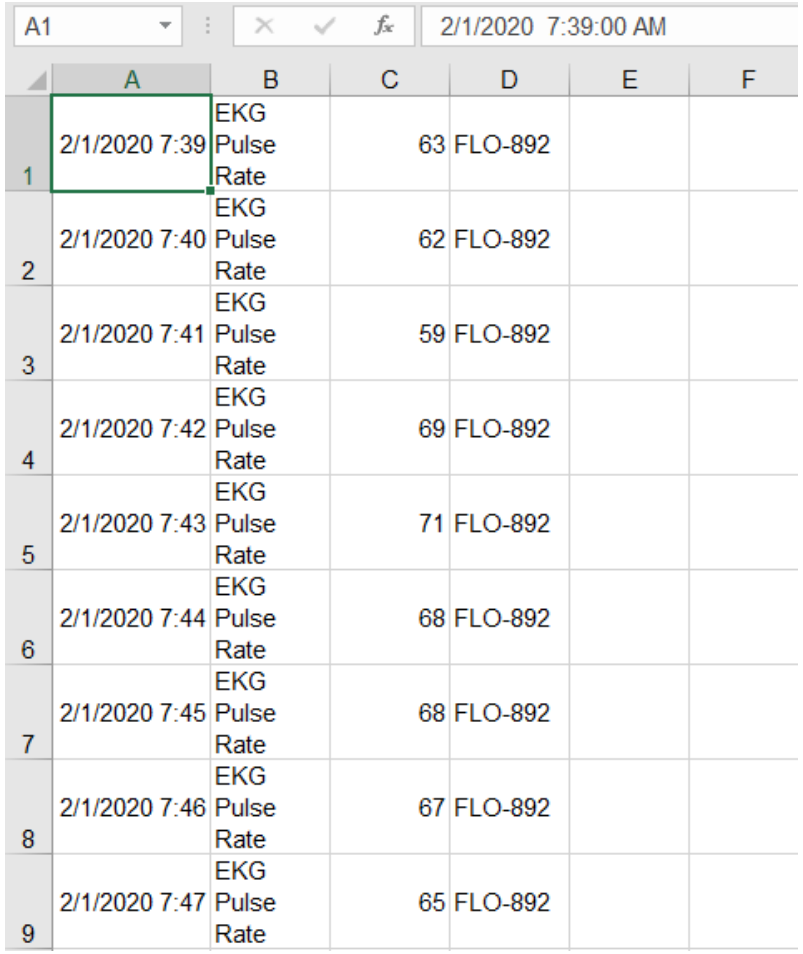




- Holding down ‘Shift’ and selecting multiple headers will open those headers together in the notes pane

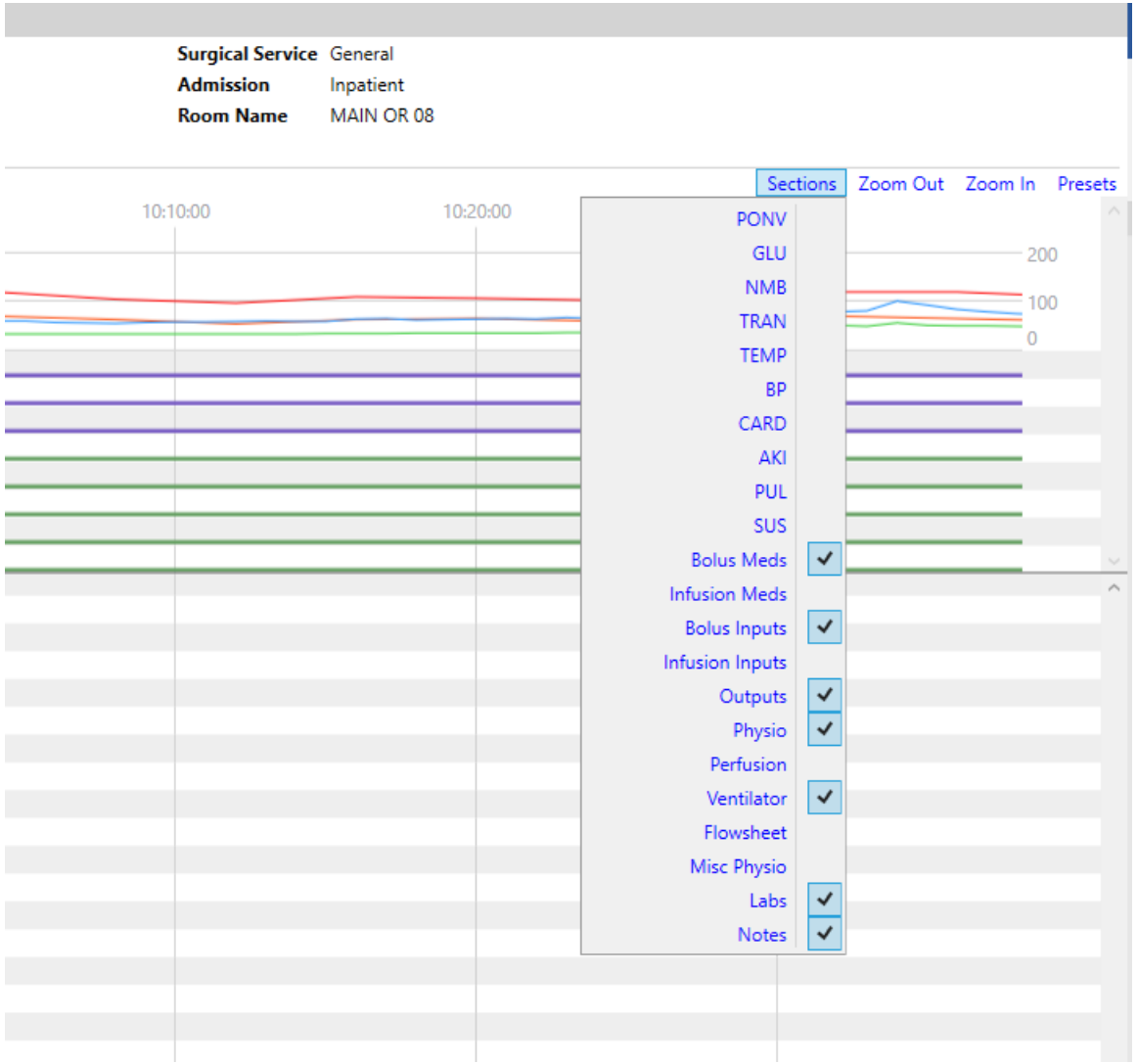
- Data can be copied out of the yellow pane and pasted into Excel for purposes of chart review
- Highlight desired rows
- Use Ctrl + C to copy
- Use Ctrl + V to paste in Excel



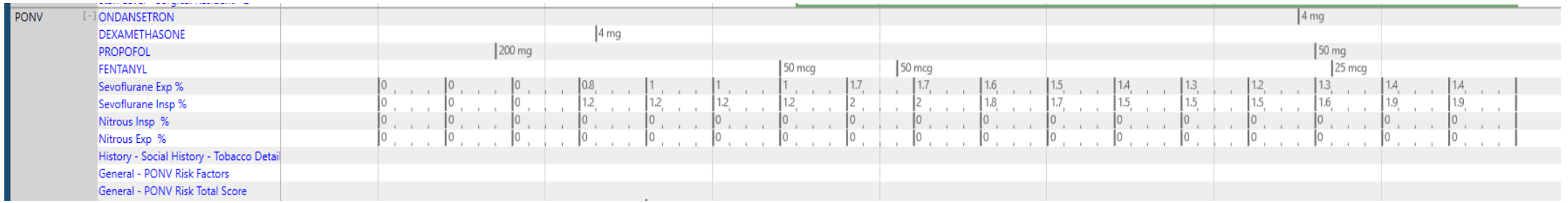


Sections Menu

- Upper right hand corner
- Use to add and remove sections from the body of the chart as needed
- MPOG Measure related sections pull in a summary section of all relevant variables to complete chart review on those measures.



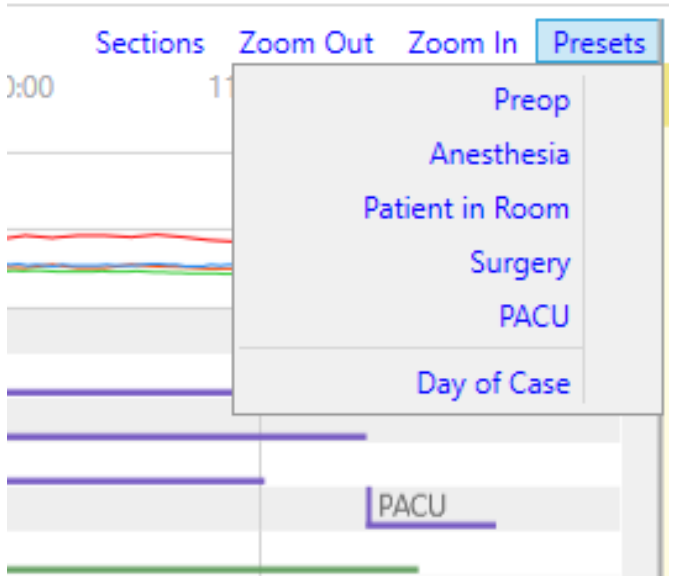
For example, the PONV section summarizes PONV relevant information such as anti-emetics given, anesthetic gases used, and PONV and smoking history and risk factors. While this information is available elsewhere in the chart, this view quickly summarizes and puts the information into one place.

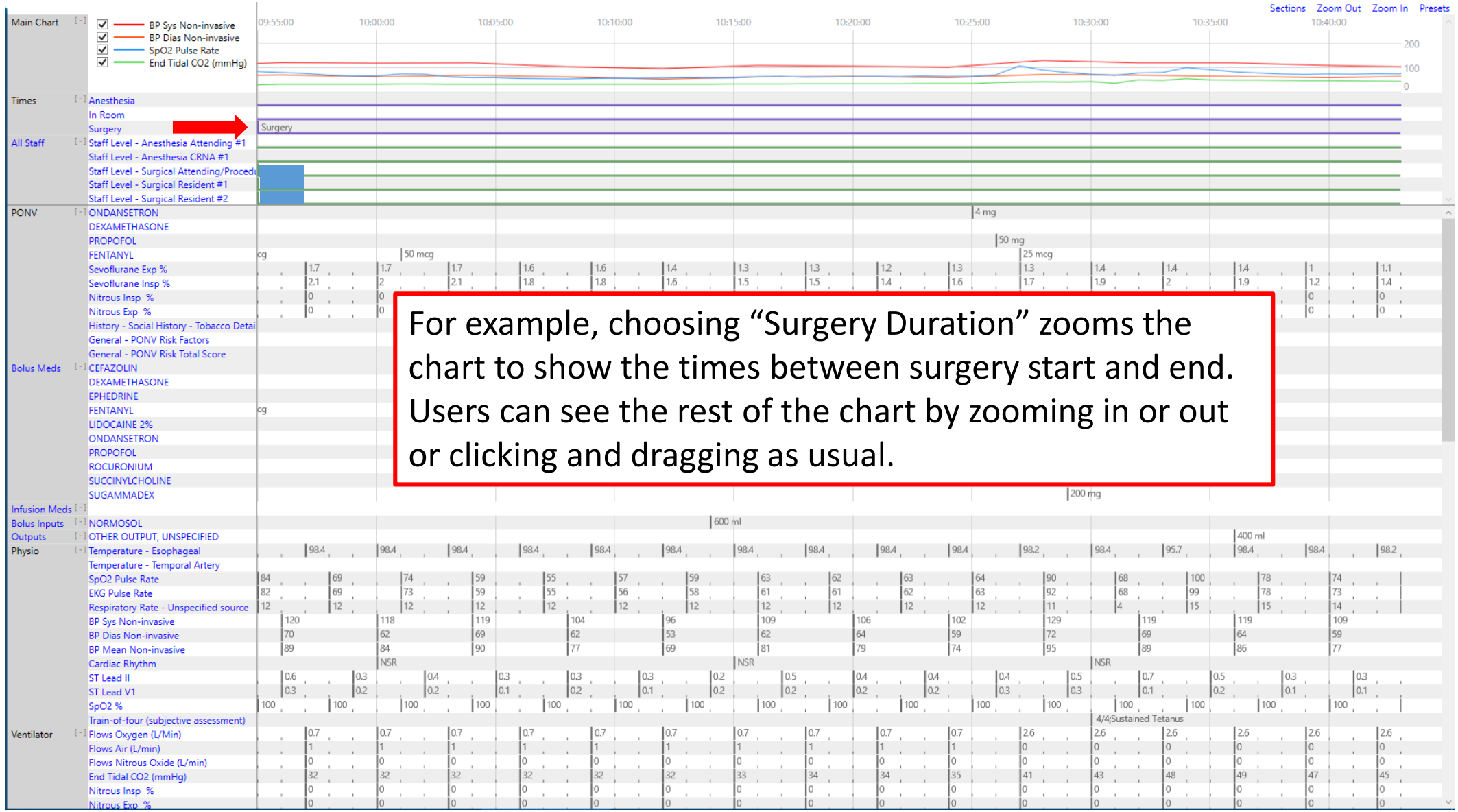


When using an imported case list and the box on the left to move through cases, any ‘Section’ you have open will remain open case to case

Preset Menu

- The “Preset” menu in the upper right corner shows users preset views of the chart based on their choice.

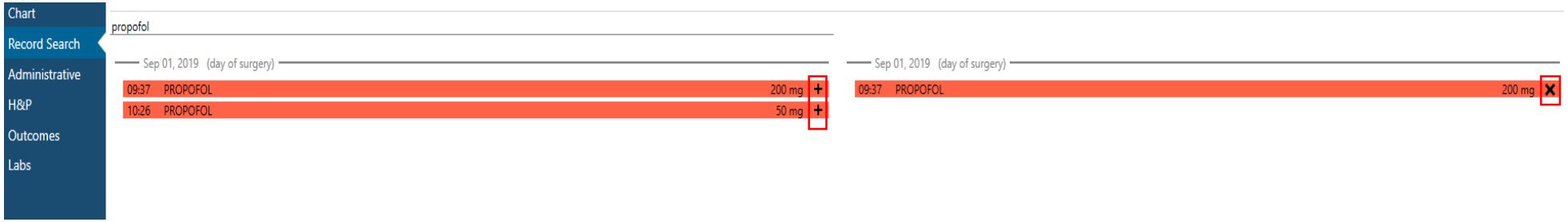




For example, choosing “Surgery Duration” zooms the chart to show the times between surgery start and end. Users can see the rest of the chart by zooming in or out or clicking and dragging as usual.

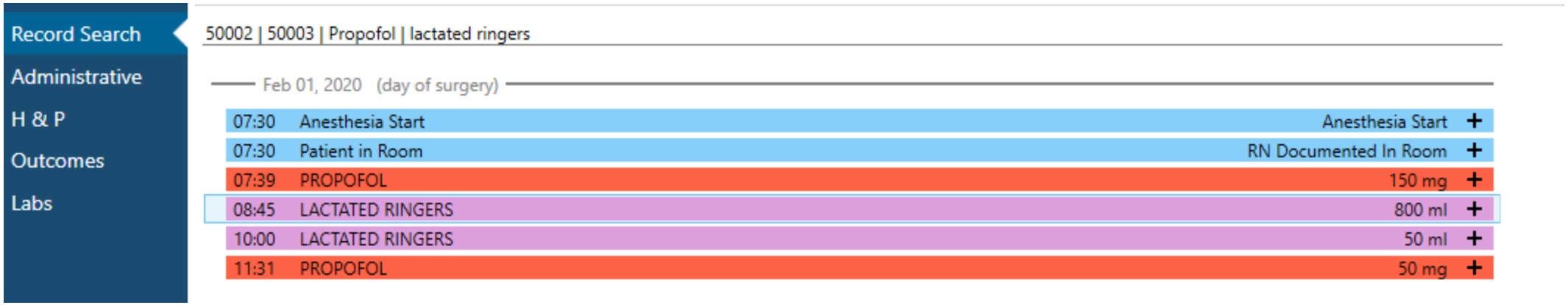
Record Search

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



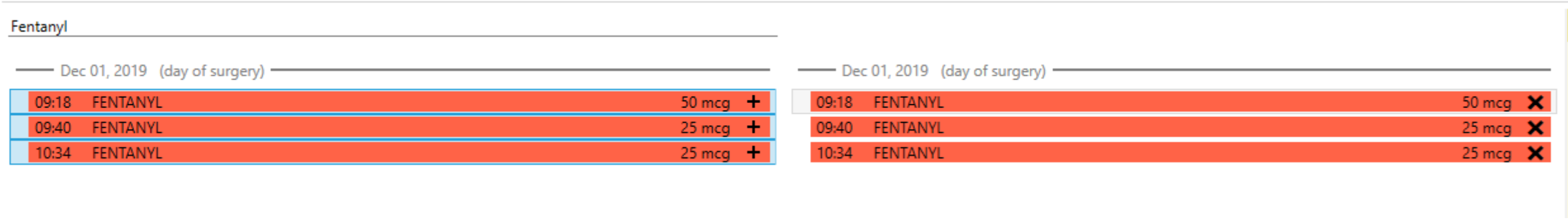
Record Search

- 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'
- CTRL + Z will undo searches in record search

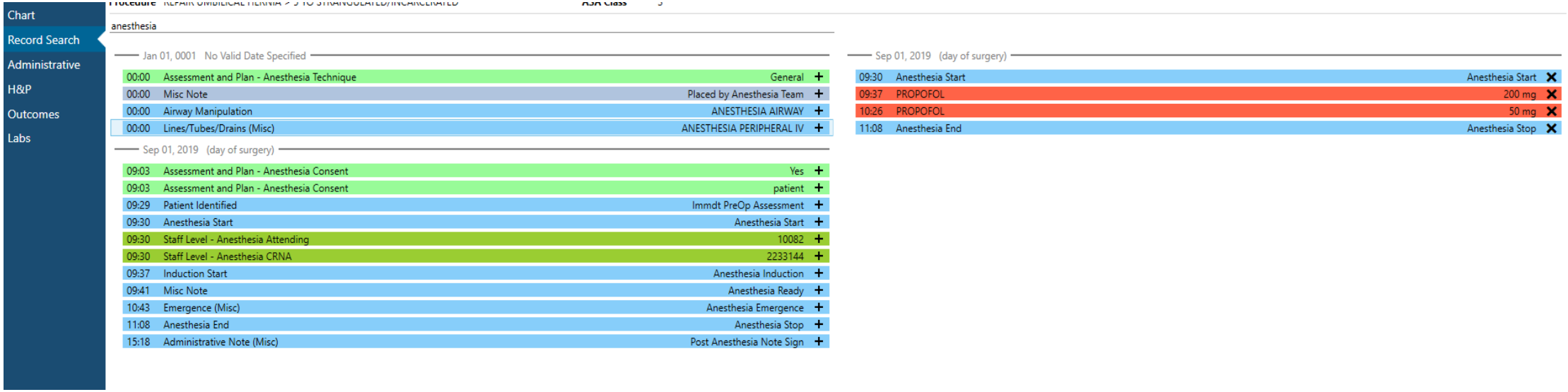


Record Search

- Ctrl + Click or Shift + Click allows for multi-select and the ability to add more than one row of information into the “Shopping Cart”

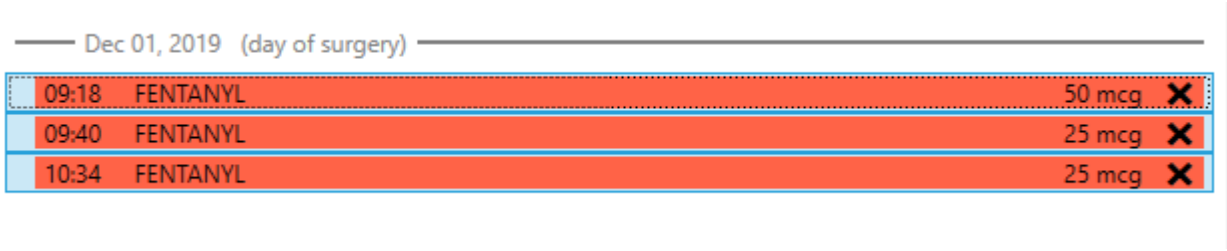


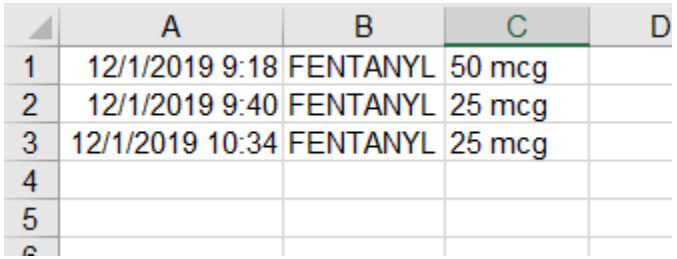
- Utilize Record Search to look at information relevant to a chart evaluation in one location



Record Search

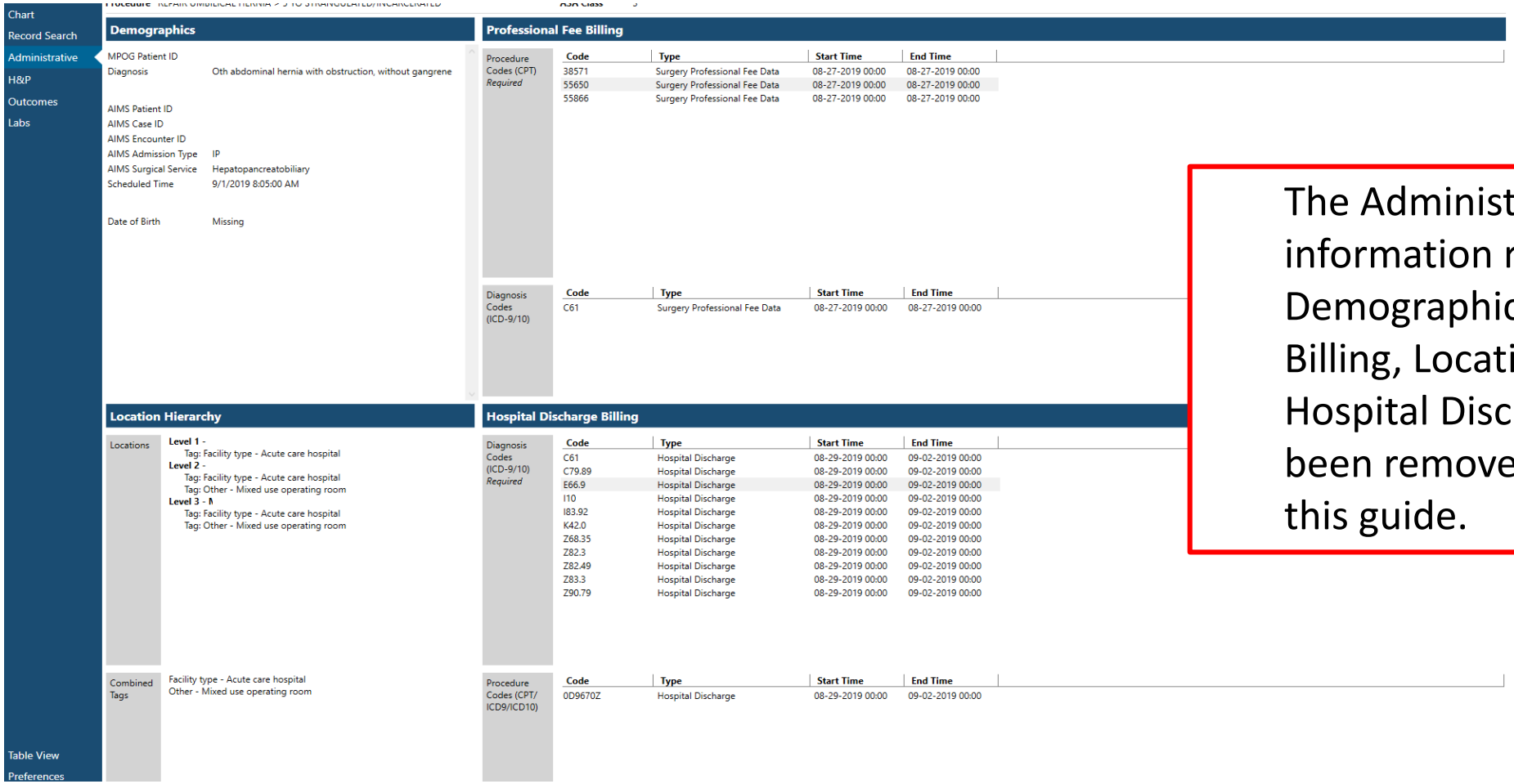
- Users can copy and paste select information from the “Shopping Cart” into an Excel file if needed
- Select the desired rows and use Ctrl + C to copy information
- In an Excel spreadsheet, Paste the information





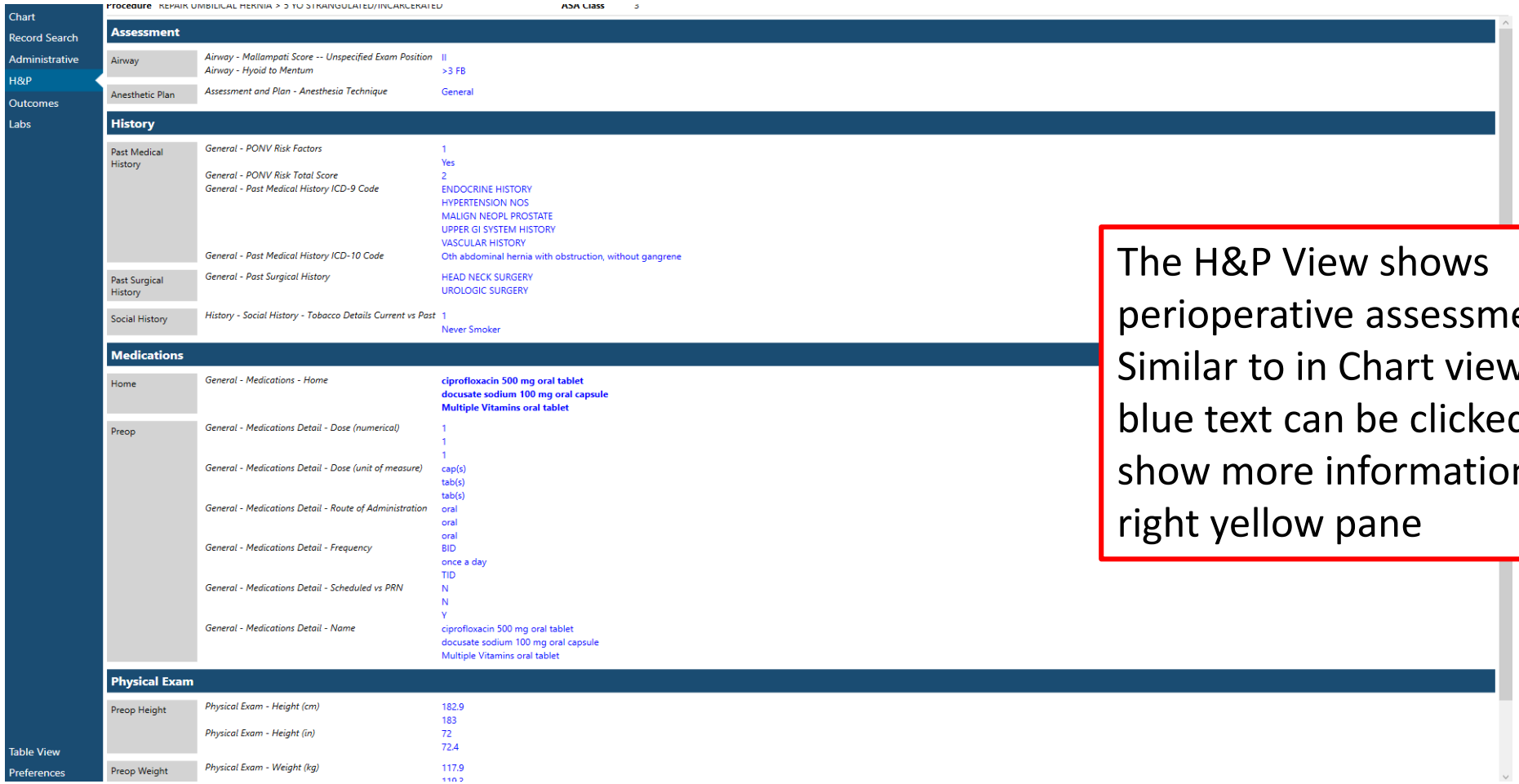
	A	B	C	D
1	12/1/2019 9:18	FENTANYL	50 mcg	
2	12/1/2019 9:40	FENTANYL	25 mcg	
3	12/1/2019 10:34	FENTANYL	25 mcg	
4				
5				

Administrative



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.

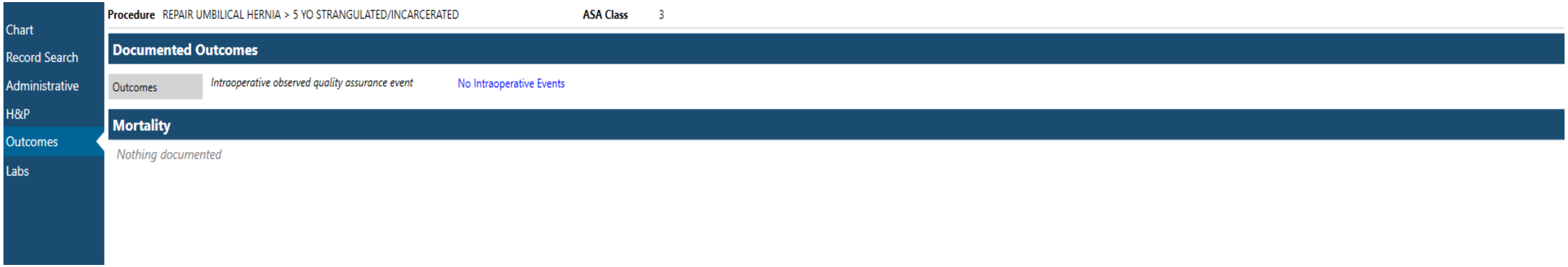
History and Physical



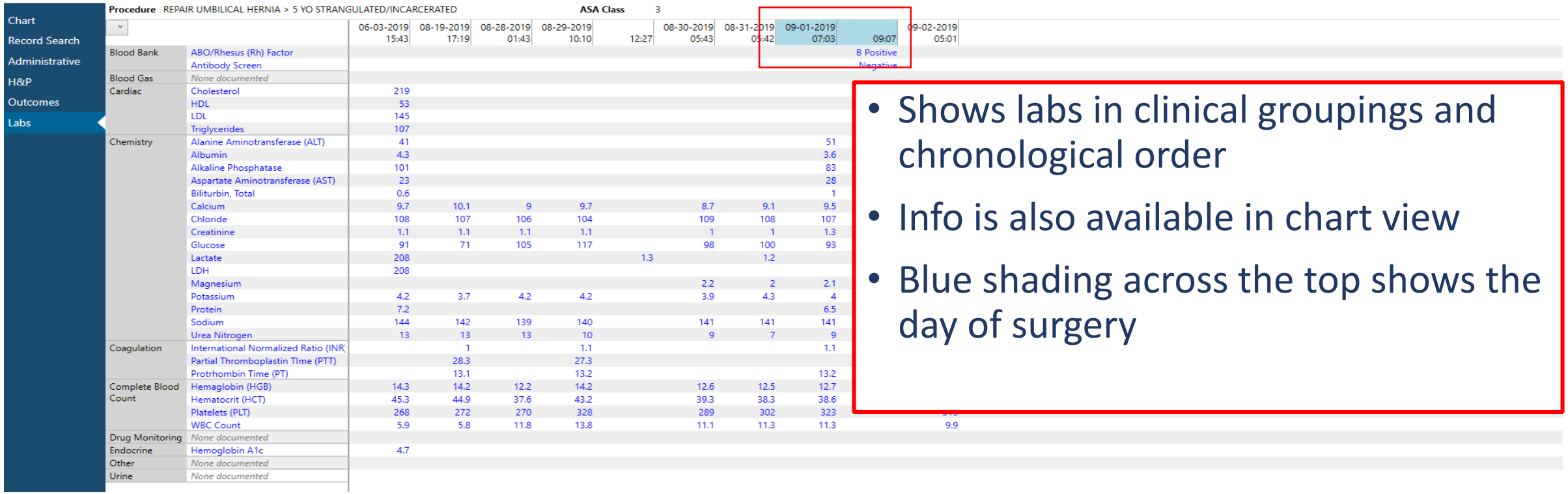
The H&P View shows perioperative assessment data. Similar to in Chart view, any blue text can be clicked to show more information in the right yellow pane

Outcomes

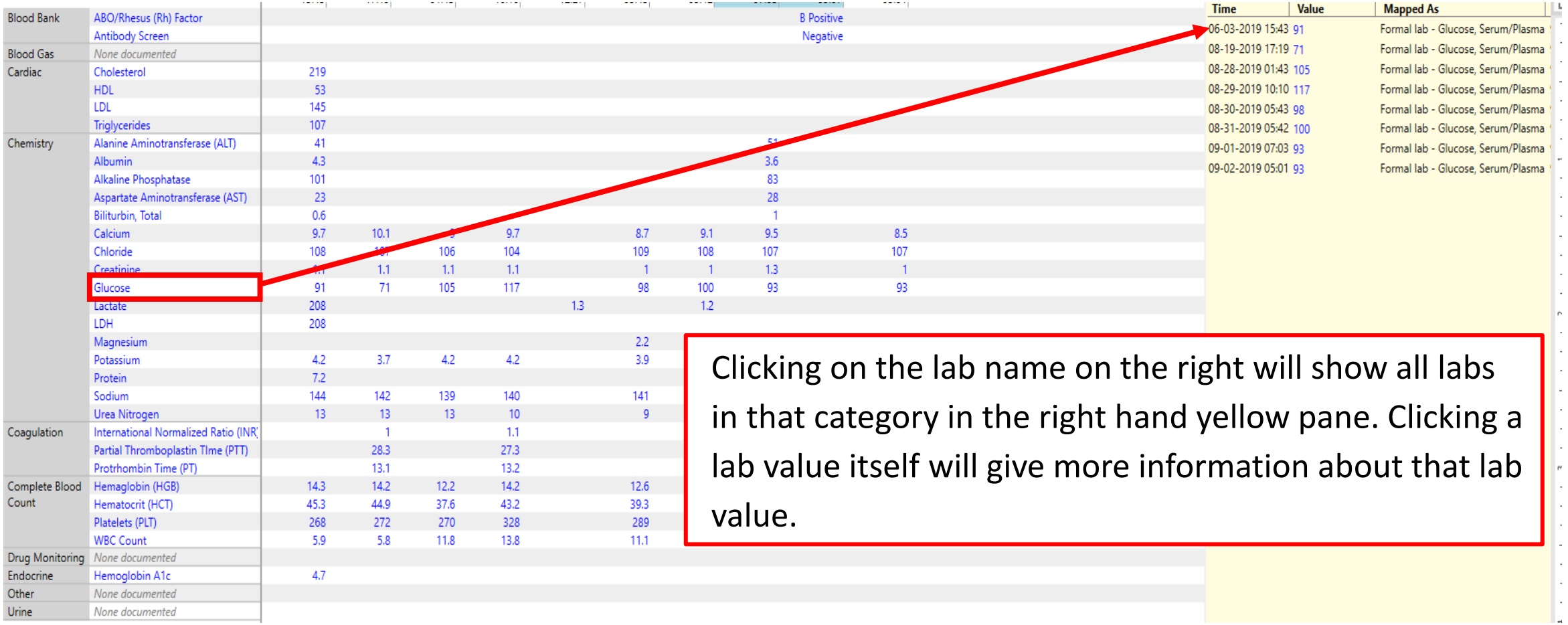
The Outcomes view shows documented outcomes and mortality if available. The blue text in this view also remains clickable to reveal more information in the yellow right pane.



Labs



- 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

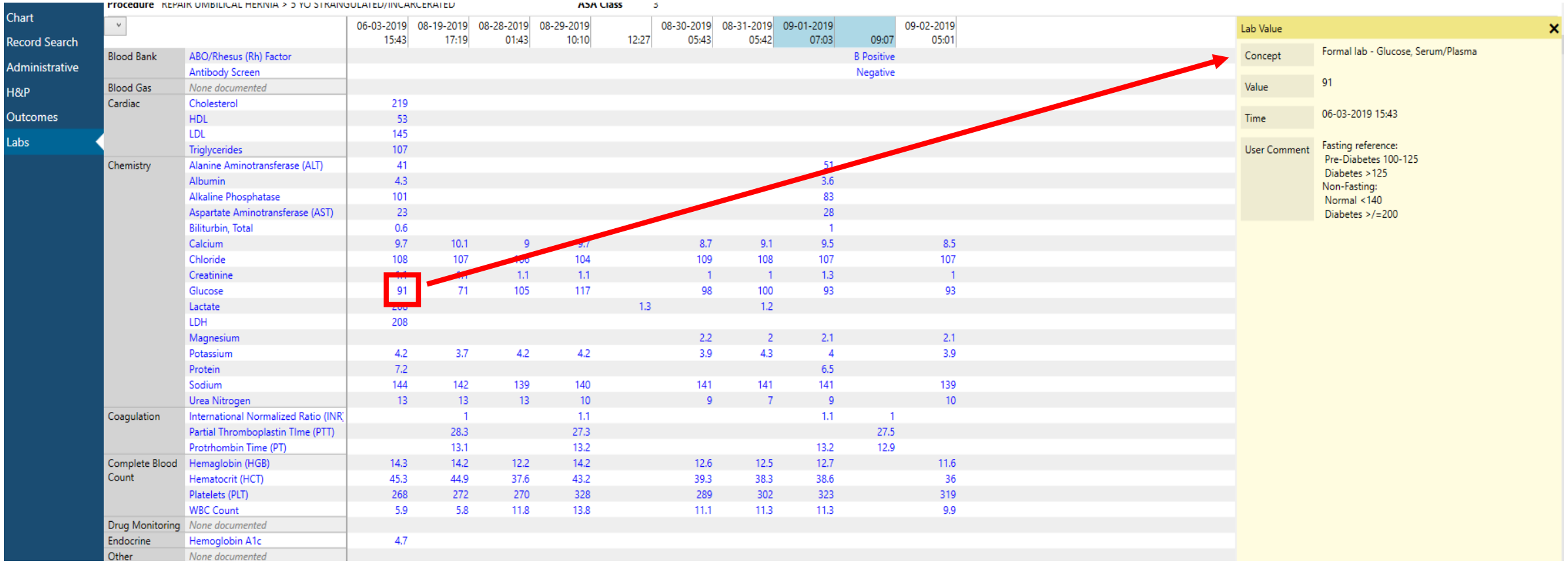


Blood Bank	ABO/Rhesus (Rh) Factor							B Positive	
	Antibody Screen							Negative	
Blood Gas	*None documented*								
Cardiac	Cholesterol	219							
	HDL	53							
	LDL	145							
	Triglycerides	107							
Chemistry	Alanine Aminotransferase (ALT)	41						51	
	Albumin	4.3						3.6	
	Alkaline Phosphatase	101						83	
	Aspartate Aminotransferase (AST)	23						28	
	Biliturbin, Total	0.6						1	
	Calcium	9.7	10.1		9.7	8.7	9.1	9.5	8.5
	Chloride	108		106	104	109	108	107	107
	Creatinine		1.1	1.1	1.1	1	1	1.3	1
	Glucose	91	71	105	117	98	100	93	93
	Lactate	208				1.3	1.2		
	LDH	208							
	Magnesium					2.2			
	Potassium	4.2	3.7	4.2	4.2	3.9			
	Protein	7.2							
	Sodium	144	142	139	140	141			
	Urea Nitrogen	13	13	13	10	9			
Coagulation	International Normalized Ratio (INR)		1		1.1				
	Partial Thromboplastin TIme (PTT)		28.3		27.3				
	Protrhombin Time (PT)		13.1		13.2				
Complete Blood Count	Hemaglobin (HGB)	14.3	14.2	12.2	14.2	12.6			
	Hematocrit (HCT)	45.3	44.9	37.6	43.2	39.3			
	Platelets (PLT)	268	272	270	328	289			
	WBC Count	5.9	5.8	11.8	13.8	11.1			
Drug Monitoring	*None documented*								
Endocrine	Hemoglobin A1c	4.7							
Other	*None documented*								
Urine	*None documented*								

Time	Value	Mapped As
06-03-2019 15:43	91	Formal lab - Glucose, Serum/Plasma
08-19-2019 17:19	71	Formal lab - Glucose, Serum/Plasma
08-28-2019 01:43	105	Formal lab - Glucose, Serum/Plasma
08-29-2019 10:10	117	Formal lab - Glucose, Serum/Plasma
08-30-2019 05:43	98	Formal lab - Glucose, Serum/Plasma
08-31-2019 05:42	100	Formal lab - Glucose, Serum/Plasma
09-01-2019 07:03	93	Formal lab - Glucose, Serum/Plasma
09-02-2019 05:01	93	Formal lab - Glucose, Serum/Plasma

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



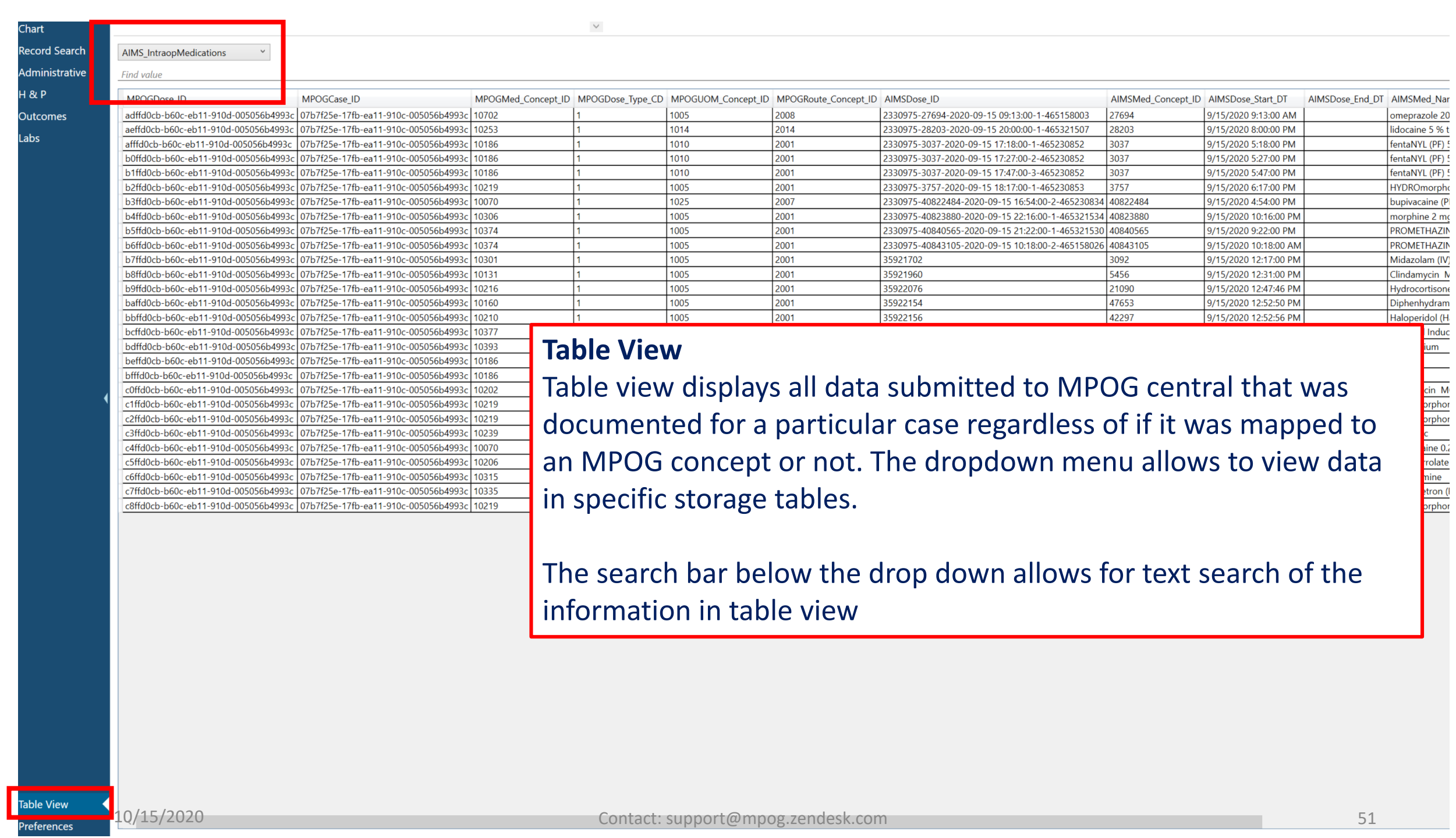


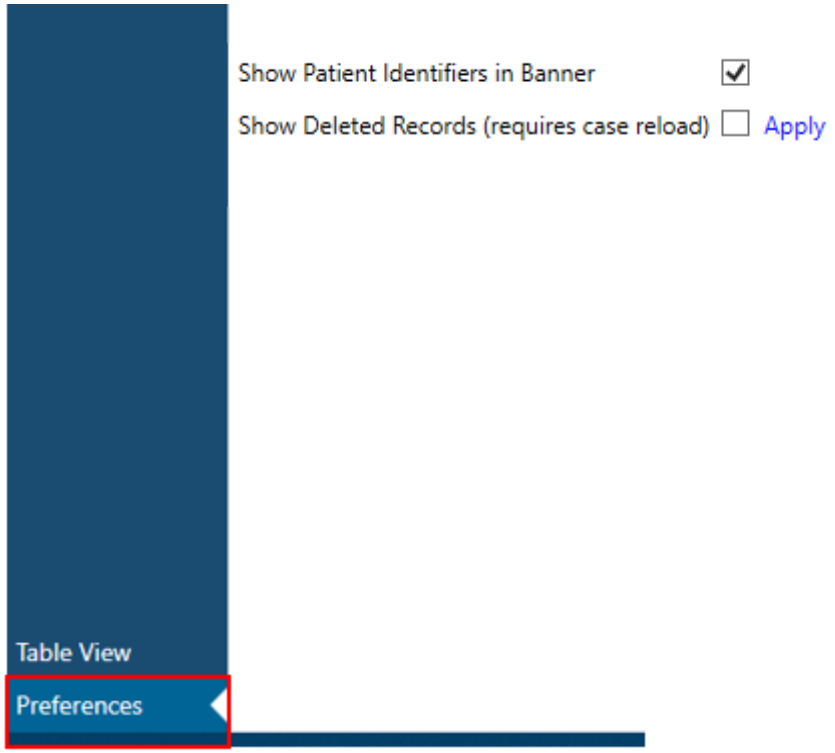
Table View

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.

The search bar below the drop down allows for text search of the information in table view

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

Module 6

Data Diagnostics

Data Diagnostics Overview

- ASPIRE sites may contribute information from various sections of an EHR: preoperative, intraoperative, and postoperative notes and physiologic data, demographic information, laboratory values, and procedure codes.

Data Diagnostics Overview

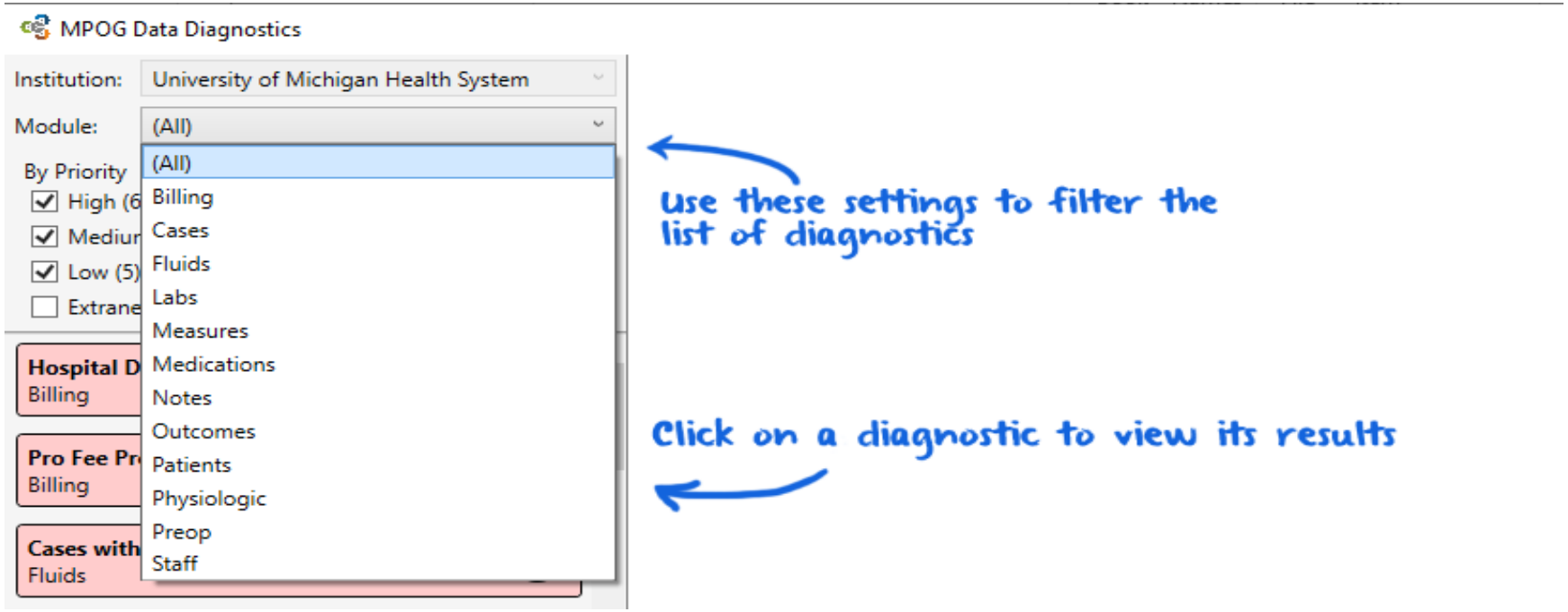
- Two separate strategies are employed to improve data quality and ensure data accuracy.
  - First, data diagnostics are used by technical and clinical staff to detect systematic errors with data extraction, transformation, or mappings. Diagnostic visualizations represent specific pass/failure thresholds to determine compliance at a macro level.
  - Second, clinicians at each site are required to manually validate between 5 and 10 cases per month to ensure that the data that have been extracted into MPOG matches the original EHR information utilizing the Case Validator utility (see Module 7: Case by Case Validation)

Data Diagnostics Requirements

- Data Diagnostic review and attestation are **required** for **all sites before uploading** to the Central MPOG database.
- All **funded** sites are required to conduct this attestation process on a **monthly** basis.
- **Non-funded sites** are required to **complete before each upload** to MPOG Central. If submission is on a monthly basis, then attestation should also occur on a monthly basis.

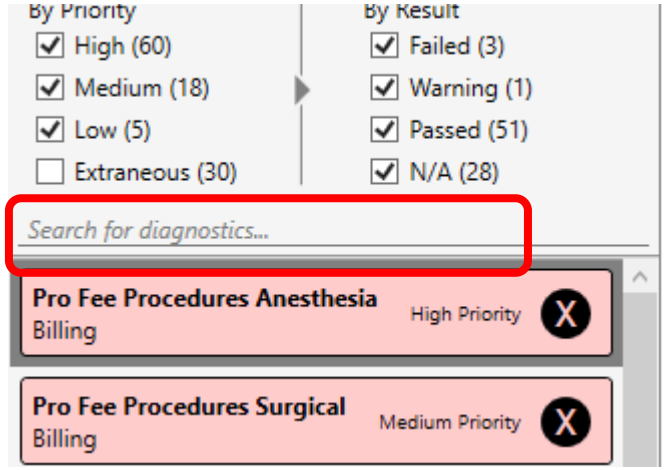
Accessing Data Diagnostics

- Your institution/site should be defaulted in the top field.
- Select a module to filter the diagnostic list to accommodate the type of data to review. If planning to review all data diagnostics for the monthly attestation process, click “(All)” from the dropdown menu.

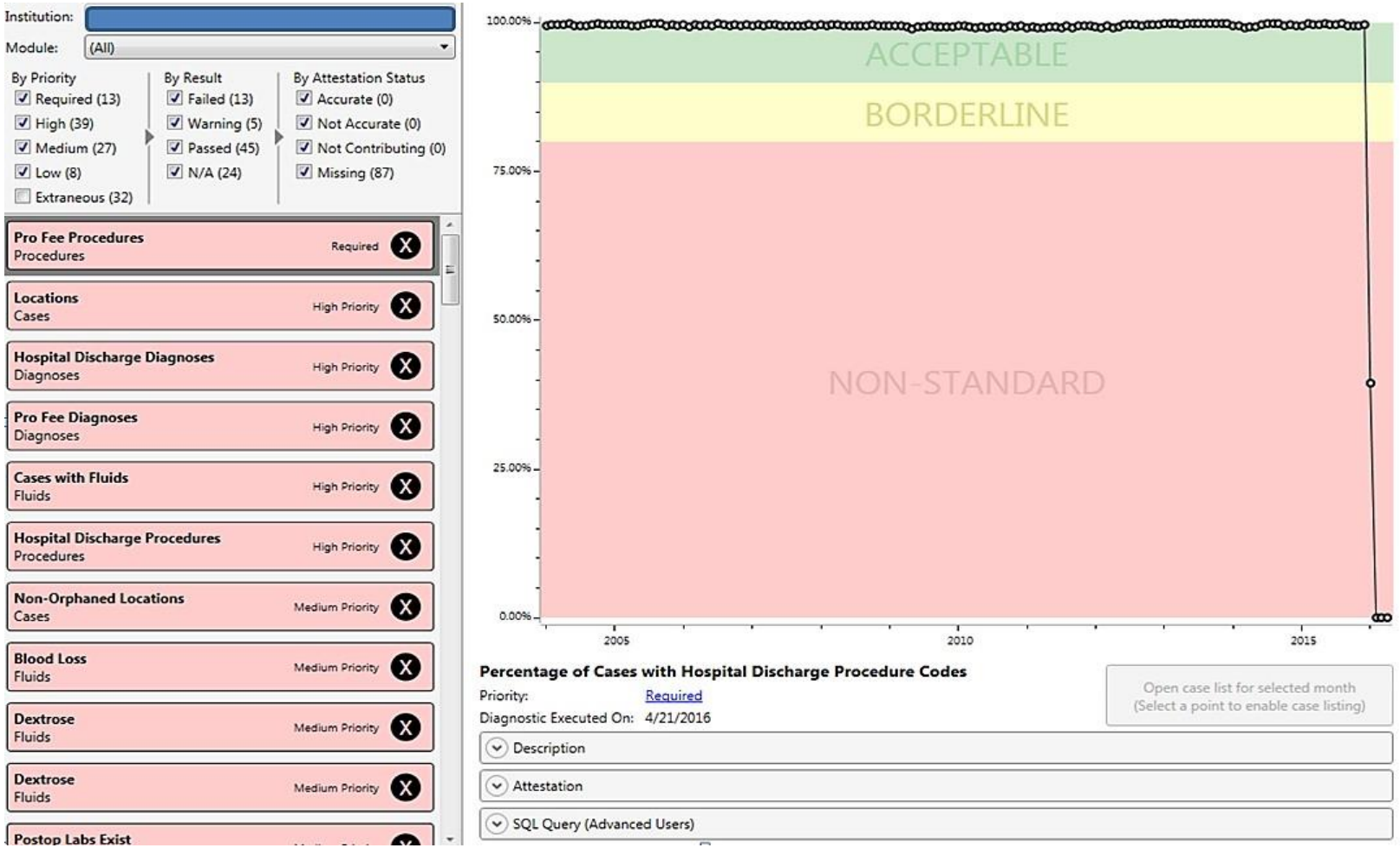


Diagnostic Search

- If searching for a specific diagnostic, a free text search is available on the left-hand side



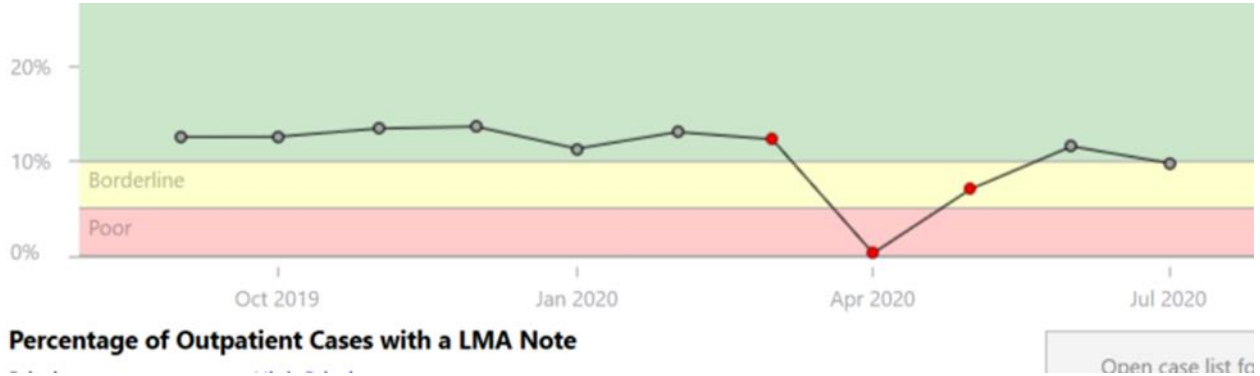
Click on the name of the Data Diagnostic in the left column to display the graphical results on the right.

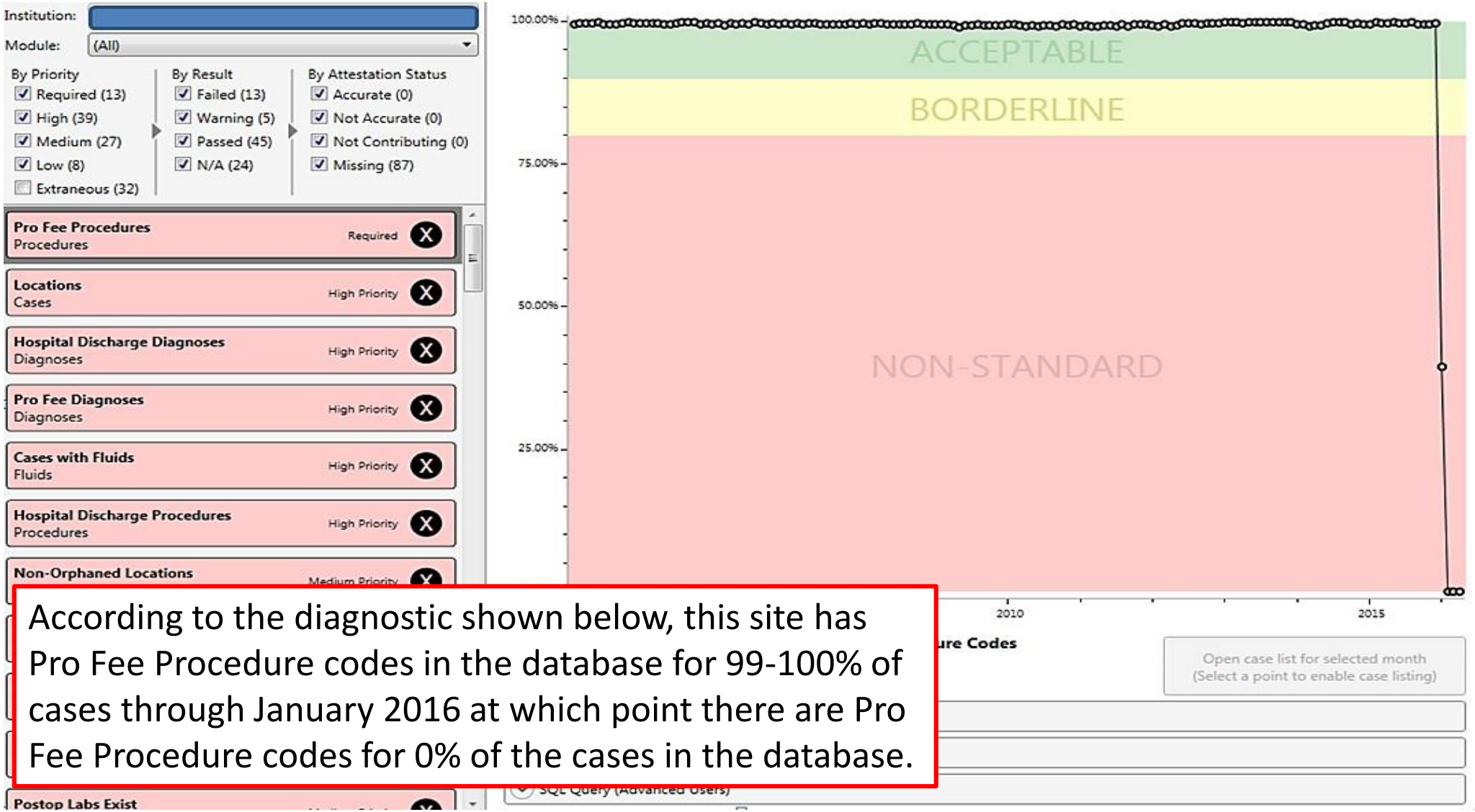


- For the example on the previous slide, Pro Fee Procedures are highlighted in the left column, and the diagnostic displays the percentage of cases with hospital discharge procedure codes by month.
- If your site does not submit billing data, the graph will display 0% of cases have Pro Fee Procedure codes.

COVID-19 Adjustments

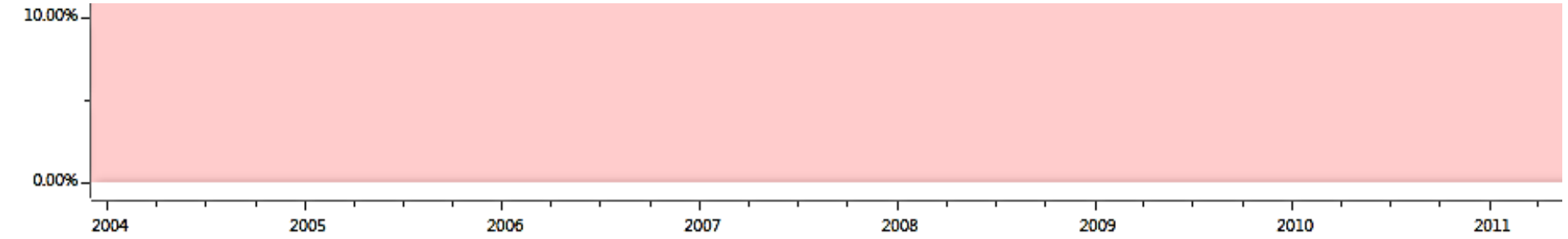
- For some diagnostics, the months of March/April/May 2020 are now excluded from diagnostic pass/fail consideration due to COVID-19's impact on case volume
- These months will appear as red data points on the graph



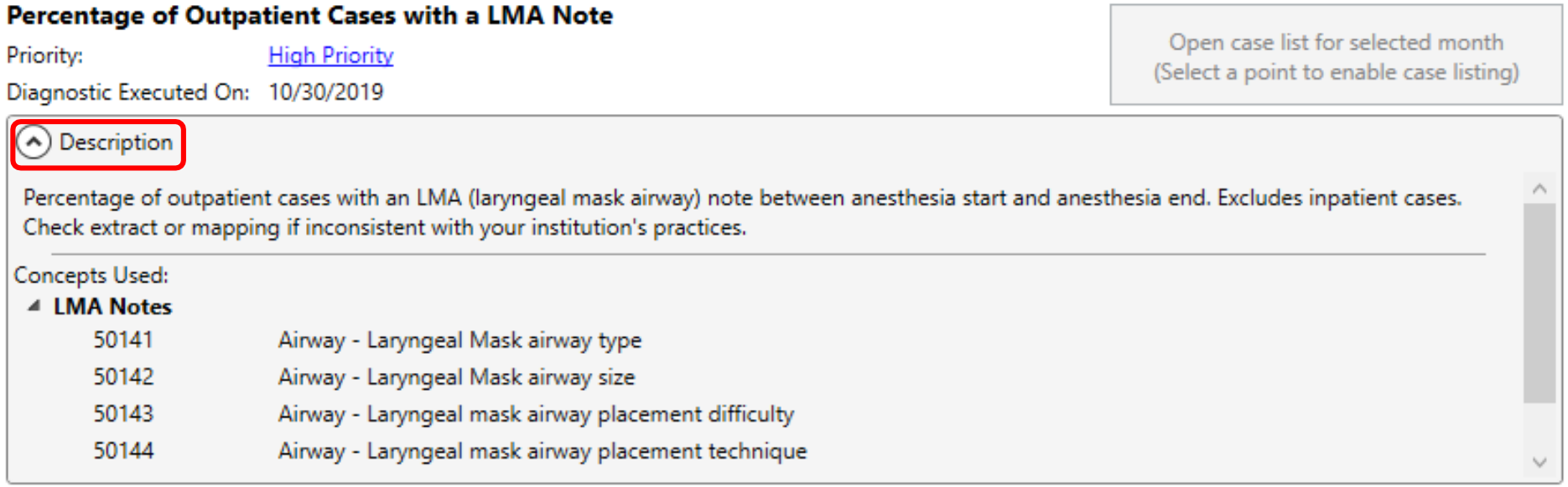


According to the diagnostic shown below, this site has Pro Fee Procedure codes in the database for 99-100% of cases through January 2016 at which point there are Pro Fee Procedure codes for 0% of the cases in the database.

To understand when the Diagnostic was last updated, view the ‘Diagnostic Executed On: XX/XX/XXXX’ date listed beneath the graph.

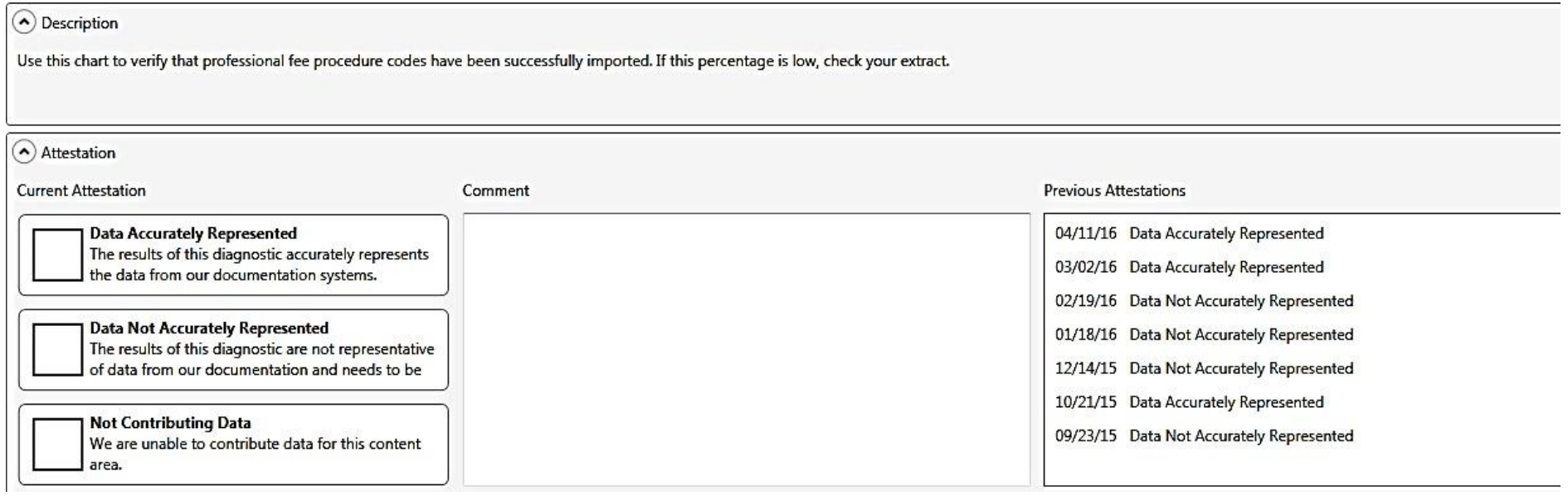


- To seek further clarification for the diagnostic selected, click on the “Description” header beneath the graph.
- Clicking on the Description will expand the box to display the definition of the Data Diagnostic shown as well as the MPOG concept IDs that impact that diagnostic.



Attestation

- Beneath the description is an Attestation section. Click on the dropdown arrow next to ‘Attestation’ to open.



Attestation

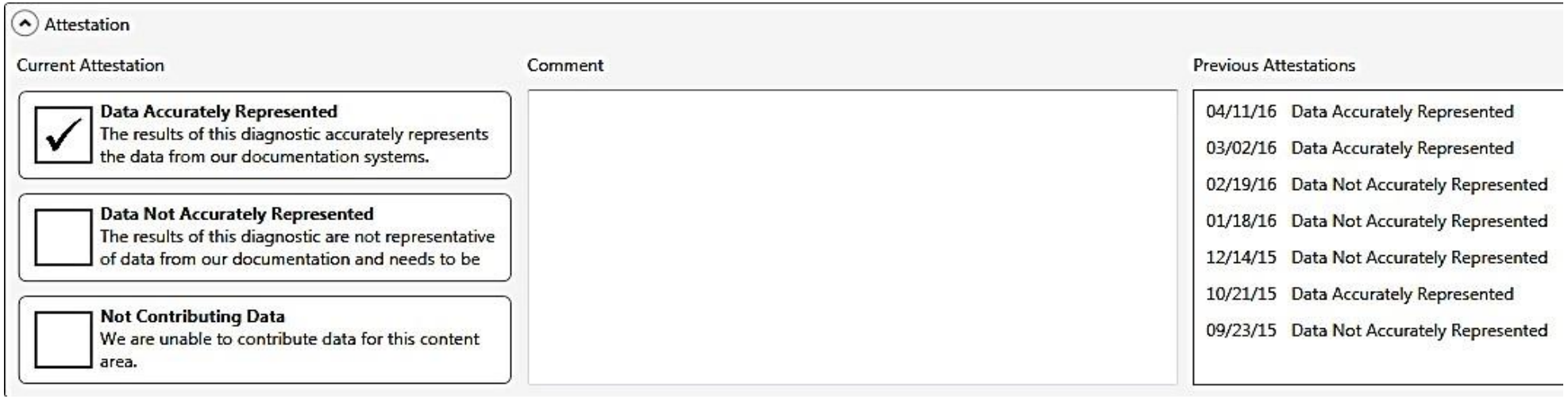
- In the Attestation section, the site Anesthesia Clinical Quality Reviewer (ACQR) or Quality Champion has the opportunity to review the diagnostic and determine if the data accurately represents the documentation present at the site (either in the EHR or billing software).

Attestation

- If the site is not submitting data for the content area measured in the diagnostic (i.e. billing data), the option of “Not Contributing Data” should be selected.
- Click the box next to the attestation selection that most represents the analysis conducted on the Data Diagnostic under review. When the Data Diagnostic application is updated the following weekend, the current attestation will move to the Previous Attestation box on right side of the screen with an associated date

Attestation

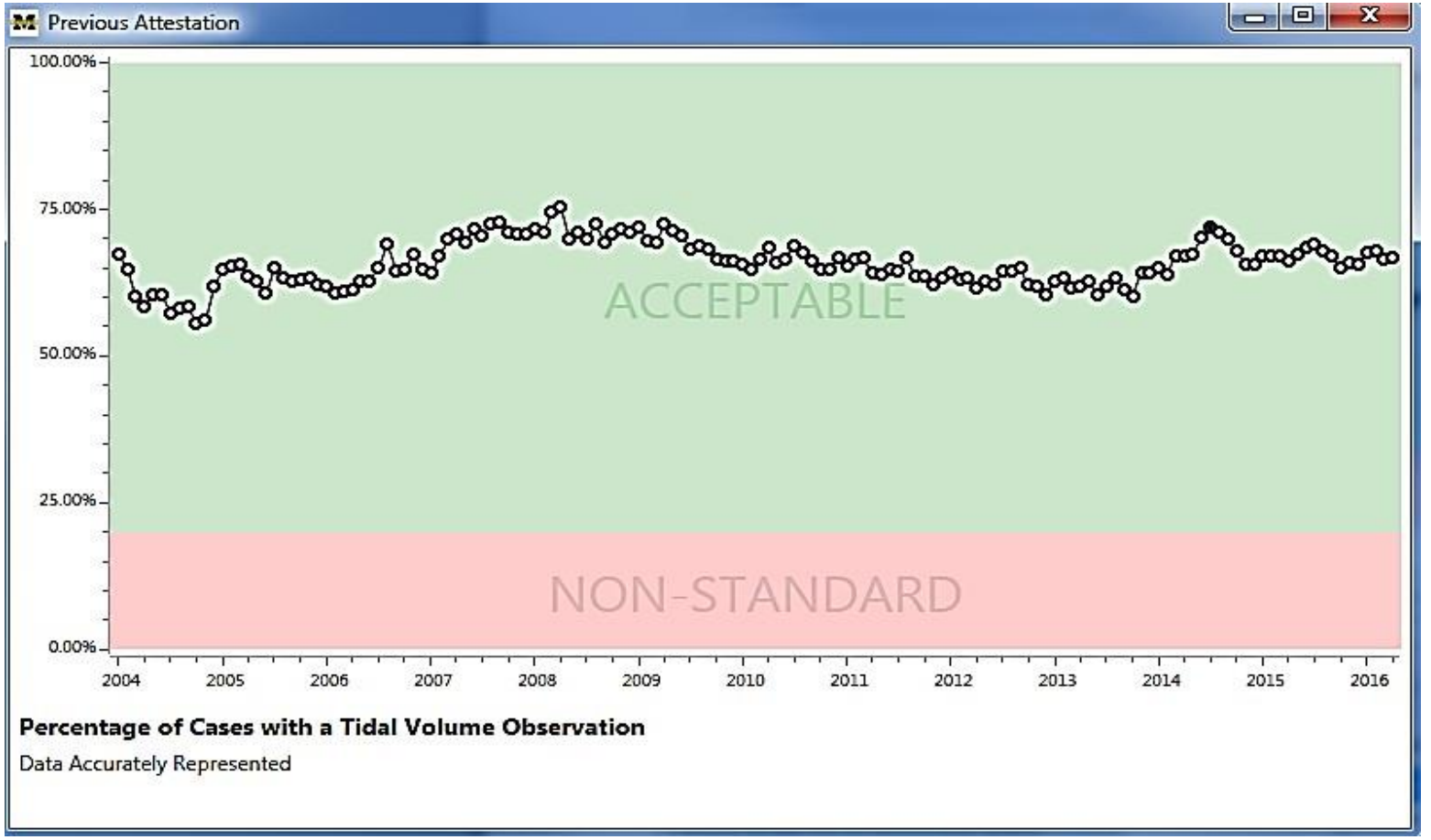
- For the purpose of this example (slide 9), “Data Accurately Represented” would be chosen since the data reflects the documentation for the cases that have been loaded to date.
- Comments can be added to the middle column as needed



Viewing Previous Diagnostics

- To view diagnostic graphs from a previous attestation, double-click on the row of the attestation to review and a new screen will display with the previous graph

- Previous attestation graph will display in a new window



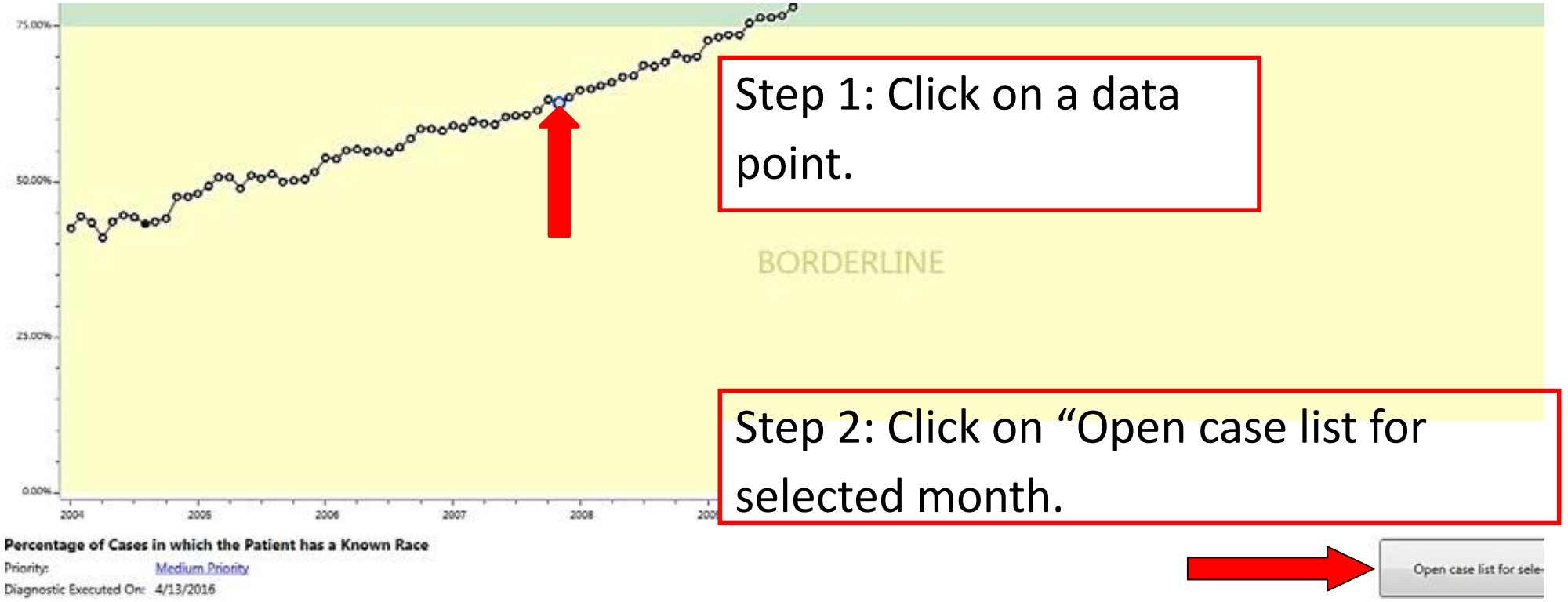
Investigating Diagnostics

- If data is not accurately represented (gaps in the data or values are higher or lower than expected)
- Thresholds for many of the diagnostics are reflective of common practice across man sites
  - Acceptable (green)
  - Borderline (yellow)
  - Non-standard (red)

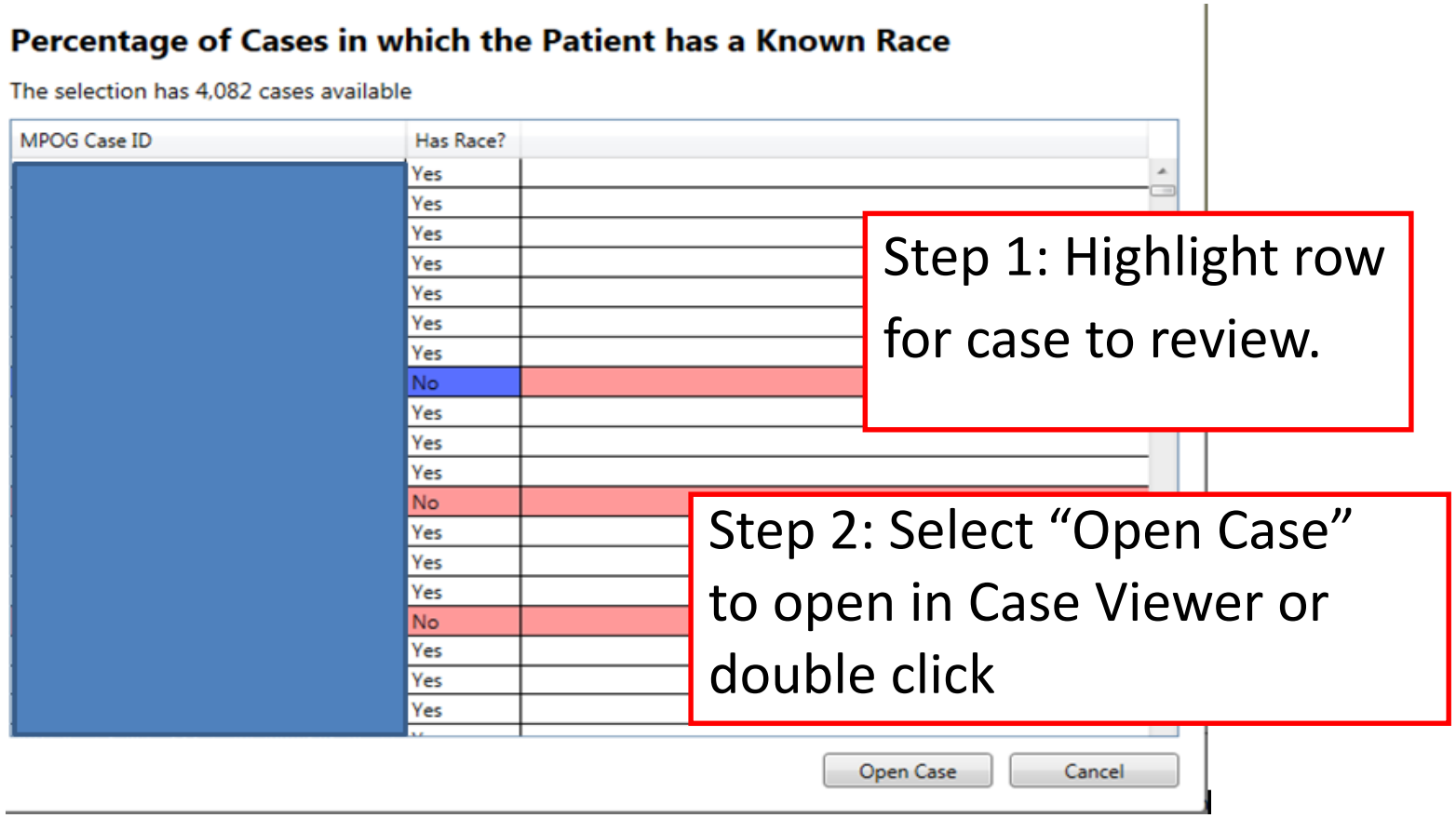
Diagnostics Investigation

- If you are below the threshold, with data in the ‘Borderline’ or ‘Non-standard’ areas of the graph, please verify the accuracy of the data.
- If not accurate, investigate further with the site technical team to identify if extract or mapping issues exist.

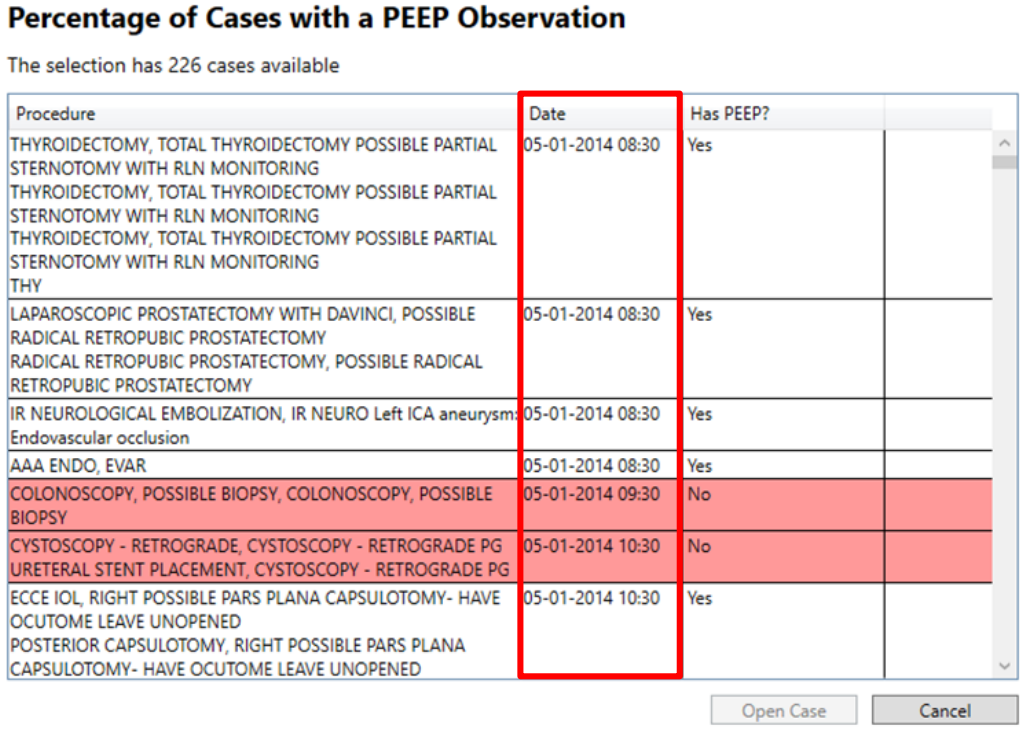
Click on the data point associated with the time period in question and select ‘Open case list for selected month’ to display a list of cases for that time period.



- A case list will open showing a random sampling of cases from the selected month
- Open cases as needed in case viewer for further investigation



- A date column also allows users to quickly see any trends to missing data by date on which the cases occurred
- By drilling down in to cases, it may be possible to determine if a mapping issue exists.
- Contact the QI Coordinators to identify next steps to improving the data quality.



Percentage of Cases with a PEEP Observation

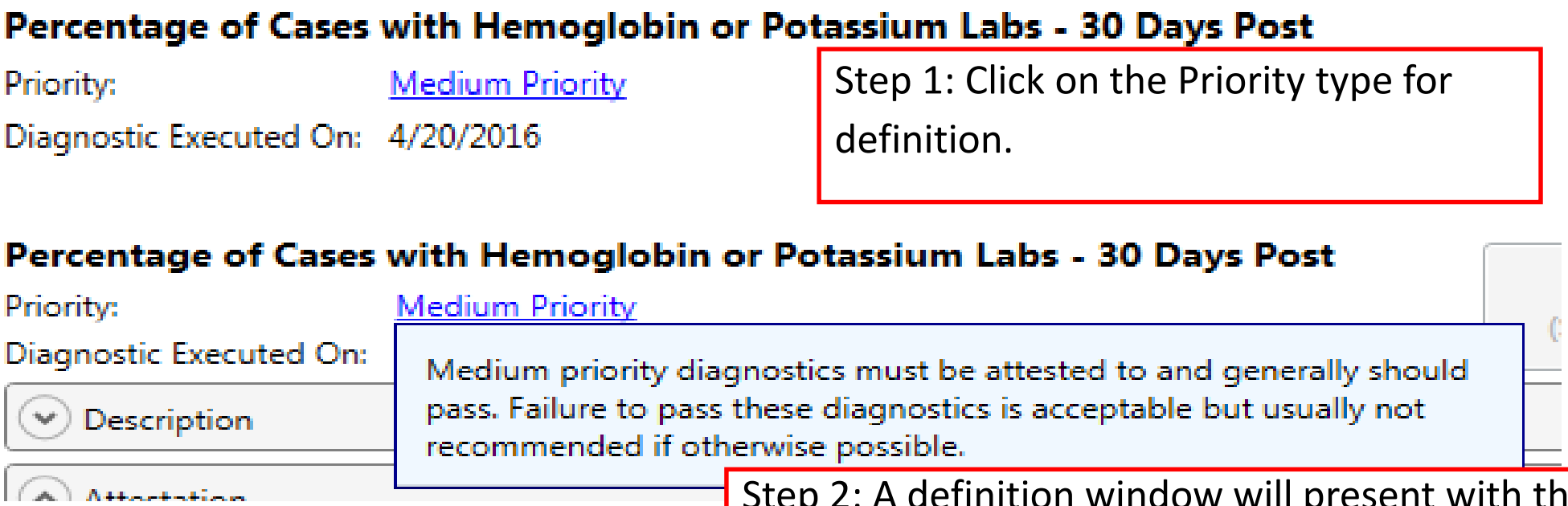
The selection has 226 cases available

Procedure	Date	Has PEEP?
THYROIDECTOMY, TOTAL THYROIDECTOMY POSSIBLE PARTIAL STERNOTOMY WITH RLN MONITORING THYROIDECTOMY, TOTAL THYROIDECTOMY POSSIBLE PARTIAL STERNOTOMY WITH RLN MONITORING THYROIDECTOMY, TOTAL THYROIDECTOMY POSSIBLE PARTIAL STERNOTOMY WITH RLN MONITORING THY	05-01-2014 08:30	Yes
LAPAROSCOPIC PROSTATECTOMY WITH DAVINCI, POSSIBLE RADICAL RETROPUBIC PROSTATECTOMY RADICAL RETROPUBIC PROSTATECTOMY, POSSIBLE RADICAL RETROPUBIC PROSTATECTOMY	05-01-2014 08:30	Yes
IR NEUROLOGICAL EMBOLIZATION, IR NEURO Left ICA aneurysm: Endovascular occlusion	05-01-2014 08:30	Yes
AAA ENDO, EVAR	05-01-2014 08:30	Yes
COLONOSCOPY, POSSIBLE BIOPSY, COLONOSCOPY, POSSIBLE BIOPSY	05-01-2014 09:30	No
CYSTOSCOPY - RETROGRADE, CYSTOSCOPY - RETROGRADE PG URETERAL STENT PLACEMENT, CYSTOSCOPY - RETROGRADE PG	05-01-2014 10:30	No
ECCE IOL, RIGHT POSSIBLE PARS PLANA CAPSULOTOMY- HAVE OCUTOME LEAVE UNOPENED POSTERIOR CAPSULOTOMY, RIGHT POSSIBLE PARS PLANA CAPSULOTOMY- HAVE OCUTOME LEAVE UNOPENED	05-01-2014 10:30	Yes

Open Case | Cancel

Diagnostics Priorities

- Diagnostics are labeled by priority type. A definition for each priority type is listed below. These definitions are also available when clicking on the priority type

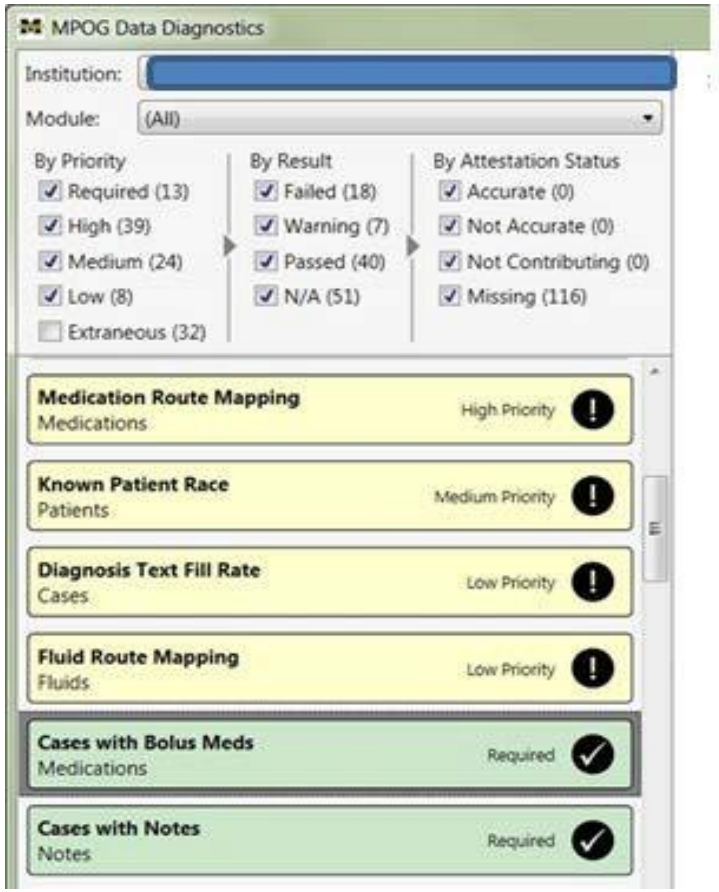


Diagnostics Priories

* **Required**: A required diagnostic MUST be passed before submission to MPOG.

* **High Priority:** High priority diagnostics must be attested to and it is strongly recommended that any detected issues are fixed prior to submission. Failure to pass these diagnostics can severely impact the quality assessment and research capabilities of your institution.

* **Medium Priority:** Medium priority diagnostics must be attested to and generally should pass. Failure to pass these diagnostics is acceptable but usually not recommended if otherwise possible.

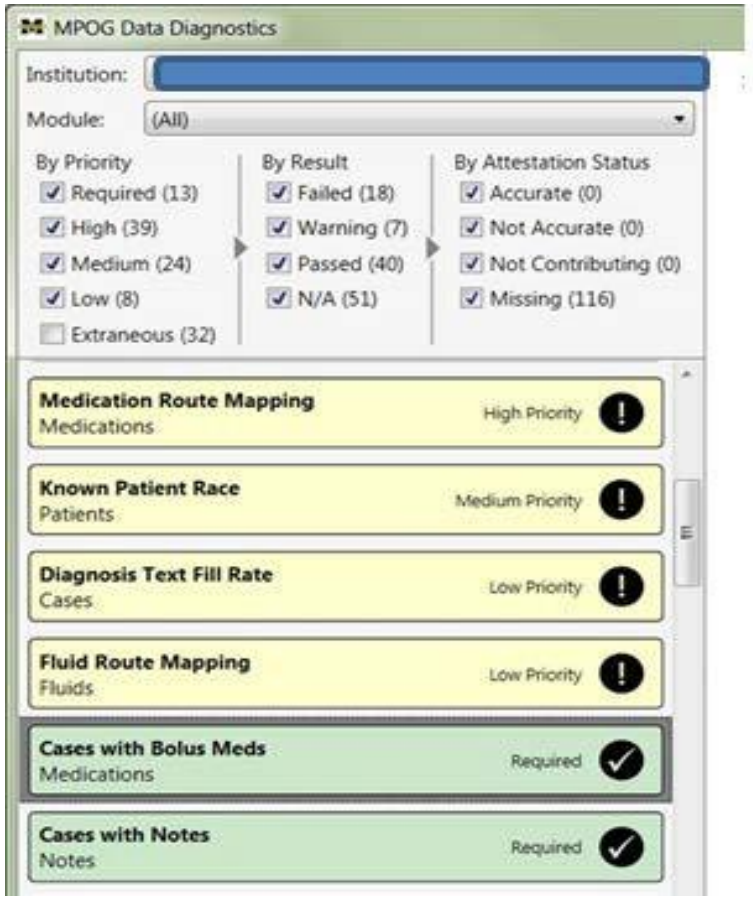


Diagnostics Priories

Low Priority: Low priority diagnostics are for low impact areas of the MPOG database.

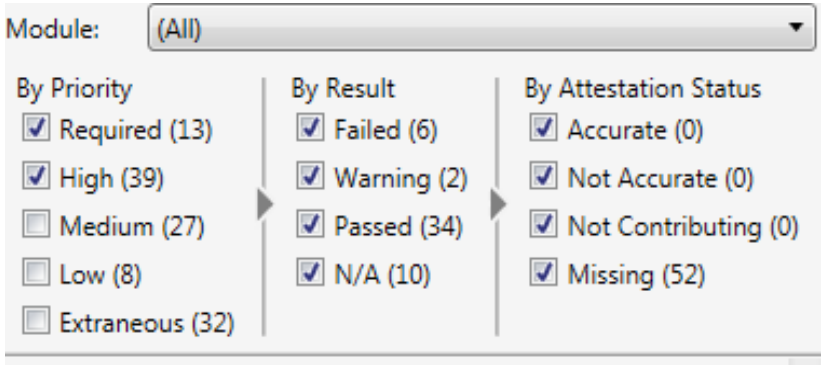
Extraneous Priority: Extraneous diagnostics are meant purely as supplemental information. Reviewing them is not required and they are hidden by default.

Priority type for each diagnostic is easily viewed on the right side in each diagnostic.



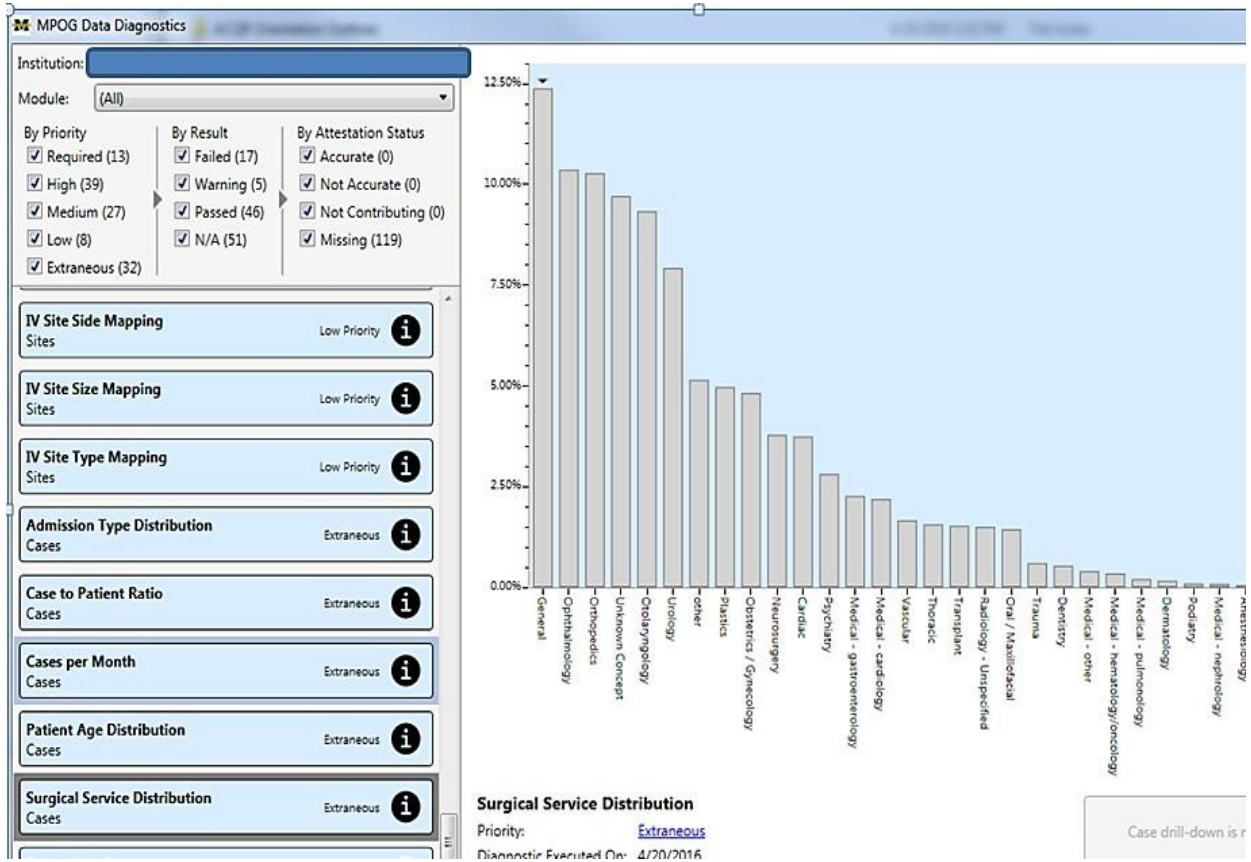
Filtering Diagnostics

- Filters can be applied by Priority, Result, or Attestation Type. Filtering allows the user to limit the number of diagnostics listed and improve the selection process for tailored and purposeful review of the data.



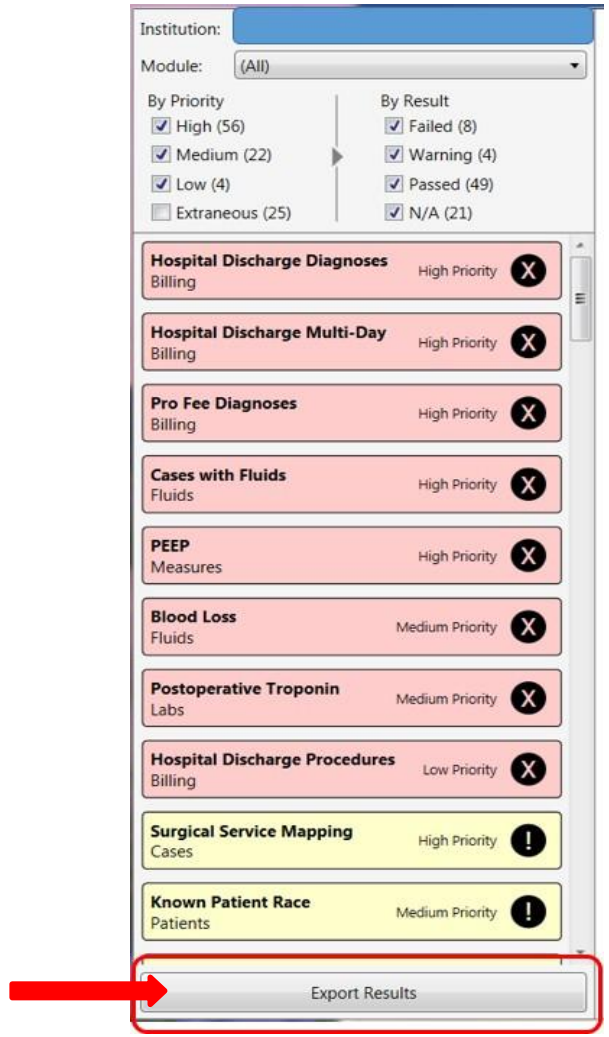
Extraneous

- Extraneous diagnostics are blue diagnostics and indicate that thresholds do not exist because every site differs in terms of case mix and patient population.
- It is important to verify that the diagnostic reflects your site case mix, population, practice, and distribution.



Exporting Diagnostics

- Click on the “Export Results” button at the bottom of the Diagnostic listings
- Will export ALL diagnostics at once
- Save file to a location you an easily retrieve from
- If the Coordinating Center requests a copy of recent Diagnostics, simply attach the file to an email and send to one of the QI Coordinators. This report does not contain PHI, and can be sent through email.



Exporting Diagnostics

- Helpful when comparing local diagnostics to MPOG Central Diagnostics
- Local Diagnostics refresh each night
- MPOG Central Diagnostics refresh each Sunday

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Module 7
Case Validation

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Case Validation Overview

- Case validation is used along with Data Diagnostics (Module 6) 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 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.

Requirements

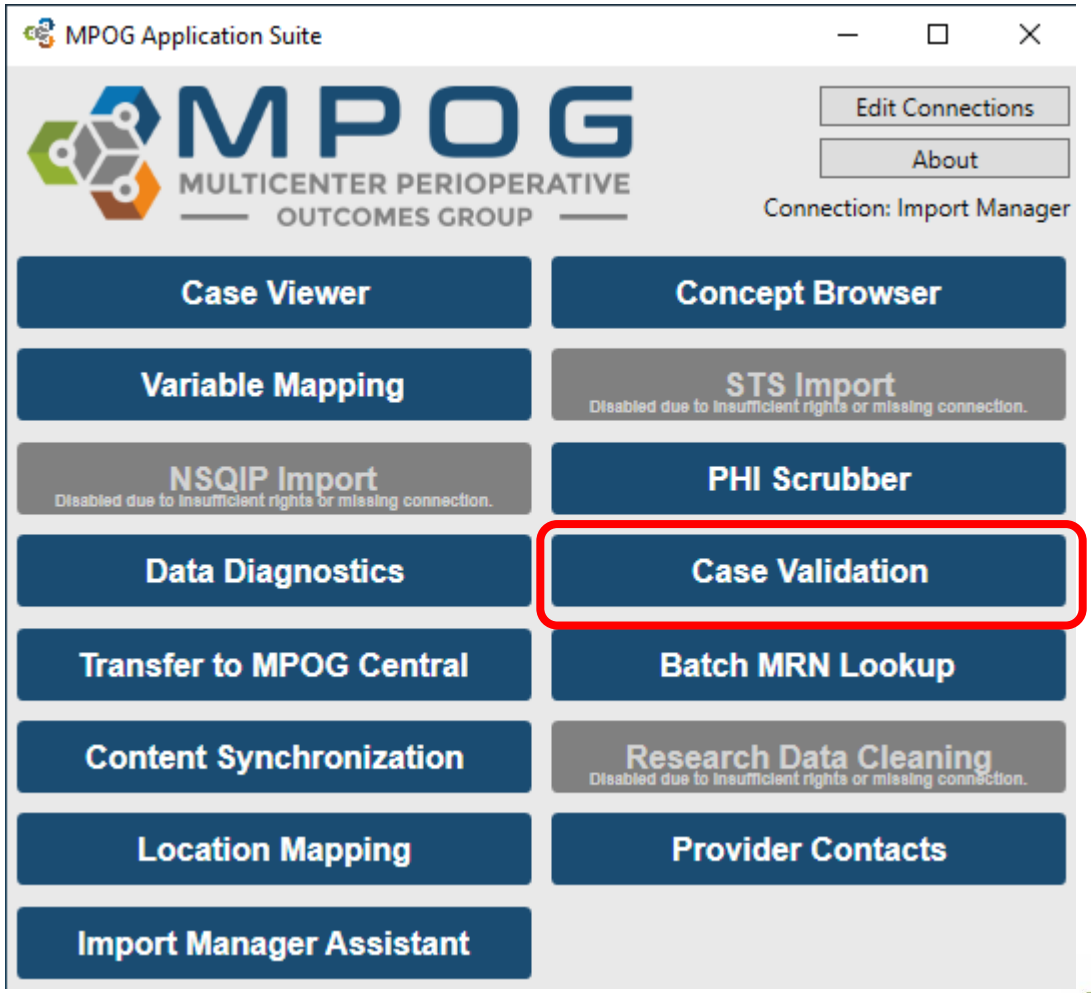
BCBS Funded sites

- MPOG requires review of 10 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 10 cases per month prior to uploading to MPOG central each month

Non-funded sites

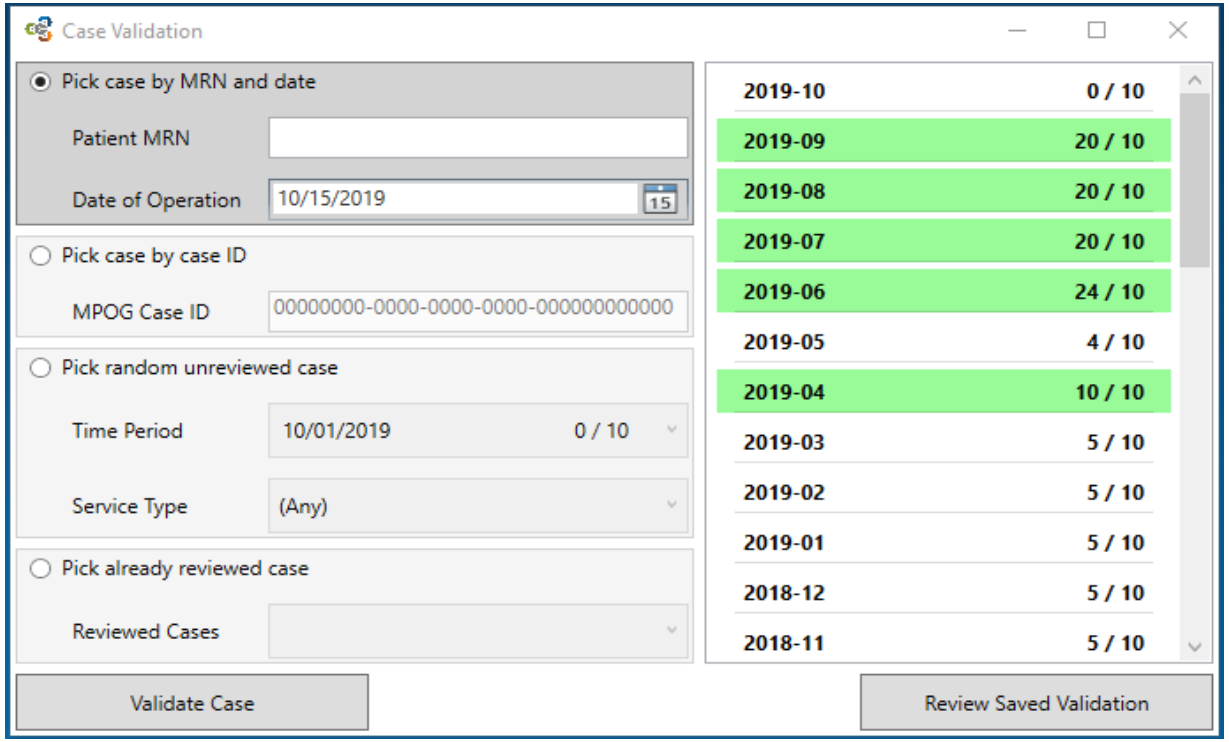
- MPOG requires review of 5 cases per month for 6 months before initial upload.
- All historical data should be validated with a minimum of 5 case validations completed per month but can be completed after initial upload if Data Diagnostics are accurate throughout.
- Required to validate 5 cases per month prior to each upload to MPOG Central

Accessing Case Validation



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.

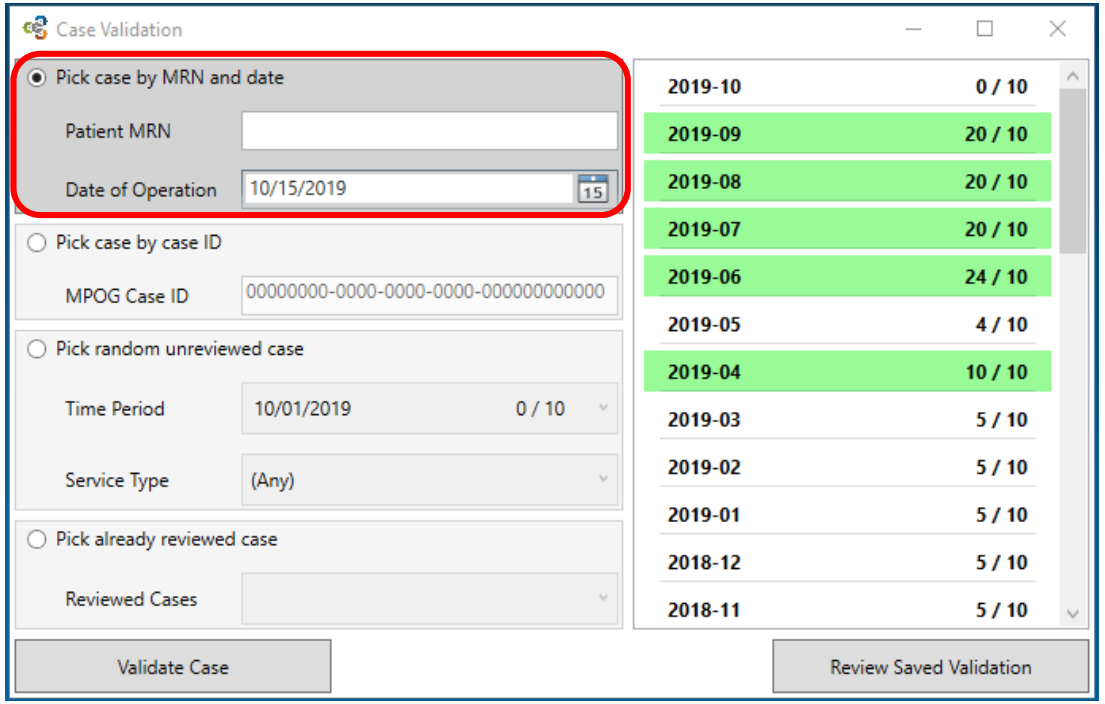


Pick a Case for Review

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

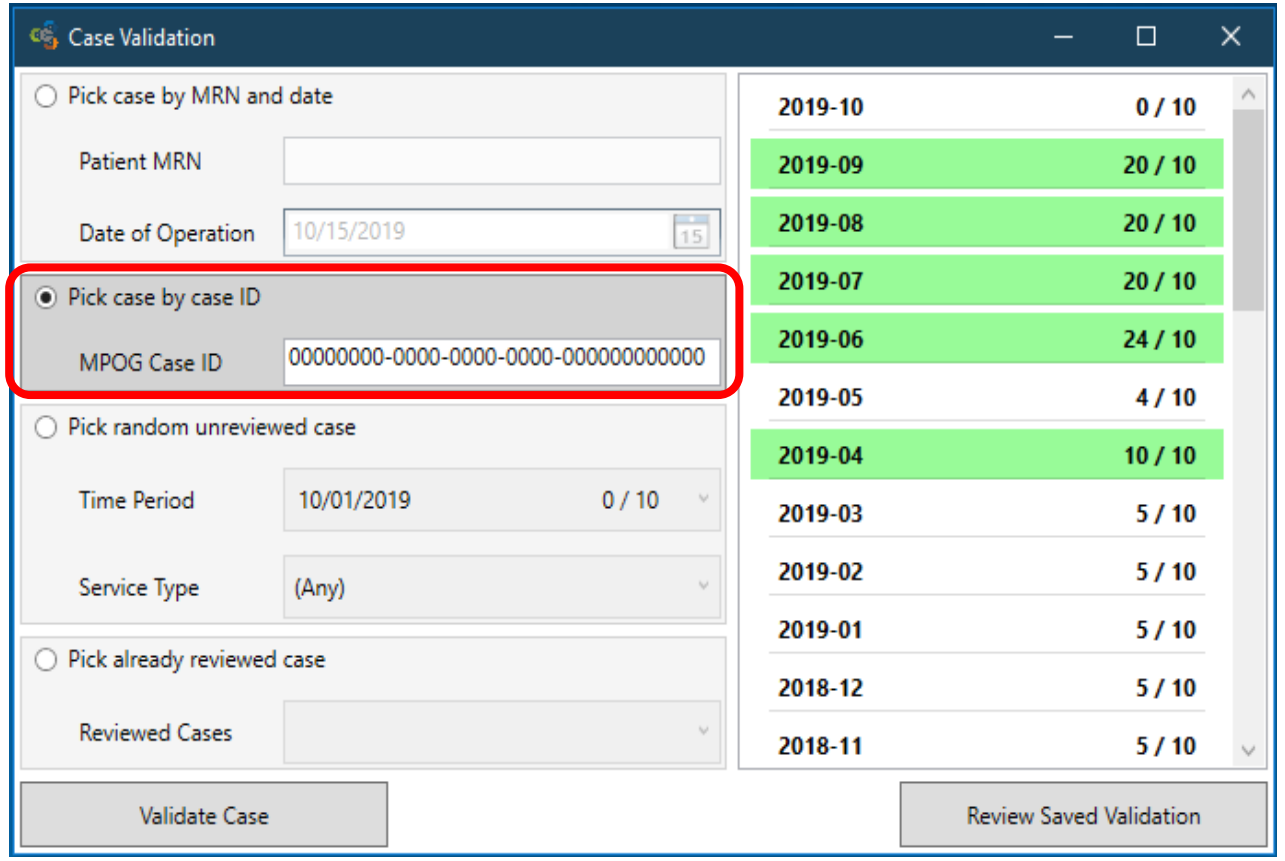
Pick a Case for Review: Select by MRN and Date

- 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.



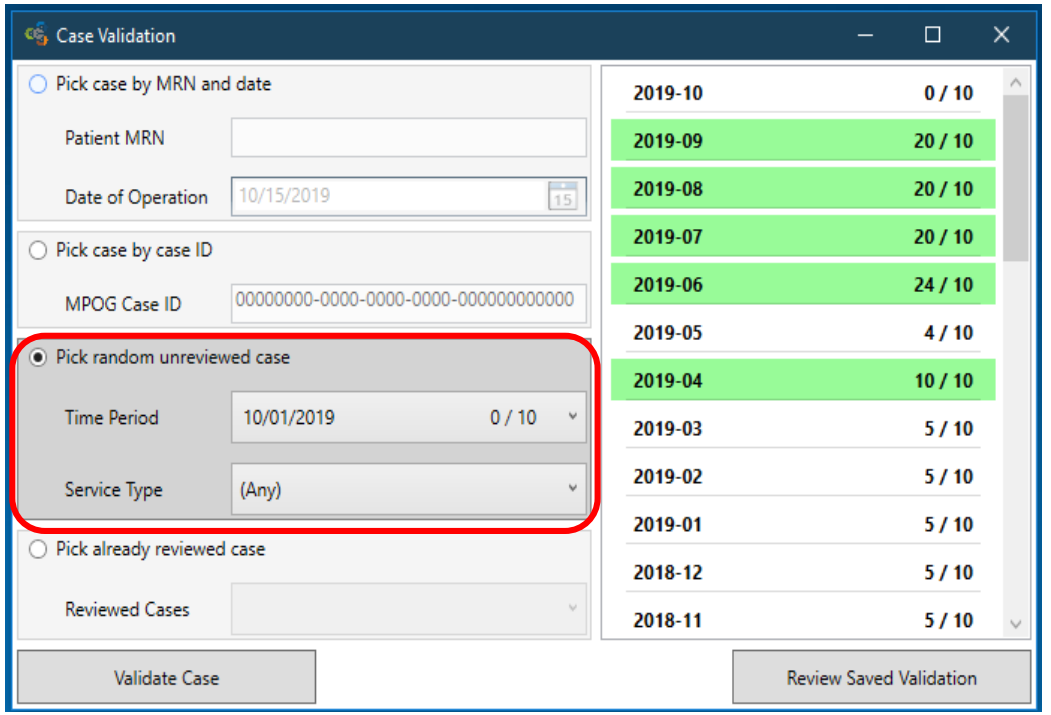
Pick a Case for Review: Select by Case ID

- 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.



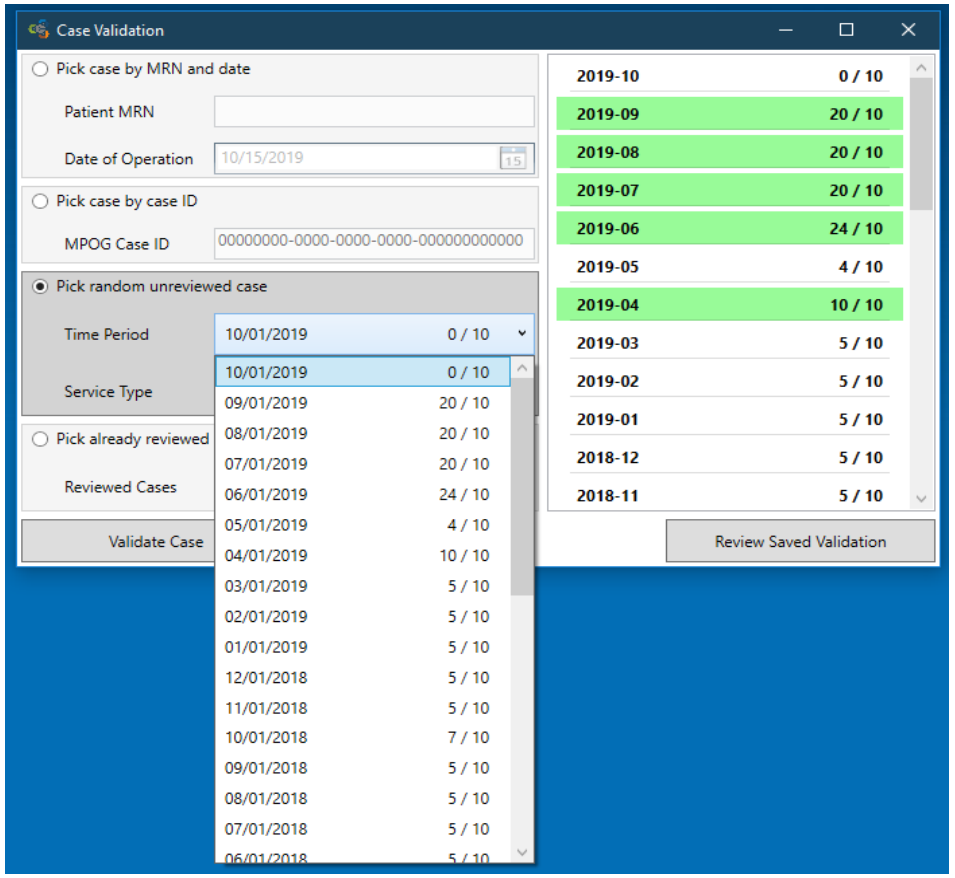
Pick random unreviewed case

- Click the dial next to “Pick random unreviewed case.”



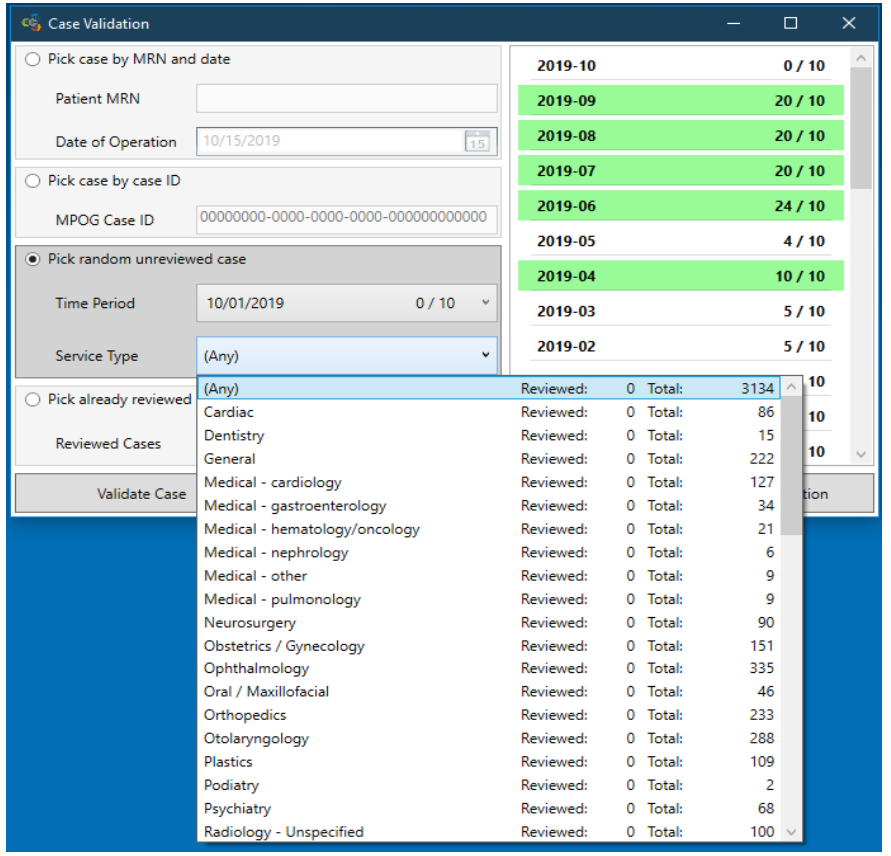
Pick random unreviewed case

- Choose the date range



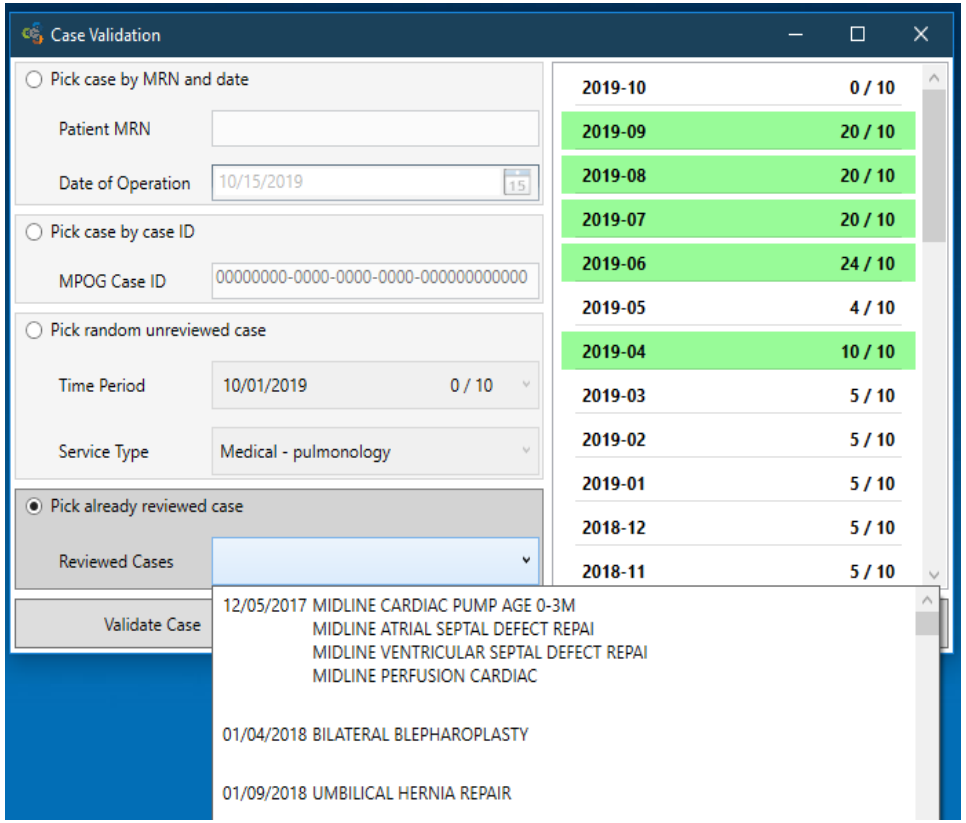
Pick random un-reviewed case

- Select a surgical service from the dropdown menu (optional)
- Select “Validate Case” at the bottom of the screen



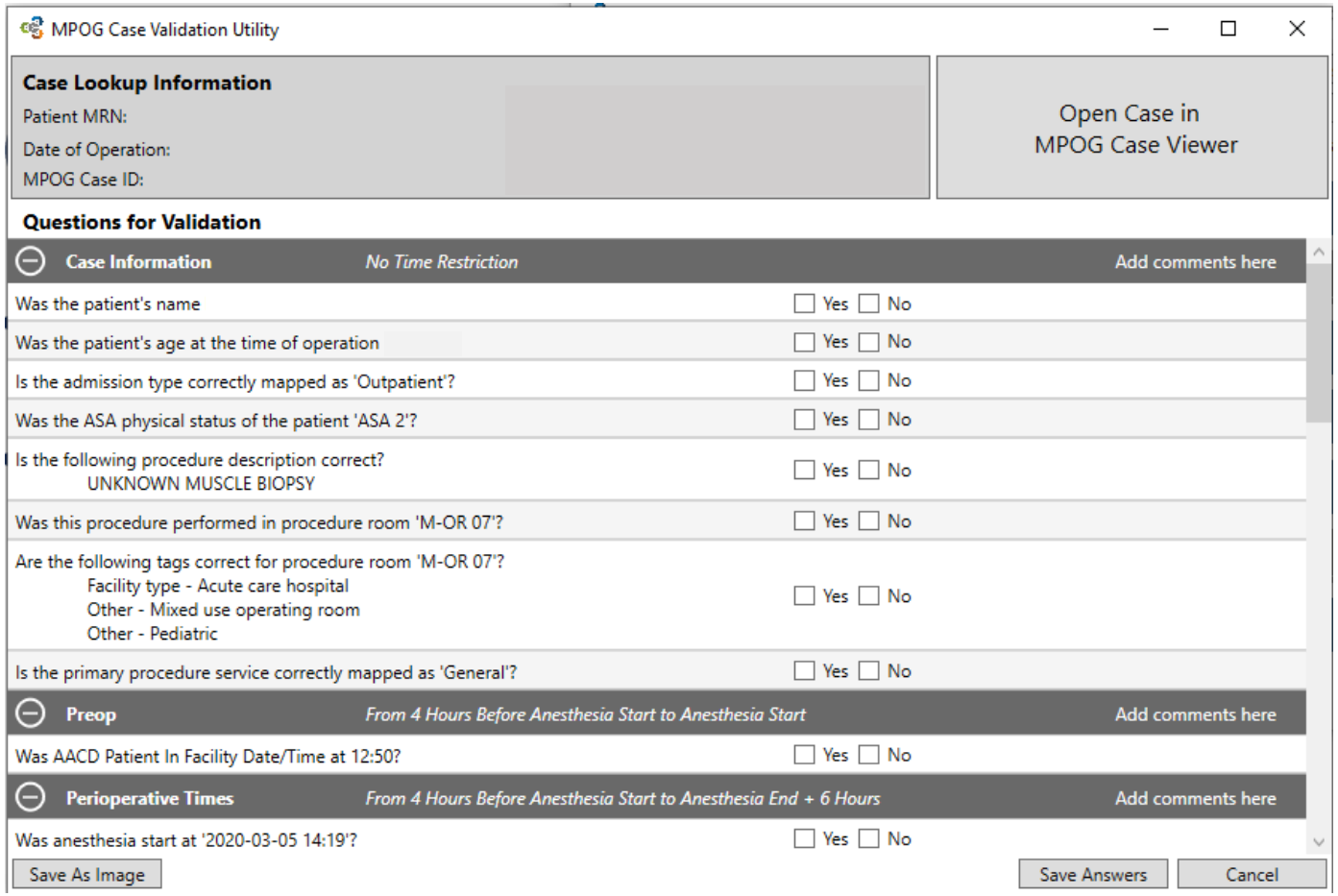
Pick a Case for Review: Picking an Already Reviewed Case

- 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.



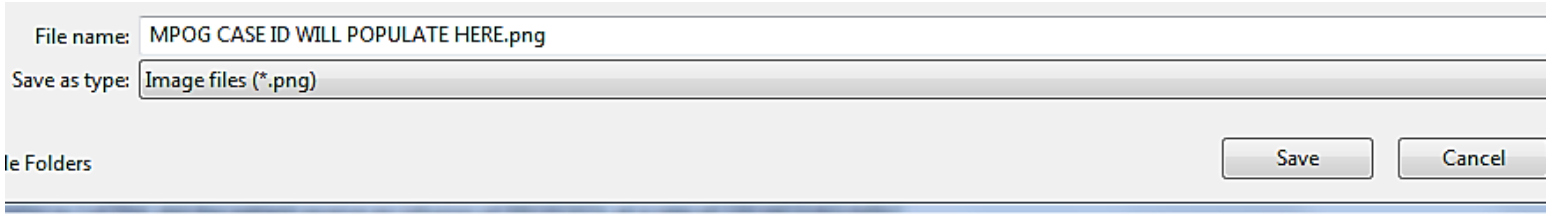
Case Validation

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



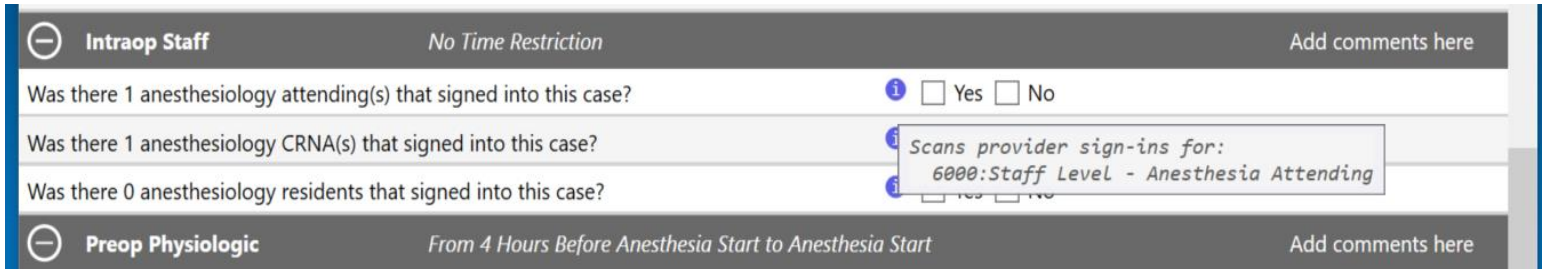
Case Validation

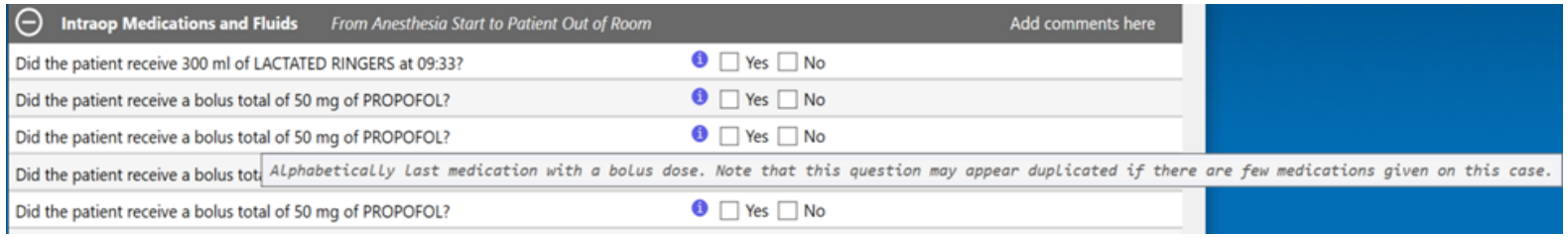
- You must answer every question with ‘yes’ or ‘no’ unless there is no data in which case the row for the question is highlighted in red.
- Compare questions against EHR. Please add comments as needed to explain any discrepancies.
- For issues that need follow- up from the site technical team or coordinating 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



Case Validation

- Tooltips are available by hovering over the “(i)”. Tooltips provide more information regarding which concepts the question uses





Case Validation

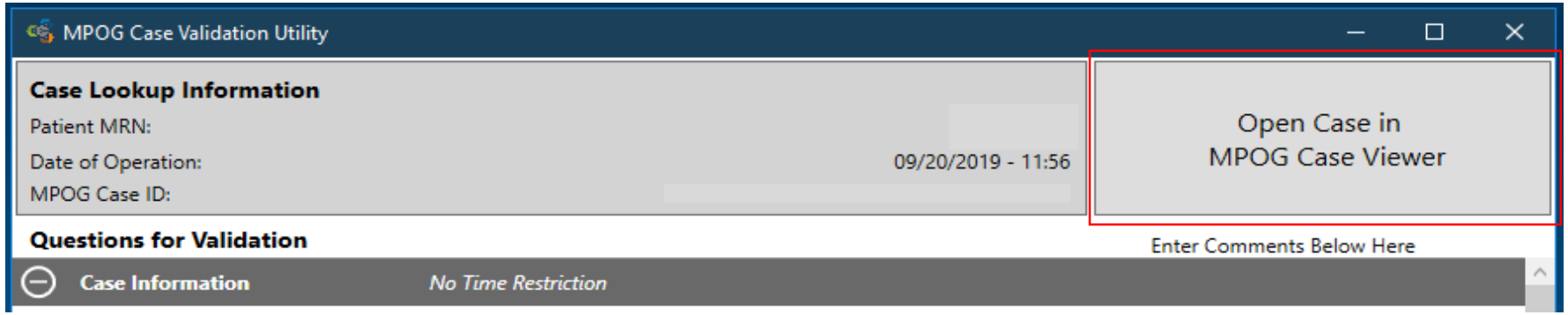
- May need 3-4 programs open at a time to verify the data in the MPOG case validator “matches” the information present in the hospital Anesthesia Information Management System (AIMS)
- It is recommended reviewers have 2 monitors/screens available for use
- Most likely will need intra-op record open on 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.

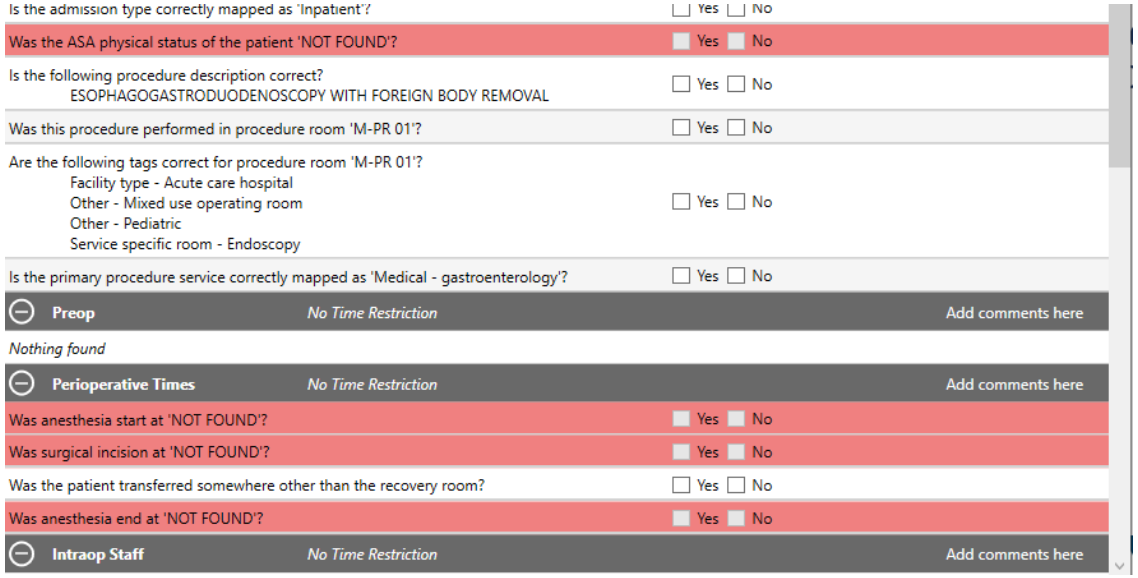
Case Validation

- 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 Module 5



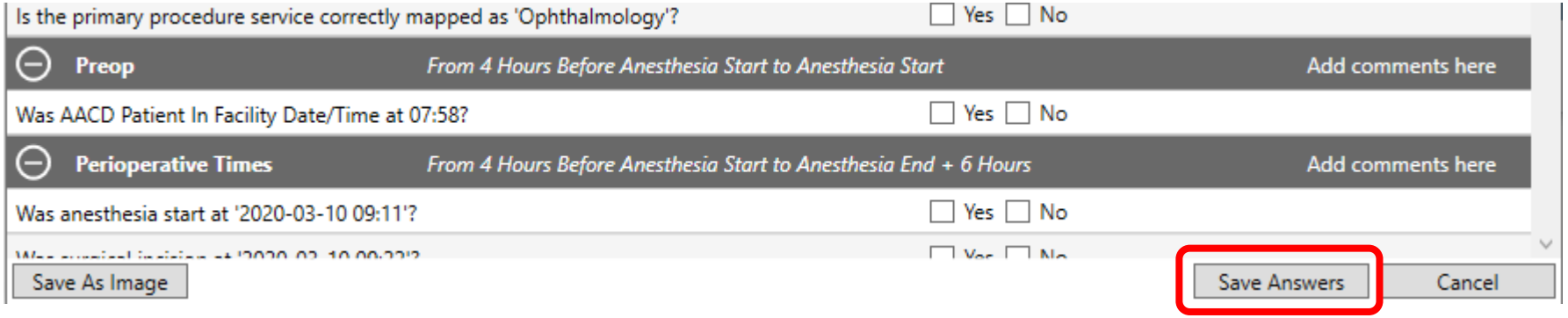
Case Validation

- 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 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.



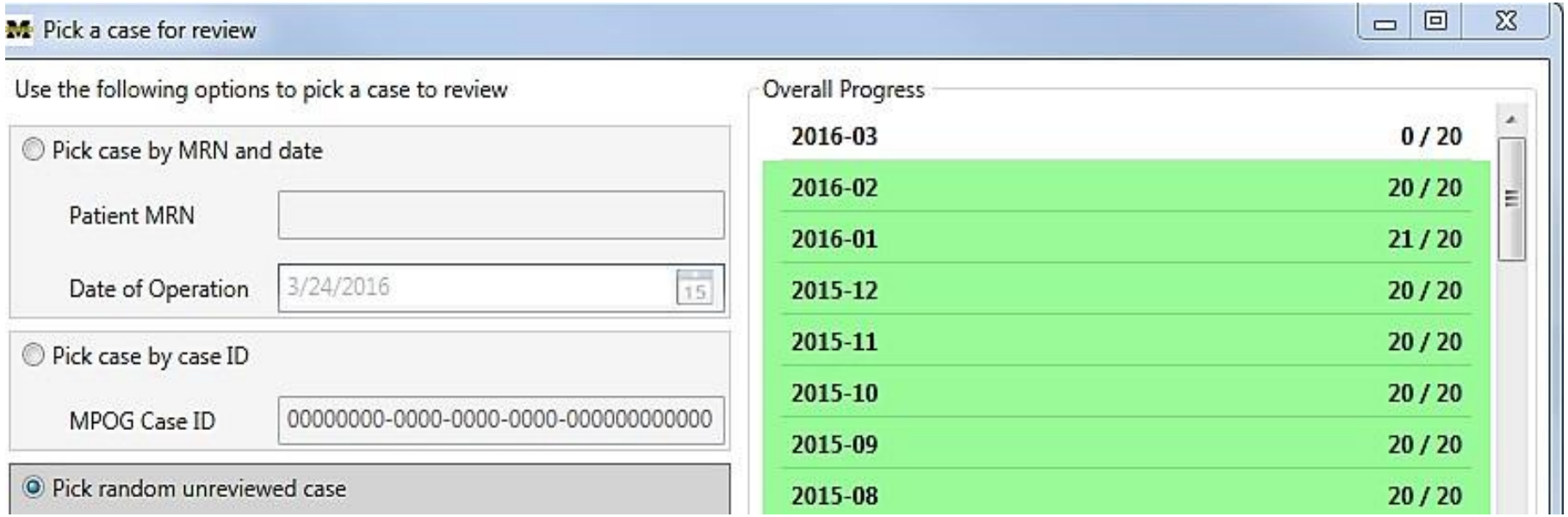
Case Validation

- 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 change 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.



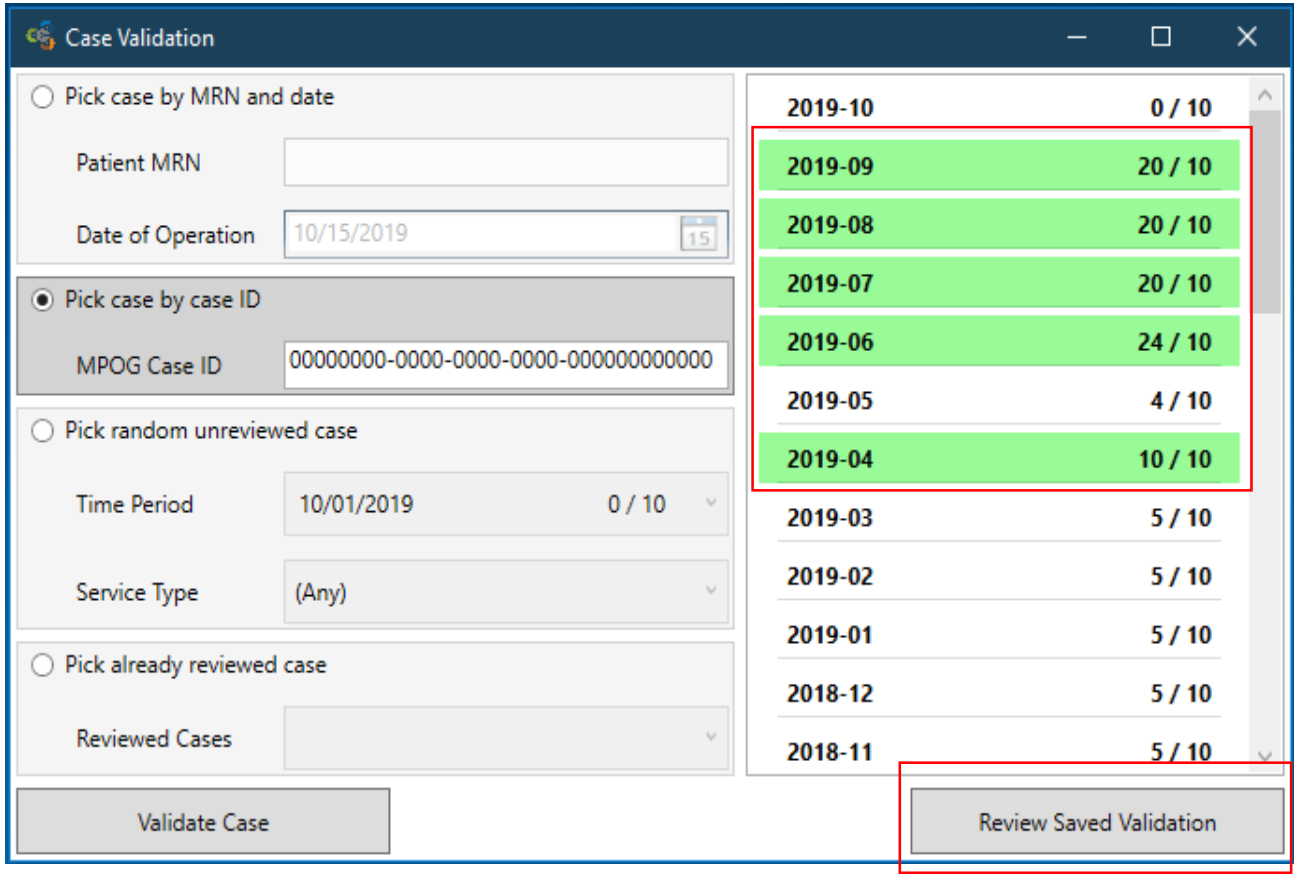
Case Validation

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

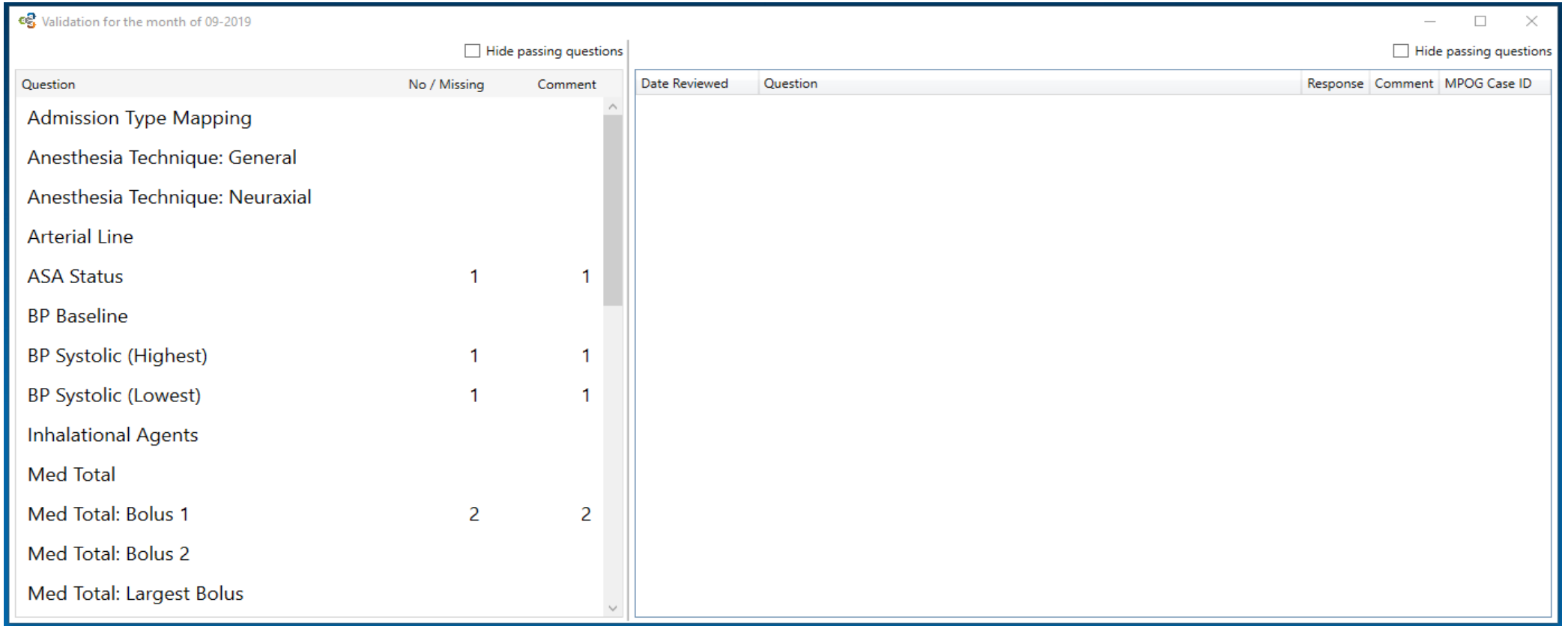


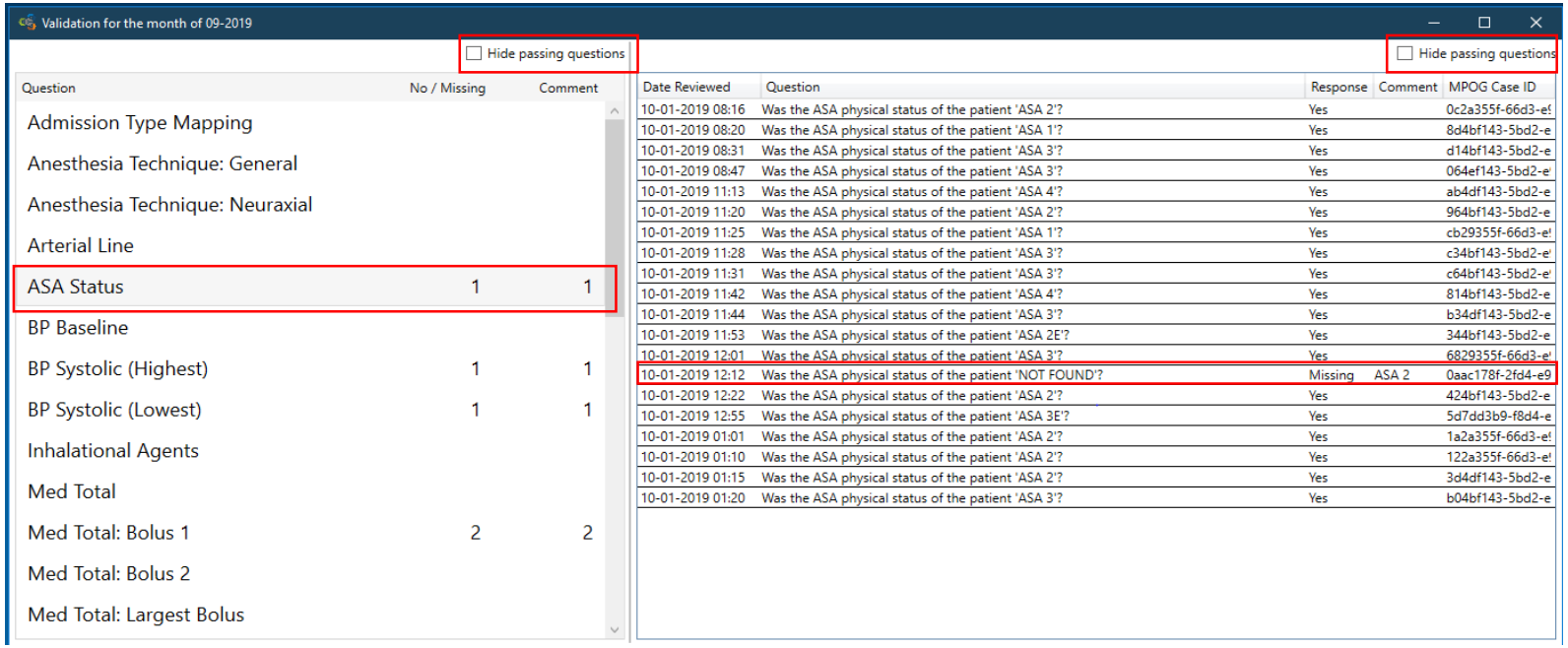
Case Validation

- 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



- 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





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

MPOG
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OUTCOMES GROUP

Module 8
PHI Scrubber

MPOG
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PHI Scrubber Overview

- Allows sites to remove staff and patient identifiers before transferring data to the MPOG Central database
- Must be executed before each transfer

PHI Scrubber Dictionary

- Several dictionaries have been preloaded into the application including a list of the most common first and last names from the US Census Bureau and the Snomed dictionary to identify healthcare terminology that should remain with the transfer.
- The site technical team must load the local institution-specific provider names and identifier dictionary to allow scrubbing of staff identifiers.
- It is important to note that though the PHI Scrubber will remove as many identifiers as it detects, there will always be a minimal (non-zero) risk of identifiers transferring via free text notes.

Accessing the PHI Scrubber

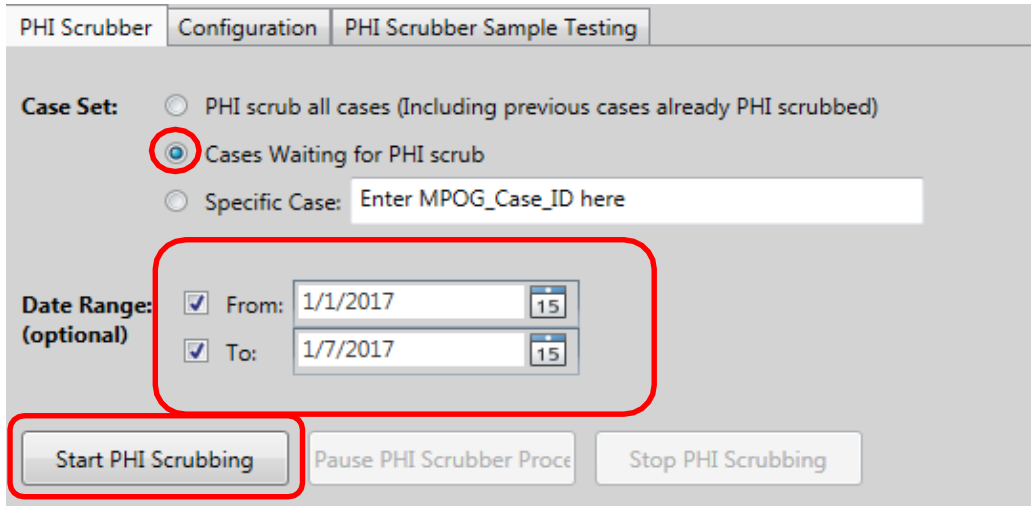
PHI Scrubbing Options

- Three options for selecting a ‘Case Set’ to be scrubbed
  - **PHI scrub all cases (Including previous cases already PHI scrubbed):** Allows users to scrub all cases including those that have been scrubbed in the past.
  - **Cases Waiting for PHI scrub:** Allows users to scrub only those cases marked as needing to be scrubbed.
  - **Specific Case:** Allows users to scrub a single case using the MPOG Case ID. A date range should not be selected for scrubbing a single case.

- **Date Range:** Selecting a date range is optional but is often used to assist with limiting the scrubbing procedure to only those cases the user wishes to transfer. Again, a ‘Case Set’ must be selected in addition to a date range in order to proceed with the scrubbing process.

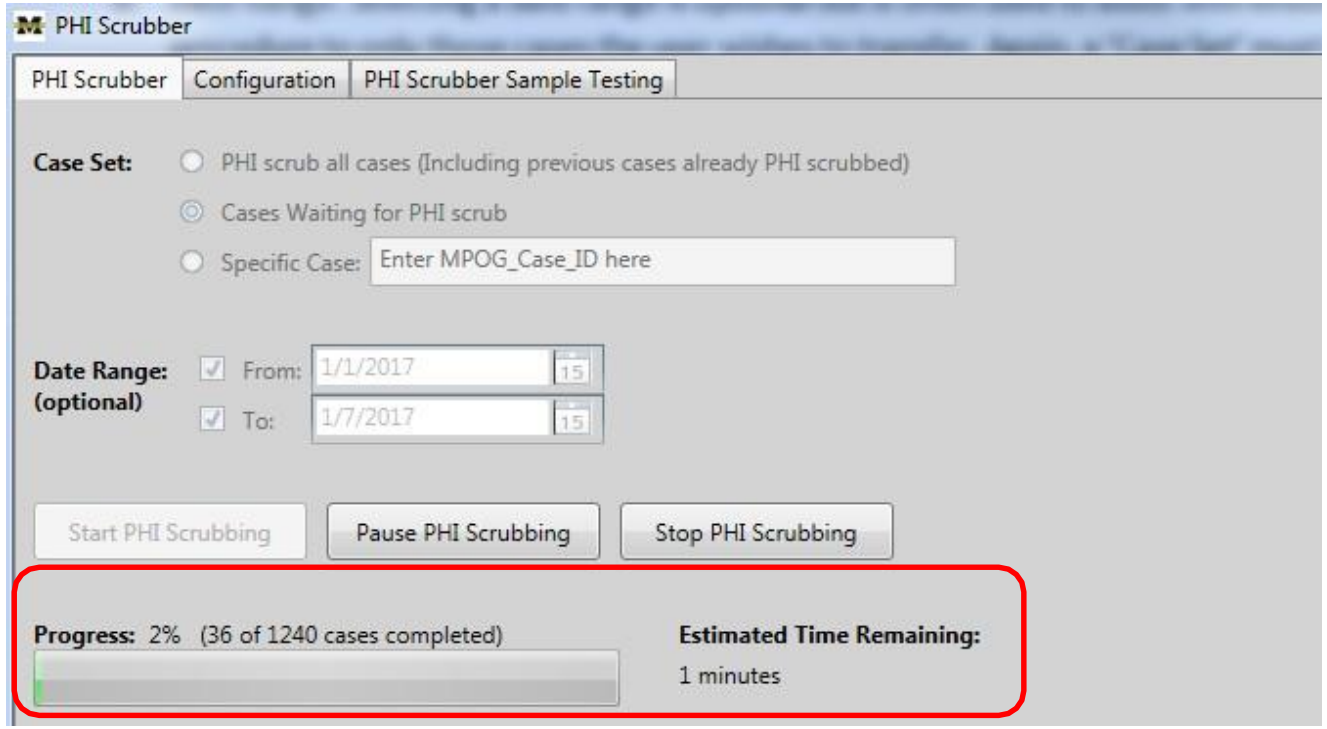
Initiating PHI Scrubber

- Once the case set is selected, click ‘Start PHI Scrubbing’ to start the process.
- There are options to ‘Pause’ or ‘Stop’ PHI Scrubbing.
  - If pausing the PHI Scrubber, the application must remain open in order to ‘un-pause’ and restart the scrubbing process.
  - If for some reason, the user exits out of the application while ‘paused,’ the Case Set and Date Range (if applicable) will need to be selected again to continue scrubbing.



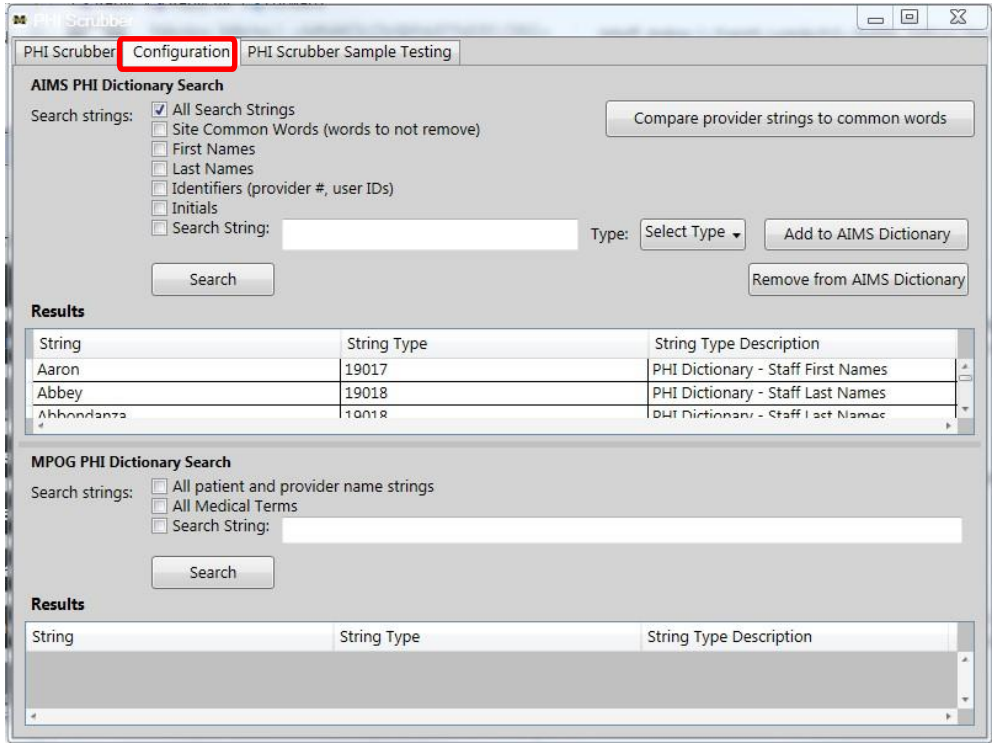
PHI Scrubbing

- The Progress Bar displays the percent complete and number of cases completed. The tool also assigns an Estimated Time Remaining to the job.



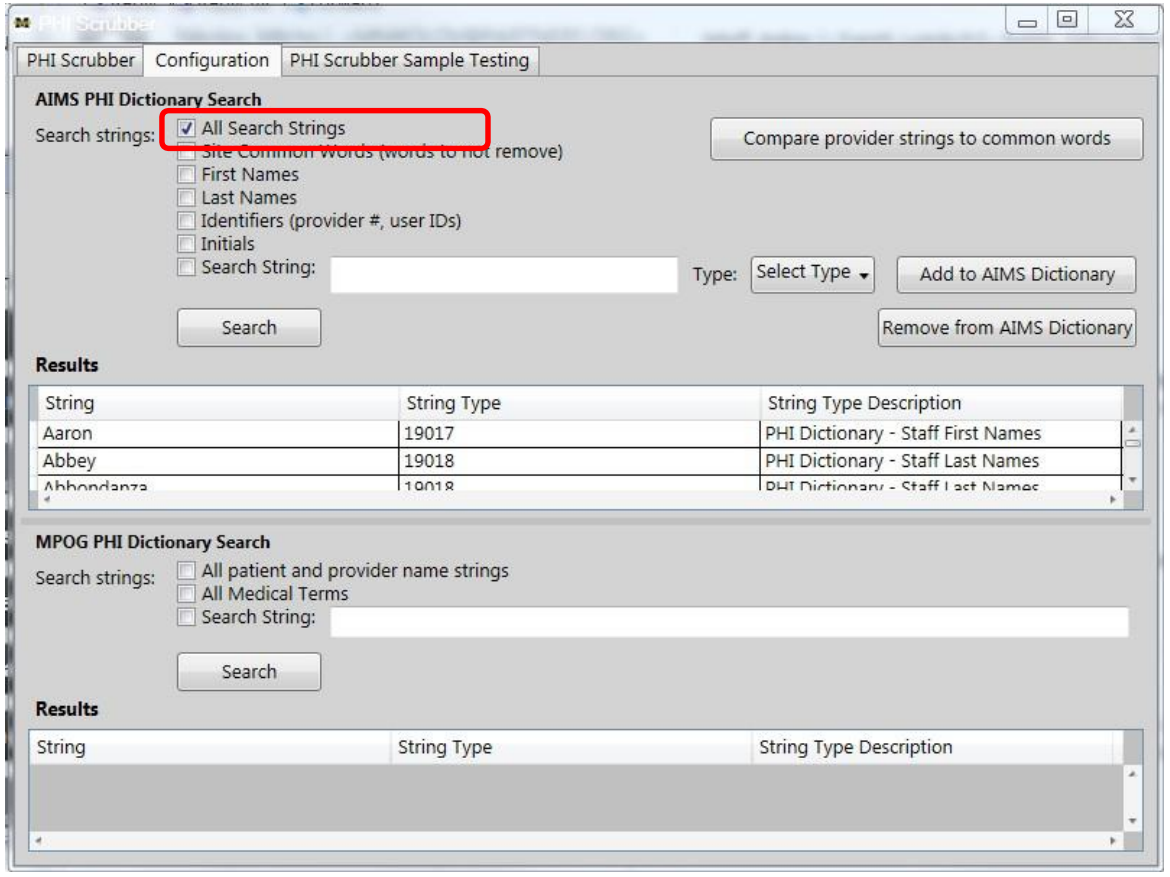
AIMS Dictionary Configuration

- The **Configuration tab** provides access to the AIMS PHI Dictionary and allows you to search through several dictionaries to establish what words/strings should be considered PHI and removed, and which should remain.
- The AIMS PHI Dictionary should be previously loaded by your designated technical team and consists of all institution-specific provider names and identifiers.
- The purpose of the institution specific provider PHI dictionary is to allow the PHI scrubbing process to remove provider names or identifiers that you do not want included in your MPOG contribution.
- Although the scrubbing algorithm can use MPOG dictionaries to remove nationally known common names (e.g. Kevin), local dictionaries are needed for uncommon names (e.g. Sachin).



Configuration

- To search specific strings, select ‘All Search Strings’ and then click ‘Search’ to display the list of strings in your local database. Each institution must determine what provider information they are comfortable leaving in their database (i.e. provider numbers, initials, clinical terms, etc.)
- **Note:** If the custom search string checkbox is not selected, the program will display all the words found in the dictionary for the selected categories.

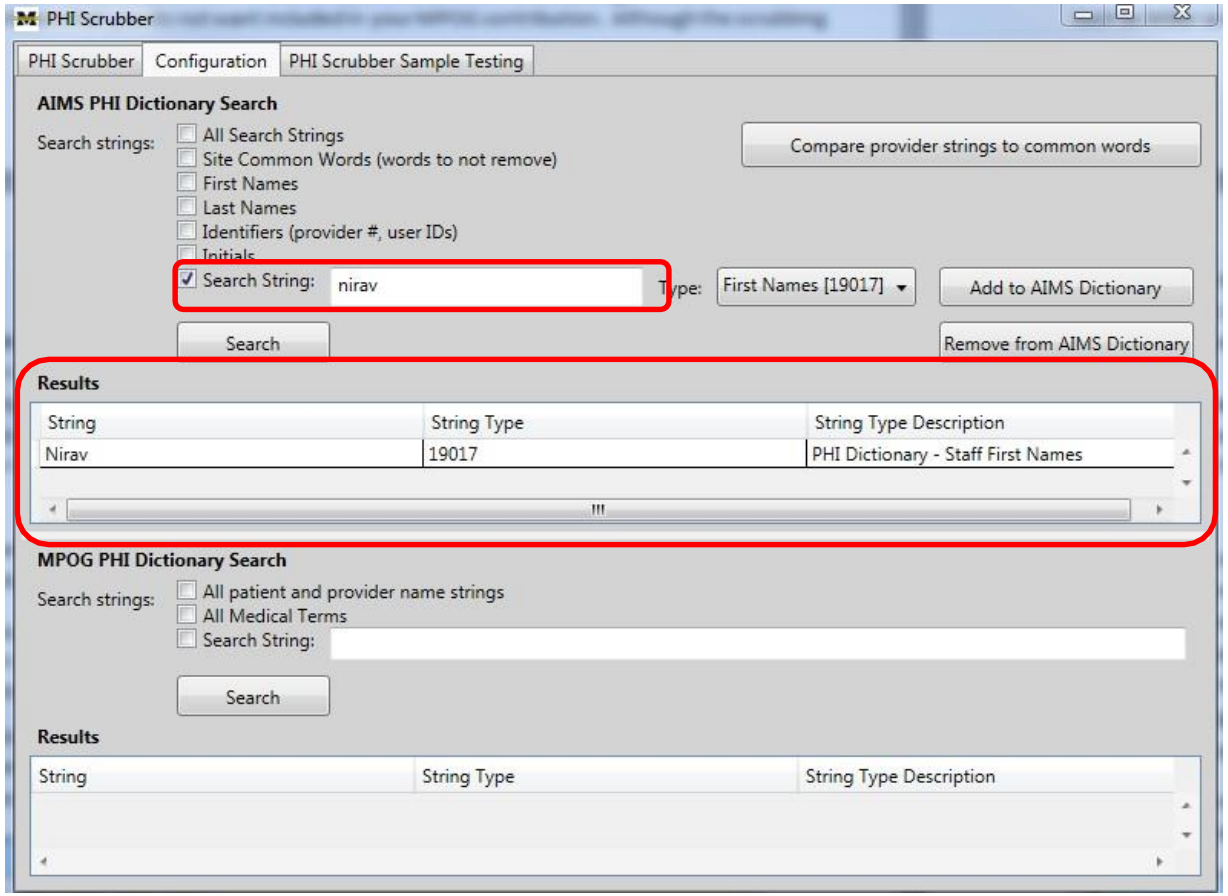


Configuration

- If ‘Search String’ is selected, the program will search the selected categories for the specified search string indicated.
- To remove a string from the AIMS PHI Dictionary, simply highlight the desired string and click ‘Remove from AIMS Dictionary.’
- Assess the list to determine which terms are common words that you want to keep.
- For example, you may have a provider name of “Pain,” you must determine the research value vs. privacy risk

Configuration

- Clinical terms will need to be removed from the local dictionary. All instances of clinical terms such as Miller and Macintosh will not be scrubbed unless it is the patient's name.



Configuration

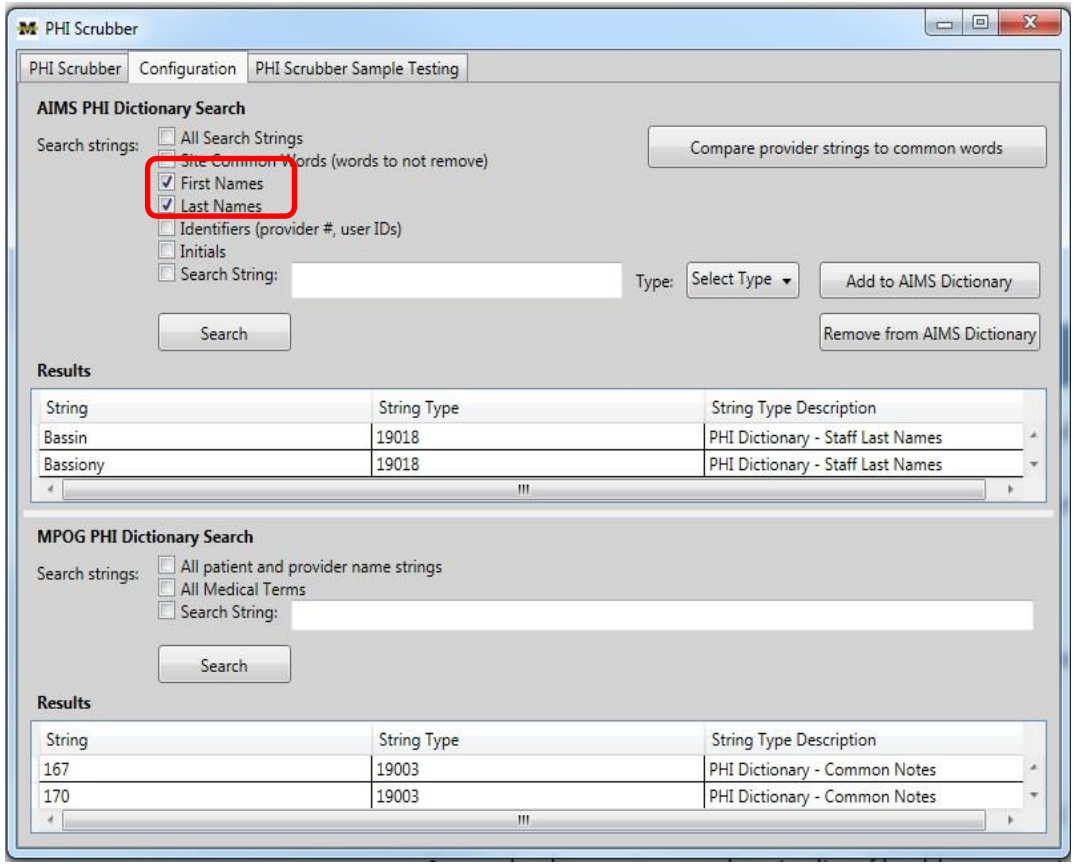
- The ‘Compare provider strings to common words’ function searches through the preloaded dictionaries to identify PHI, which strings should be removed, and which strings should be kept.
- Once you have removed all terms in your local dictionary, click on ‘Compare provider strings to common words.’
- This will compare the provider names in your local dictionary to clinical terms which are listed in Snomed (such as CRNA, attending, and Miller).

Configuration

- The MPOG PHI Dictionary can also be tested to identify medical terminology and provider names already existing in the default dictionary.
- The MPOG Dictionary includes:
    - US Census: Includes all common first and last names (strings to remove)
    - Snomed: Includes comprehensive list of medical terms (strings to keep)
    - Common Perioperative Terms and Acronyms (strings to keep)

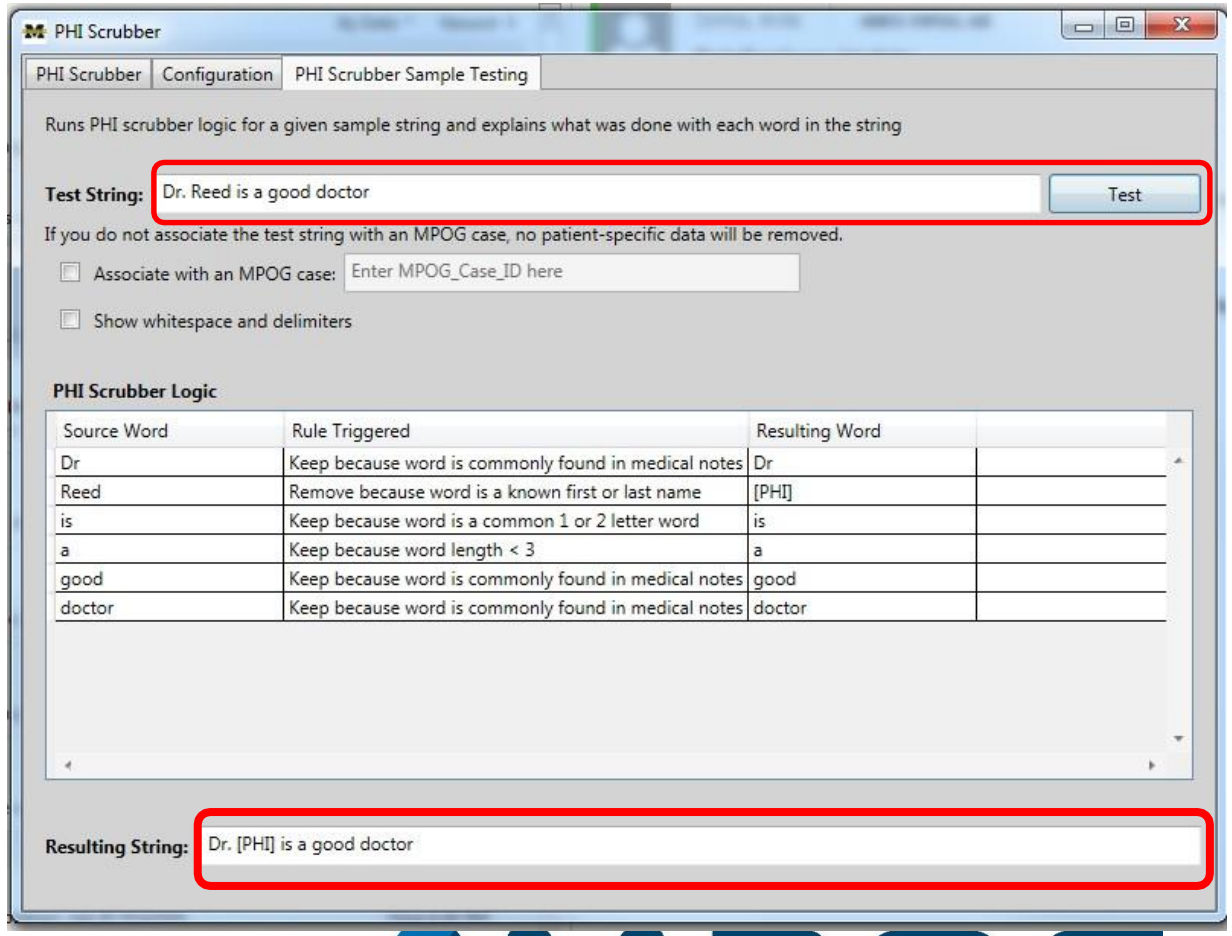
Configuration

- To test the ‘Configuration’ function, select the ‘Configuration’ tab at the top.
- Select ‘First Names’ and ‘Last Names,’ then click ‘Search.’
- Provider names from the PHI dictionary should display in the Results section as shown below.
- If the Results display is empty, contact your technical team to load your local PHI dictionary data.



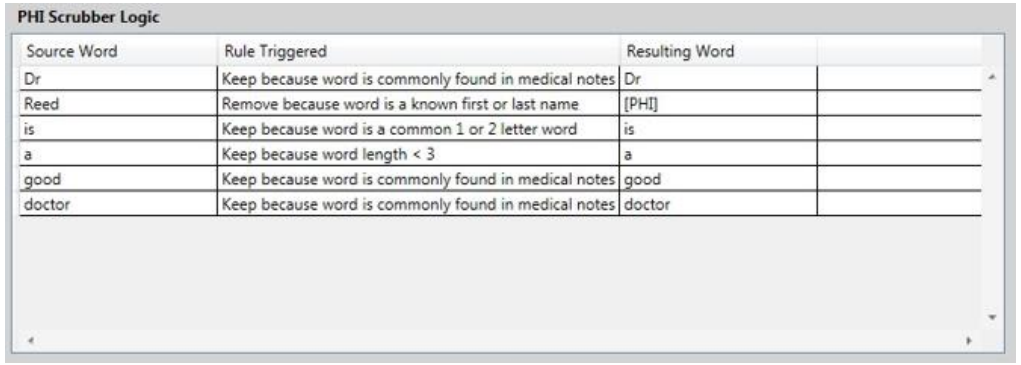
PHI Scrubber Sampling Test

- The 'PHI Scrubber Sample Testing' runs scrubbing logic for a given sample string and categorizes each word.
- This function is used to run a test string to determine if identified PHI information (in this case, staff names) will be properly excluded.



PHI Scrubber Logic will display included and excluded variables within your test string phrase, indicating PHI has been removed as displayed in the 'Resulting String.' A grid will display the following elements:

- **Source Word:** Original word(s) entered into the 'Test String' prior to PHI removal
- **Rule Triggered:** The reason why the word was or was not removed
- **Resulting Word:** The word(s) after 'PHI Scrubber Logic' has been applied and PHI has been removed
- **Note:** Clinical terms will need to be removed from the local dictionary. All instances of clinical terms such as Miller, Macintosh, and Brown will not be scrubbed unless it is the patient name.



PHI Scrubber Logic

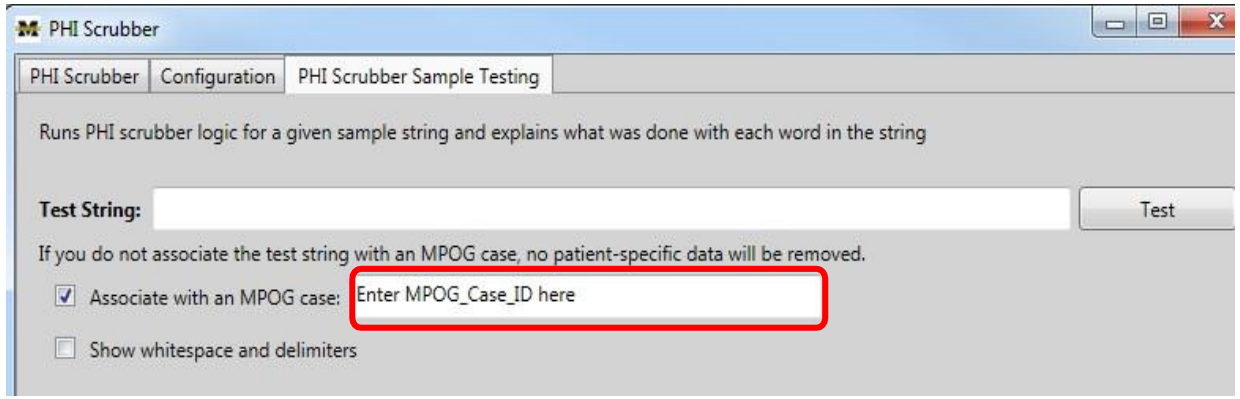
Source Word	Rule Triggered	Resulting Word
Dr	Keep because word is commonly found in medical notes	Dr
Reed	Remove because word is a known first or last name	[PHI]
is	Keep because word is a common 1 or 2 letter word	is
a	Keep because word length < 3	a
good	Keep because word is commonly found in medical notes	good
doctor	Keep because word is commonly found in medical notes	doctor

Associate with an MPOG Case

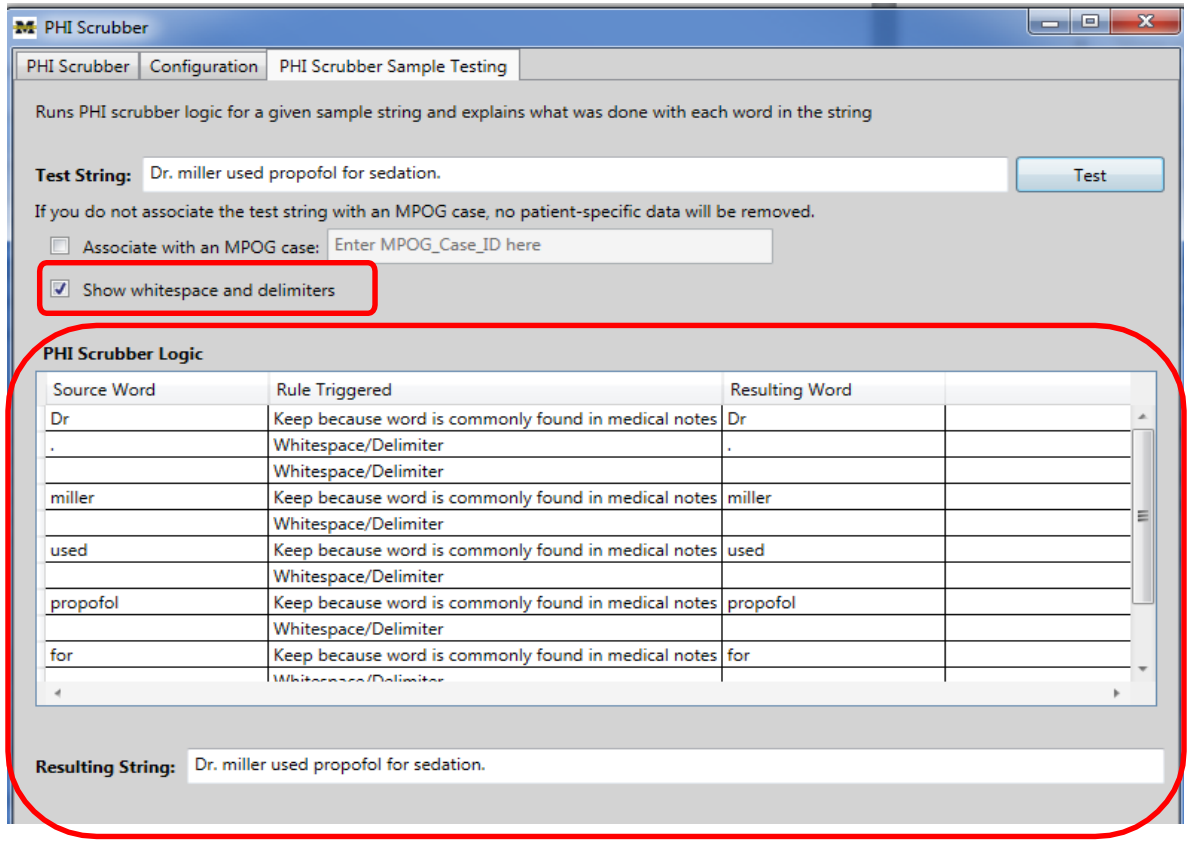
- You can also run a ‘Test String’ against a specific case to ensure PHI is being scrubbed from cases.
- This allows users to enter a valid case ID, which will run the results of the’ PHI Scrubber’ process.
- Without associating with an MPOG case, no patient specific data scrubbing can be tested. Only name strings in the US Census Bureau and MPOG staff identifier list would be removed. If there is patient PHI in the test string that is not a common name or institution-specific staff name, association with an MPOG case will show the patient name and will not be scrubbed.

Associate with an MPOG Case

- Select ‘Associate with an MPOG case’ then click ‘Test.’
- The MPOG case ID can be obtained from the MPOG case viewer application.
- ‘Show whitespace and delimiters” displays the whitespace and the delimiter characters that were present in the test string as words in the Results data grid.



Associate with an MPOG Case



Module 9

Transfer to MPOG Central

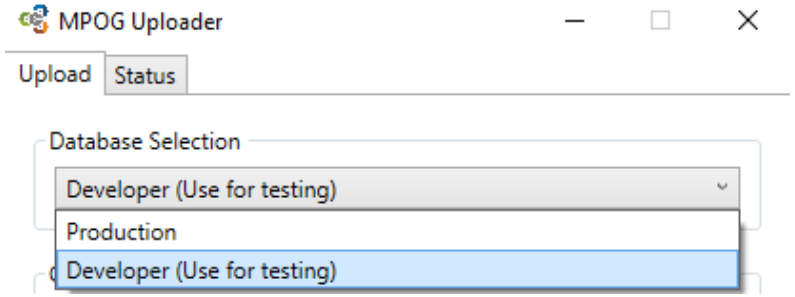
Transfer to MPOG Overview

- Exports cases from your Local MPOG database and sends them to the MPOG Central Repository
- **A 'Test Transfer' of your local data to 'MPOG Central' is required prior to the initial 'Production Transfer.'**
- MPOG QI Coordinators will assist you with initial upload to the MPOG Central TEST and Production environments.
- Prior to transferring data to MPOG Central, PHI Scrubbing must occur. Refer to 'Module 8: PHI Scrubber' for more details on how to complete the scrubbing process.

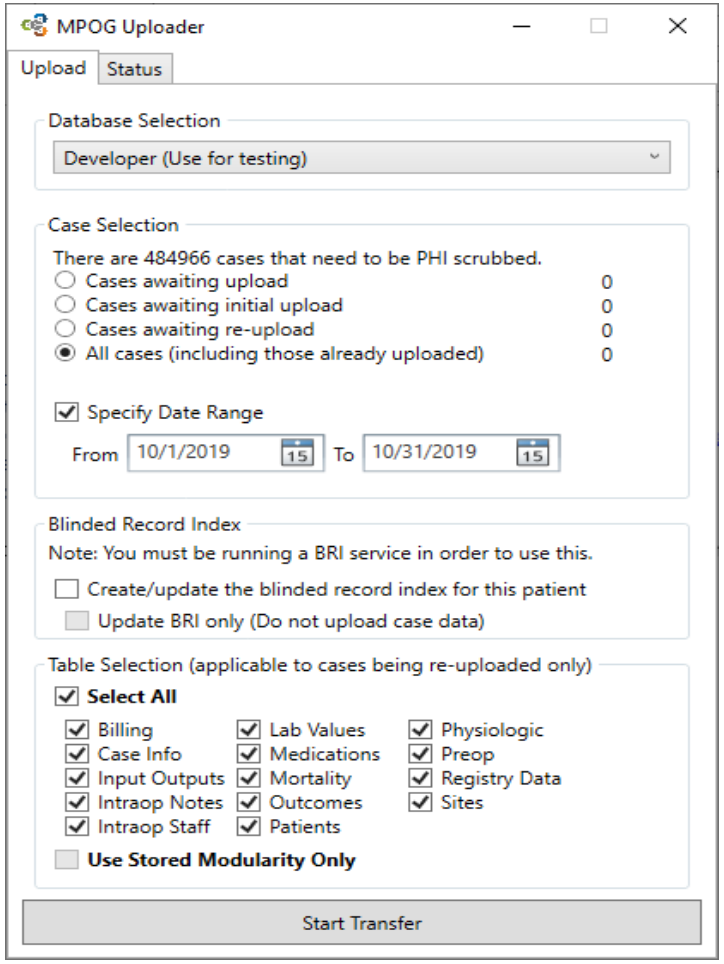
Accessing Transfer to MPOG Central

Transferring to MPOG Central – **TEST** Environment

- Test environment allows sites to transfer data to the Coordinating Center without impacting the larger production data set used for research and quality improvement activities.
- A QI Coordinator will direct the transfer process for initial upload.
- Open the ‘Database Selection’ dropdown window and select the ‘Developer (Use for testing)' option.

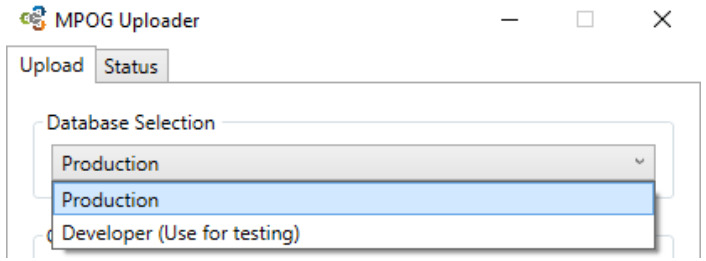


- Ensure the following selections have been made prior to beginning the transfer process (The QI Coordinator will advise on the date range to transfer for initial upload)
- Once cases have processed in Central, a QI Coordinator will review your data and contact you with how to proceed.

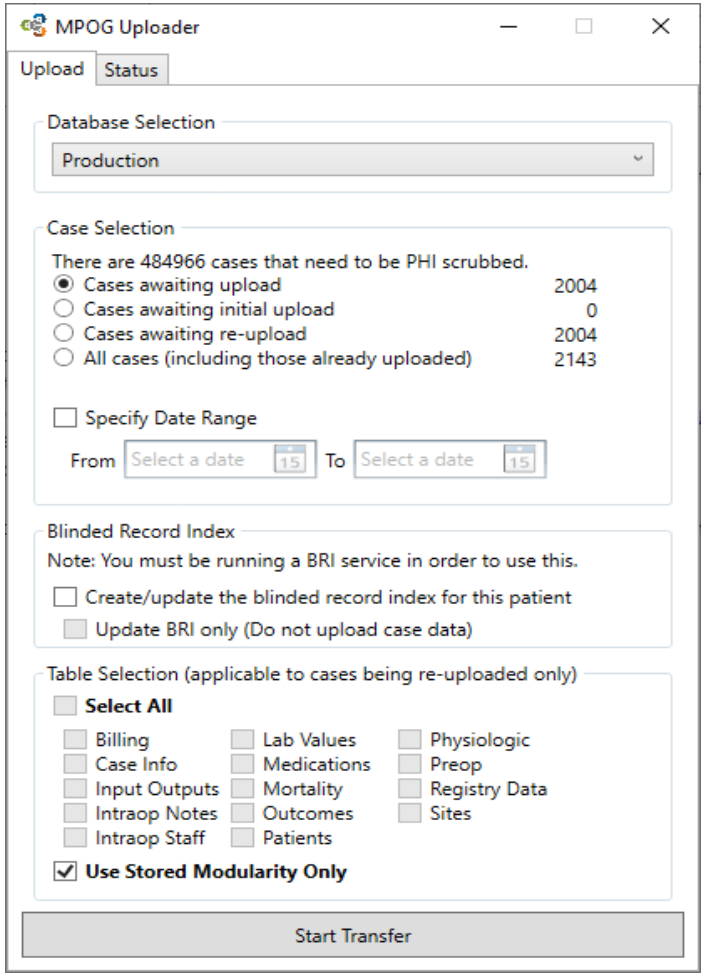


Transferring to MPOG Central – **PRODUCTION** Environment

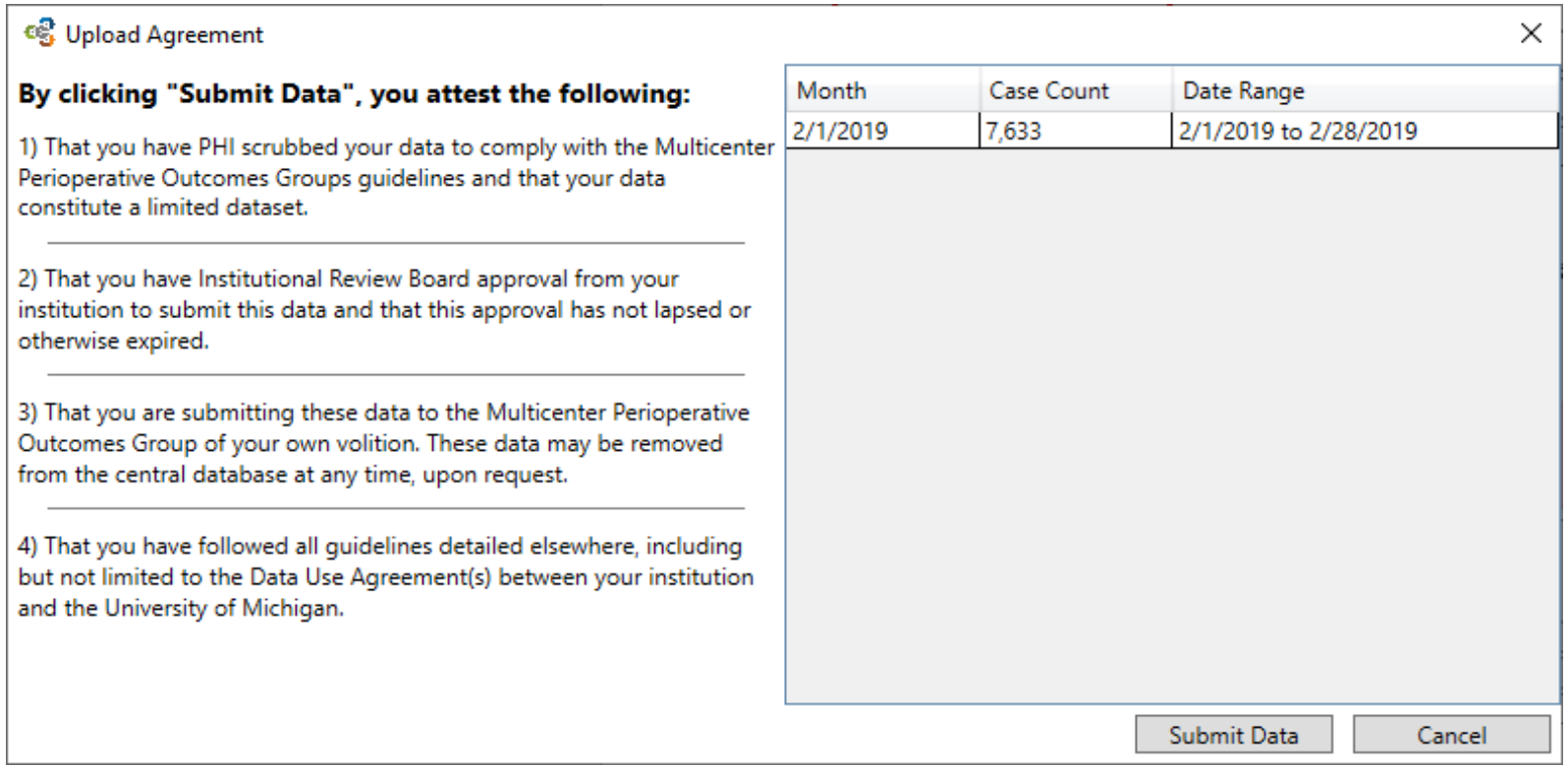
- **Note: An MPOG QI Coordinator or MPOG Director must approve first upload to the MPOG Central Production Environment.** Please contact the Coordinating Center for directions on how to execute your first transfer to production.
- Open ‘Transfer to MPOG Central’ in the MPOG Suite.
- In the Database Selection window, check that the default selection for ‘Production’ is highlighted in the dropdown menu.



Next, ensure the following selections have been made prior to beginning the production transfer process and select ‘Start Transfer:’



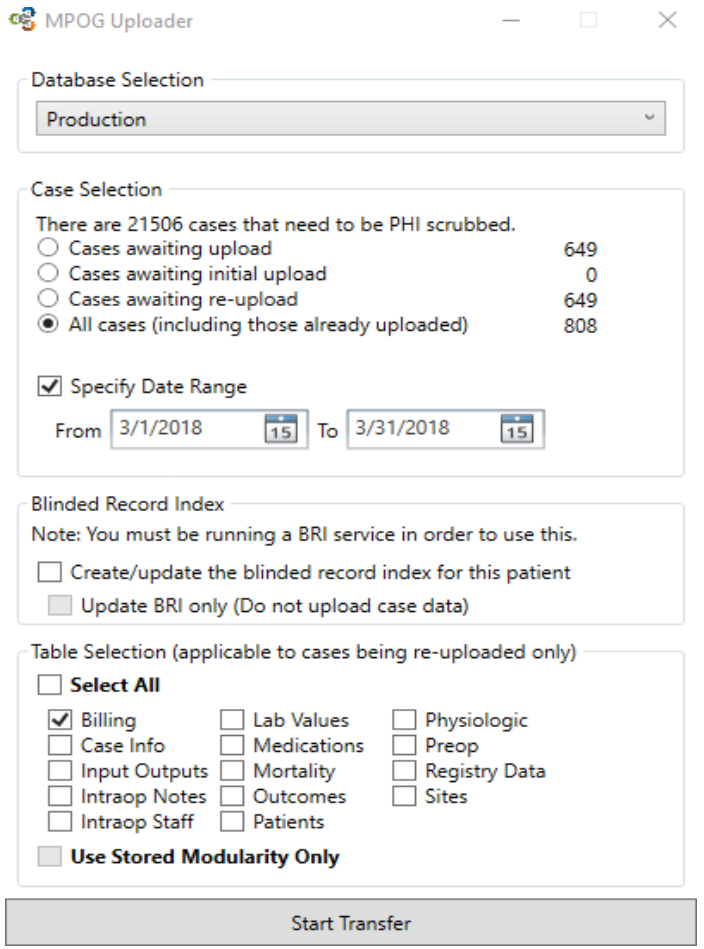
After clicking ‘Start Transfer’ a window will display the date range and case count that you have selected for upload. Review the attestation on the left – If all four items have been completed, select ‘Submit Data’ to begin transfer.



Resubmitting Data for Transfer to MPOG Central

- Occasionally, specific data type and/or date range may require re-submission to MPOG Central due to changes that were made in your site's MPOG local database after the previously scheduled monthly data upload (i.e. 'Billing' or 'Intraop Notes'

To resubmit data, such as ‘Billing’ to MPOG Central, ensure the following selections have been made in the MPOG Uploader window prior to beginning the production transfer process:



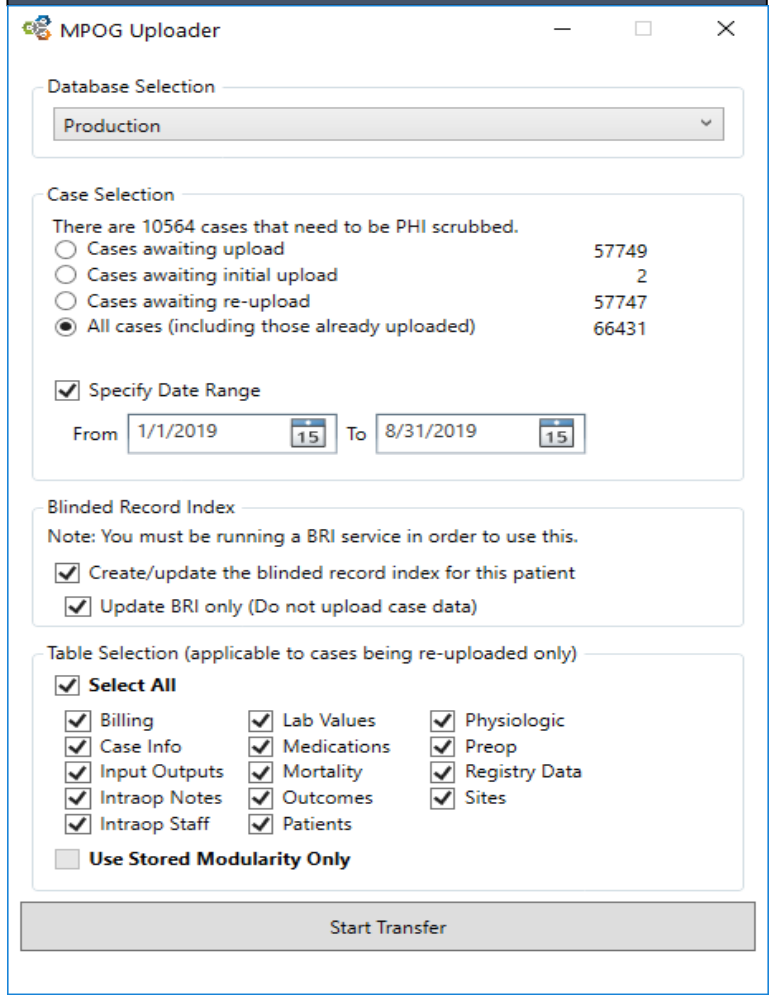
Blinded Record Index (BRI)

- Approved by the federal government registries manual as non-PHI
- BRI is a method of using a secure hashing algorithm to match PHI data sets without actually sharing any PHI
- This can allow data systems to match patients without the risk of sharing protected patient information
- For more information on how BRI works, visit our website.

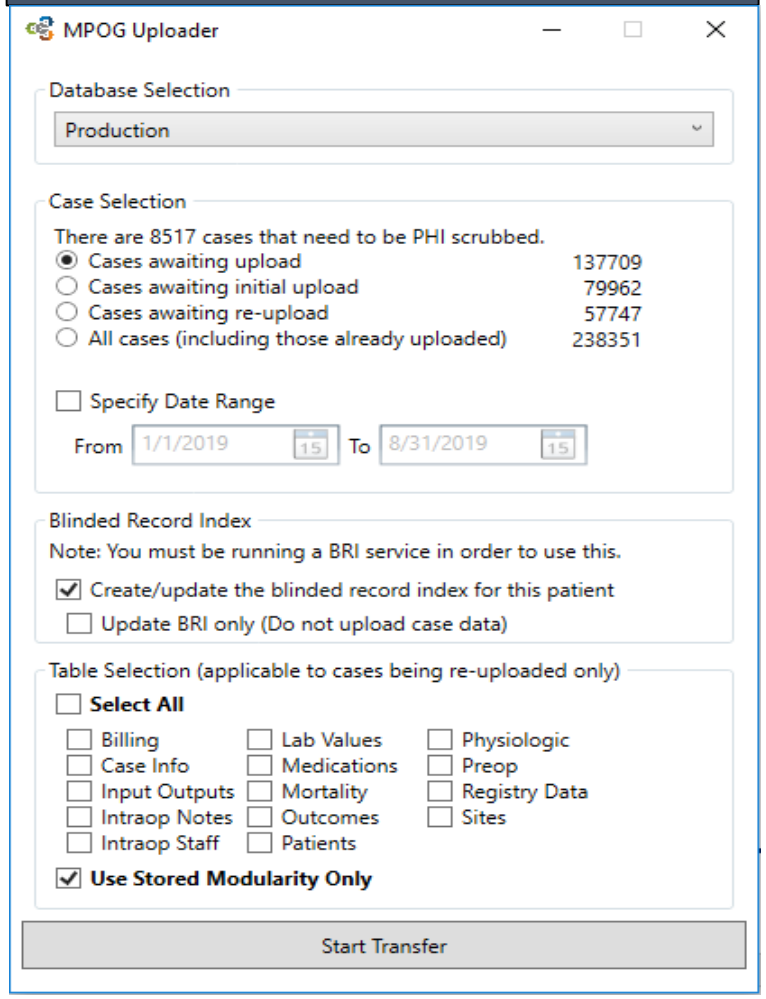
BRI Uploading

- Use the MPOG Uploader to BRI your data
- In the Blinded Record Index section, make selections based on whether you are blinding historical or new data (see next slide)
- Uploading all case data will take longer than updating BRI only
- If there are no changes to the data the require re-upload, we recommend that you be sure to select the “Update BRI only” box

Historical Upload

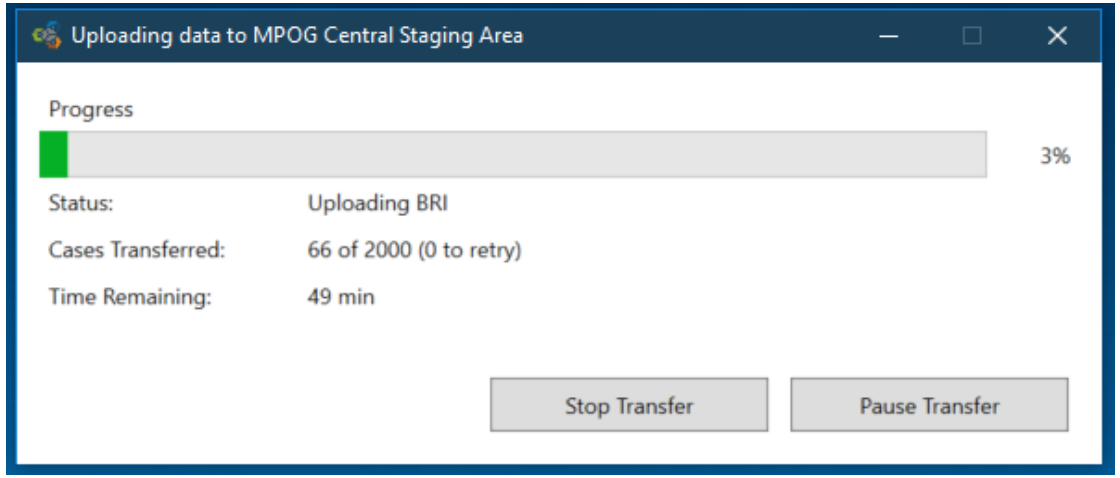


Monthly Upload

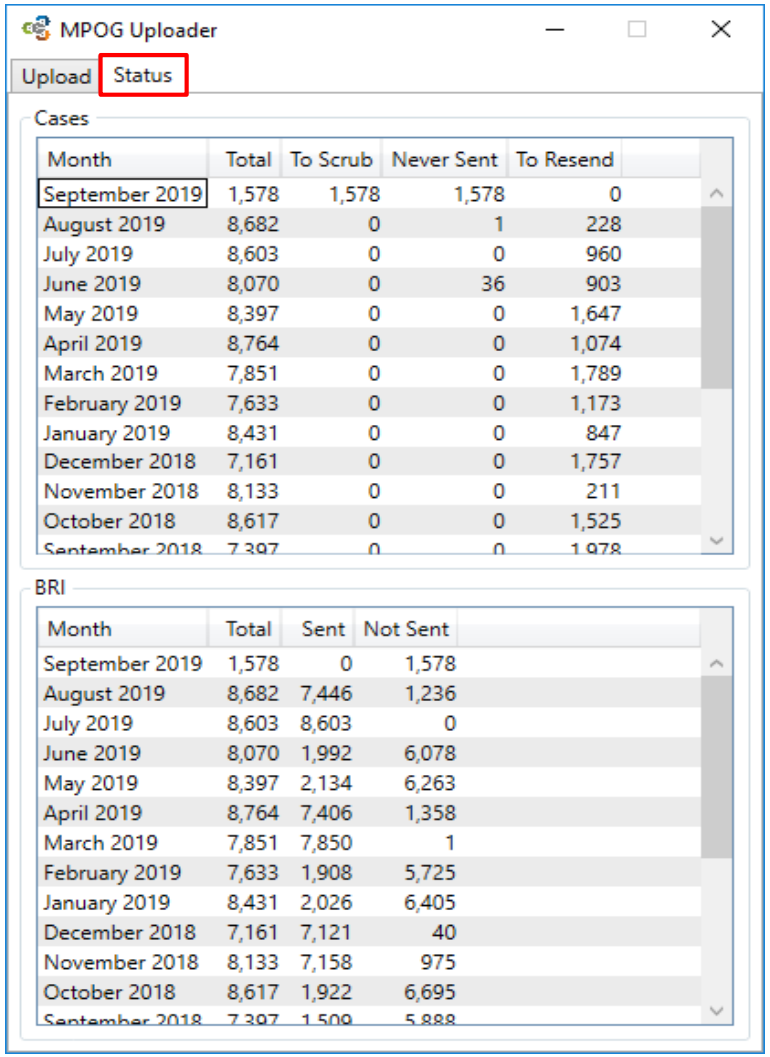


BRI Upload Tracking

- Once you select ‘start transfer’, a status bar will appear with an estimated processing time.



A status tab located in the MPOG uploader which displays which cases have been uploaded versus what cases have a blinded record index.



MPOG
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Module 10
Content Synchronization

MPOG
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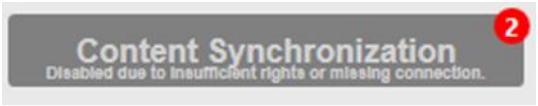
Content Synchronization Overview

- Allows you to synchronize or apply changes to content such as new concepts and PHI terminology within your local database.
- MPOG recommends performing ‘Content Synchronization’ on a monthly basis.
- You may also be advised by the Coordinating Center to perform ‘Content Synchronization’ to pull over specific content to continue mapping new variables or update diagnostics.
- The MPOG Quality Improvement Coordinators will notify you when ‘Content Synchronization’ is required outside of the monthly recommendation.

Accessing Content Synchronization

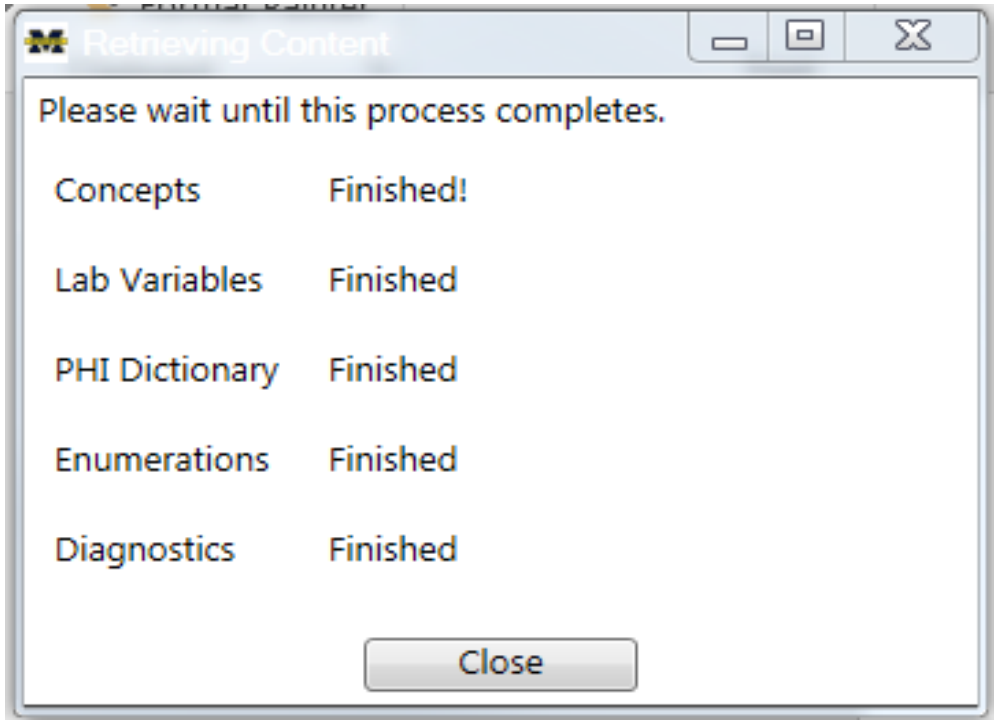
Content Synchronization

- A notification ball will appear on the “Content Synchronization” button if any new content is available



- This window will open in ‘Content Synchronization.’ Using the default settings seen below, select ‘Synchronize Content.’

- Once you have selected ‘Synchronize Content,’ retrieving content will begin and systematic downloading of new content will occur.
- Once the content retrieval process has completed, you will notice a ‘finished’ comment in the ‘Retrieving Content’ window, indicating ‘Content Synchronization’ was successful.



MPOG
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Module 11
Provider Contacts Tool

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Provider Contacts Overview

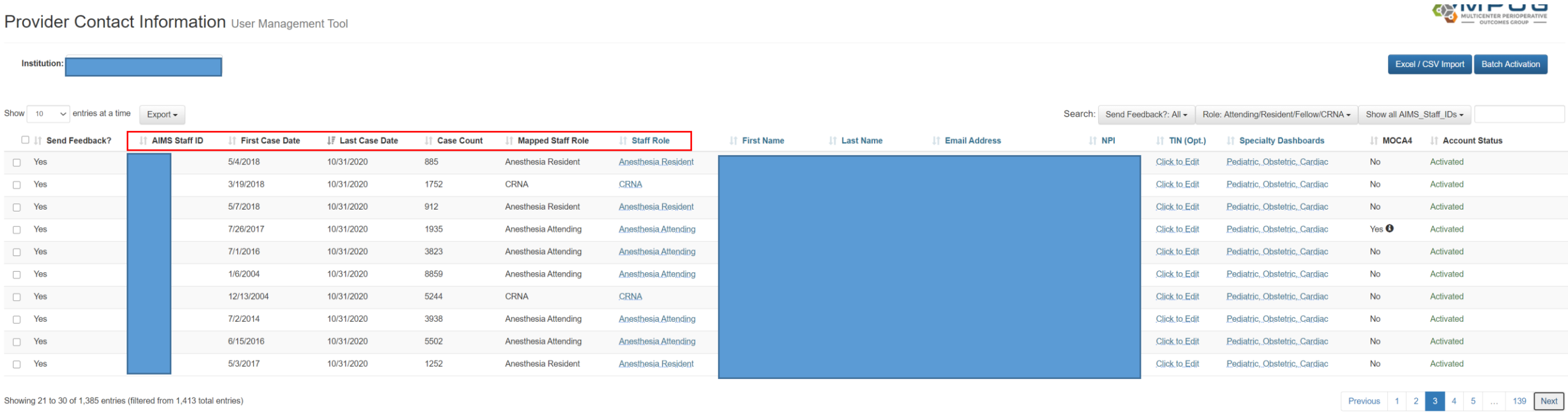
- Allows ASPIRE sites to update provider information for the purpose of sending feedback emails.
- If opting out of ASPIRE and the feedback emails, the Provider Contacts tool does not need to be populated.
- The Provider Contacts tool cannot be populated until data has been submitted to MPOG Central. There will be no case information available until a site has successfully transferred to the Coordinating Center.

Accessing Provider Contacts

- Can access via the MPOG Suite or this link https://www.aspirecqi.org/AppSuite//UserManagement/Index/

- Clicking on the link will open the login screen.
- An additional level of access is needed to populate the User Management Tool.
- If your ASPIRE username and password does not work at this point, please contact the coordinating center (support@mpog.zendesk.com) to obtain access.

- The *AIMs Staff ID, First Case Date, Last Case Date, Case Count, Mapped Staff Role, and Staff Role* columns of the User Management Tool (Provider Contacts) will be auto-populated based upon case information in the MPOG database.
- The technical team lead at your site should be able to assist with pulling the corresponding names for the AIMS Staff IDs listed.



Provider Contact Information User Management Tool

Institution: [redacted]

Excel / CSV Import | Batch Activation

Show 10 entries at a time | Export

Search: Send Feedback?: All | Role: Attending/Resident/Fellow/CRNA | Show all AIMS_Staff_IDs

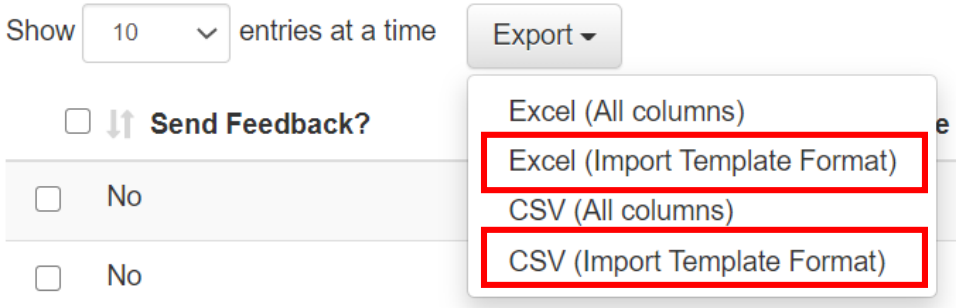
Send Feedback?	AIMS Staff ID	First Case Date	Last Case Date	Case Count	Mapped Staff Role	Staff Role	First Name	Last Name	Email Address	NPI	TIN (Opt.)	Specialty Dashboards	MOCA4	Account Status
Yes	[redacted]	5/4/2018	10/31/2020	885	Anesthesia Resident	Anesthesia Resident	[redacted]				Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		3/19/2018	10/31/2020	1752	CRNA	CRNA					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		5/7/2018	10/31/2020	912	Anesthesia Resident	Anesthesia Resident					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		7/26/2017	10/31/2020	1935	Anesthesia Attending	Anesthesia Attending					Click to Edit	Pediatric, Obstetric, Cardiac	Yes	Activated
Yes		7/1/2016	10/31/2020	3823	Anesthesia Attending	Anesthesia Attending					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		1/6/2004	10/31/2020	8859	Anesthesia Attending	Anesthesia Attending					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		12/13/2004	10/31/2020	5244	CRNA	CRNA					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		7/2/2014	10/31/2020	3938	Anesthesia Attending	Anesthesia Attending					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		6/15/2016	10/31/2020	5502	Anesthesia Attending	Anesthesia Attending					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated
Yes		5/3/2017	10/31/2020	1252	Anesthesia Resident	Anesthesia Resident					Click to Edit	Pediatric, Obstetric, Cardiac	No	Activated

Showing 21 to 30 of 1,385 entries (filtered from 1,413 total entries)

Previous 1 2 3 4 5 … 139 Next

Mass Import

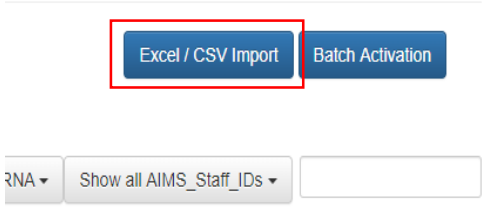
- To send the technical lead a list of the AIMS Staff IDs to obtain the corresponding first and last names, it may be useful to **export** the current list from the Provider Contacts tool. To do so, click on *'Export,'* and then *'Import Template Format' (CSV or Excel).*



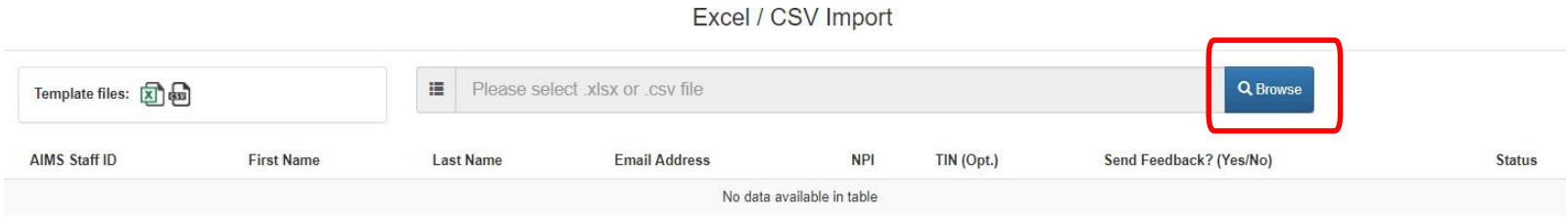
*The "All Columns" options will export all columns in the provider contact tool and should be used to obtain information only. The 'all columns' format will not work when trying to import first/last names and NPI numbers into the provider contacts tool.

Mass Import

- Update the template with the provider information and save to your computer.
- Open the saved document using the *"Excel/CSV Import"* button. Select the format you wish to use for import. The import tool will only accept files using one of these two templates. **Errors will result from using a modified version of either of these templates**



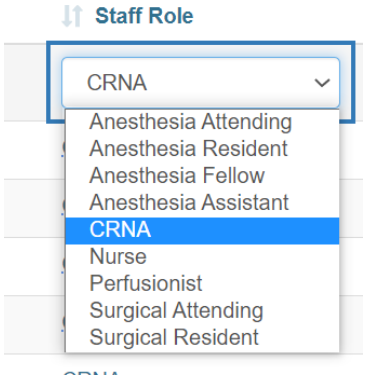
- Return to the Excel/CSV Import page, select 'Browse' and locate the file on your computer and click 'Open.'



- The Provider Contacts tool will begin to update information from the selected file and will notify of any errors. Correct any errors as needed and then click 'Submit.'

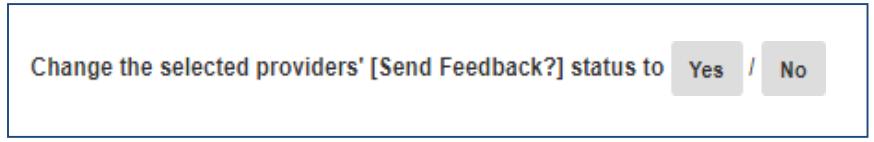
- Some sites have a single AIMS variable for anesthesia providers that is then mapped to the MPOG staff role concept: **Staff Level – Unable to Determine Anesthesia Provider**.
- In these instances, MPOG will display ‘Unknown’ in the ‘Mapped Staff Role’ column and rely on the site to populate the actual staff role in the seventh column.
- This column allows for provider feedback to include comparisons by role.

- If the ‘Staff Role’ and the ‘Mapped Staff Role’ columns match and are indicative of the providers’ actual roles in the clinical setting, no additional entry is required for the ‘Staff Role’ column.
- If the ‘Mapped Staff Role’ column is displaying incorrectly for a provider, you can update the ‘Staff Role’ directly within the user management tool (i.e. if the mapped staff role displaying for a CRNA is “Attending”) you can update it to read “CRNA” under the staff role column.

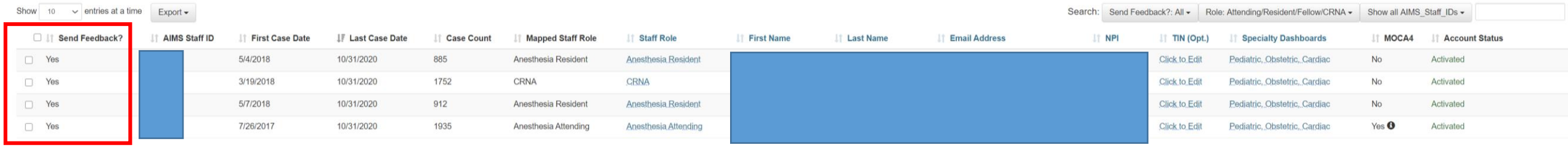


Managing Feedback Email Recipients

- An ‘Active’ provider is defined as one who receives feedback emails.
- To update a provider’s status to Active or Inactive, click the selection box on left hand side.
- A prompt will then show in the bottom left corner where you can click Yes or No to update provider status

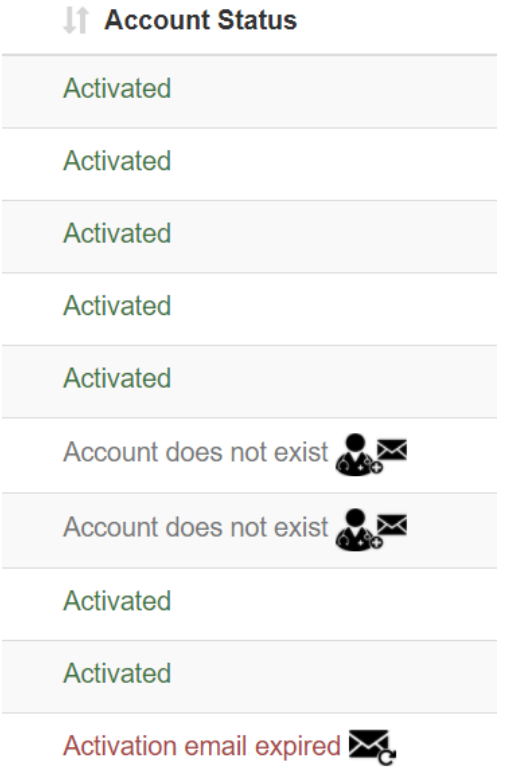


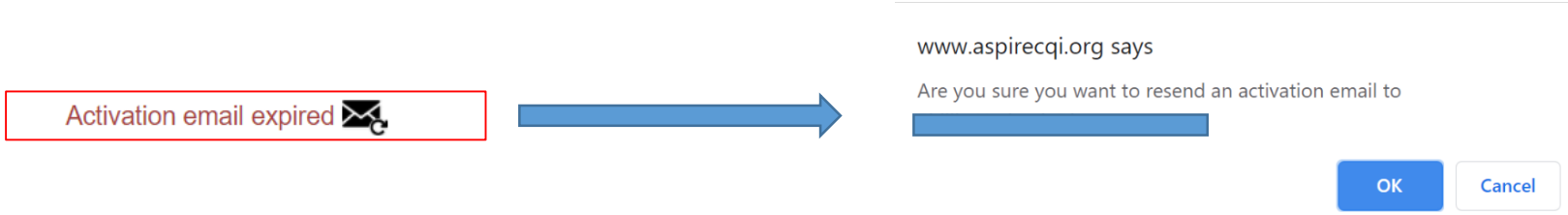
- You can change the status for multiple providers by selecting multiple rows or select all rows by clicking the top box next to “Send Feedback”



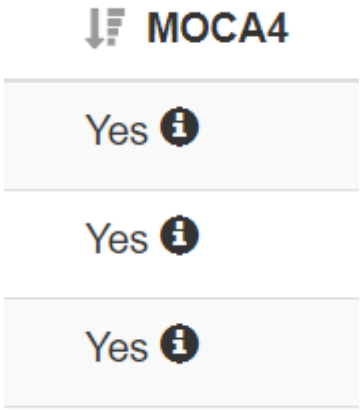
Further details regarding Account Status are shown for each provider in the last column:

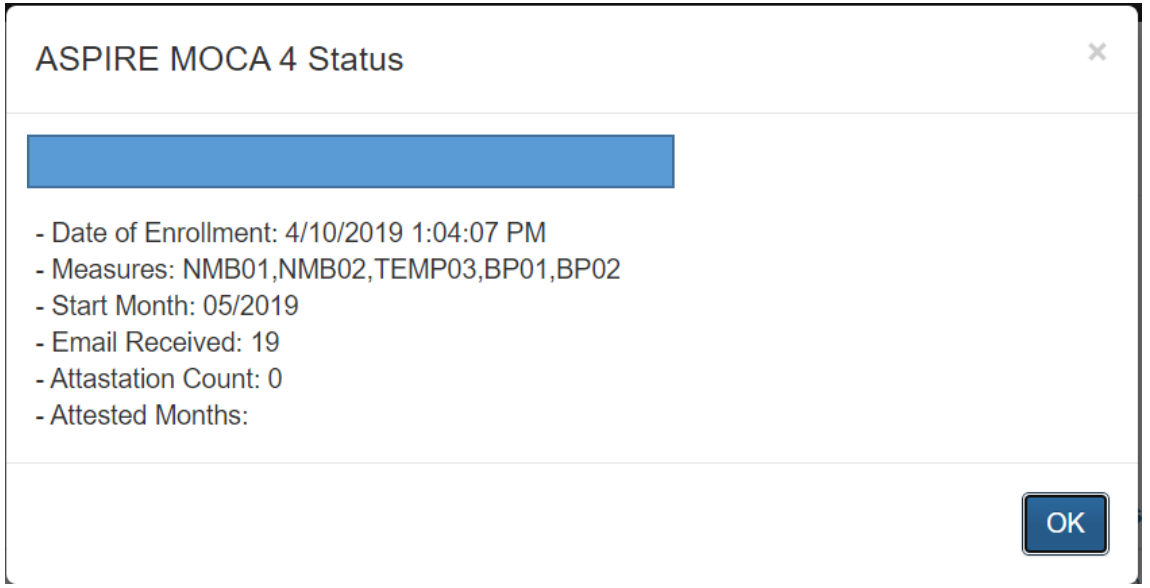
- *Activated:* Activation email has been sent and provider has successfully set up their account.
- *Not Activated:* Activation email has not been sent
- *Activation Email Sent:* Activation email send successfully. Provider has yet to click on the activation link to set up his or her account.
- *Activation Email Expired:* To resent an activation email, click 'Activation Email Expired" in the last column and follow the prompt



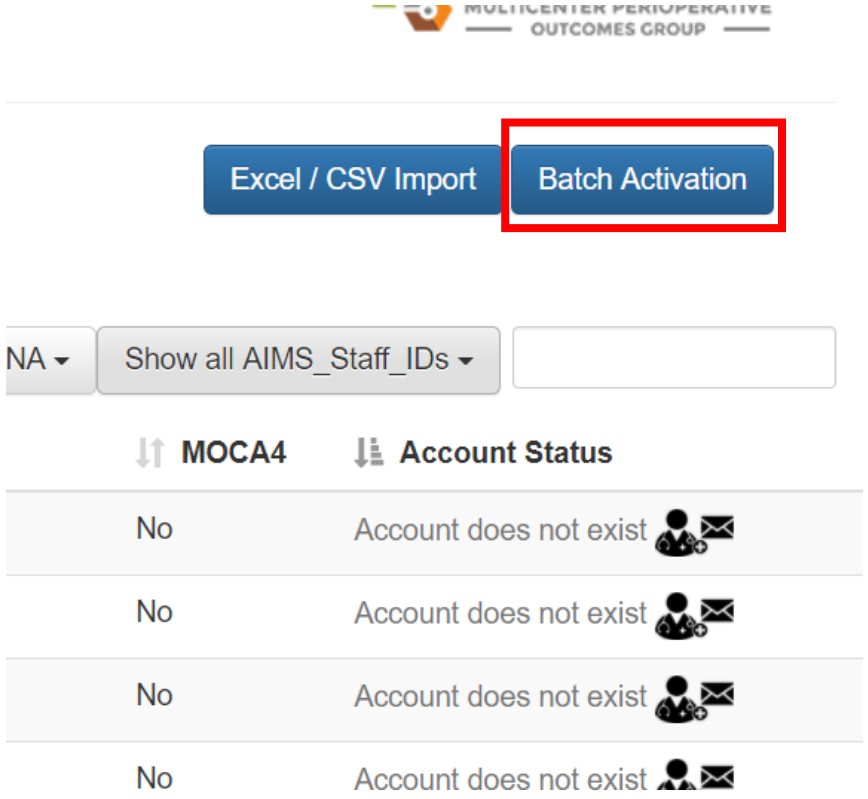


- Information regarding a provider's MOCA 4 Status is also available through the user management tool by clicking the information icon within the MOCA column





Batch Activation



- To send an activation email to all providers who have yet to receive one and to those who have let their activation email expire, you can use the Batch Activation button in the top right corner
- Click ‘Send’ when prompted

Multiple AIMS Staff IDs

- Sites who convert from MPOG's Legacy Production method to Import Manager may see 2 AIMS Staff IDs listed for each provider in the provider contacts tool.
- To manage the AIMS Staff IDs affiliated with Import Manager only, select 'Hide old AIMS_Staff_IDs' in the dropdown menu seen below.

MPOG
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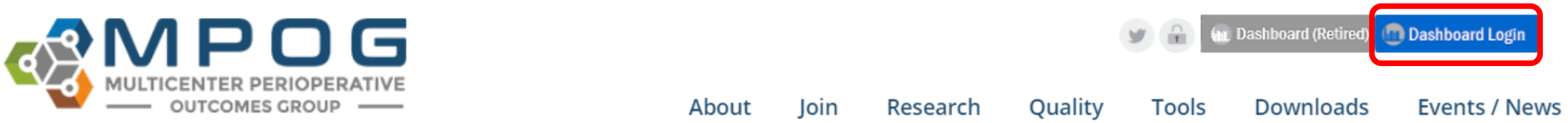
Module 12
ASPIRE Dashboard

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

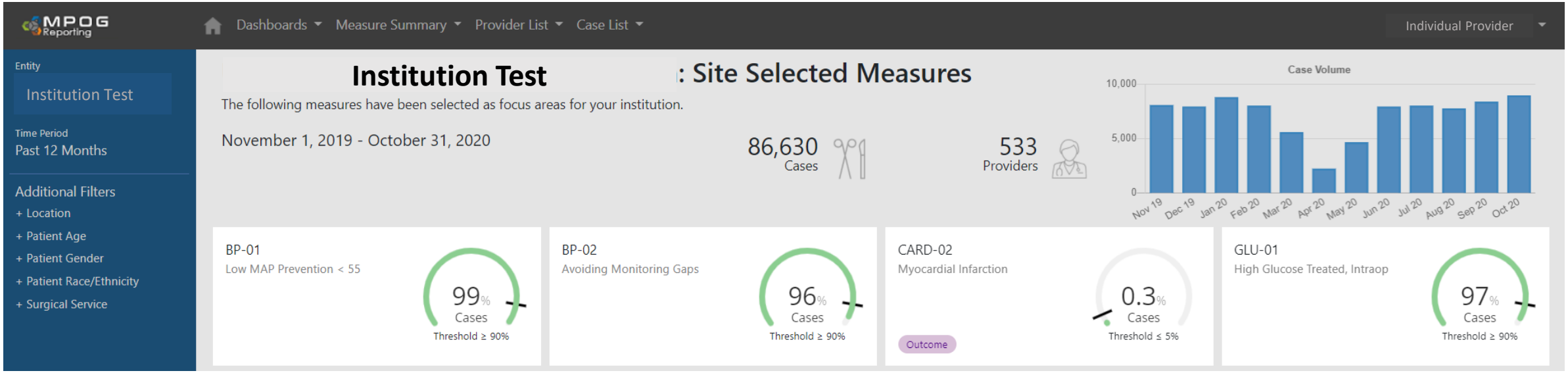
Accessing Your Dashboard

- Access your institution's ASPIRE dashboard through the MPOG website https://mpog.org/
- Click "Dashboard Login" in the upper right corner

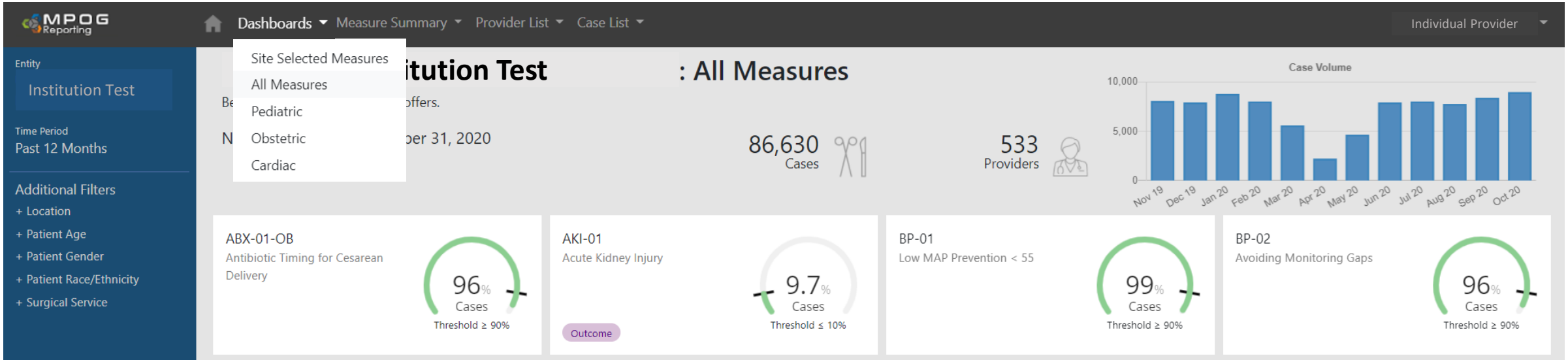


- You will be directed to the login screen below.
- Type in your user name and password.
- If you forgot your username or password, click on ‘Forgot your password?’ located below the login button near the bottom of the screen and follow the prompts.

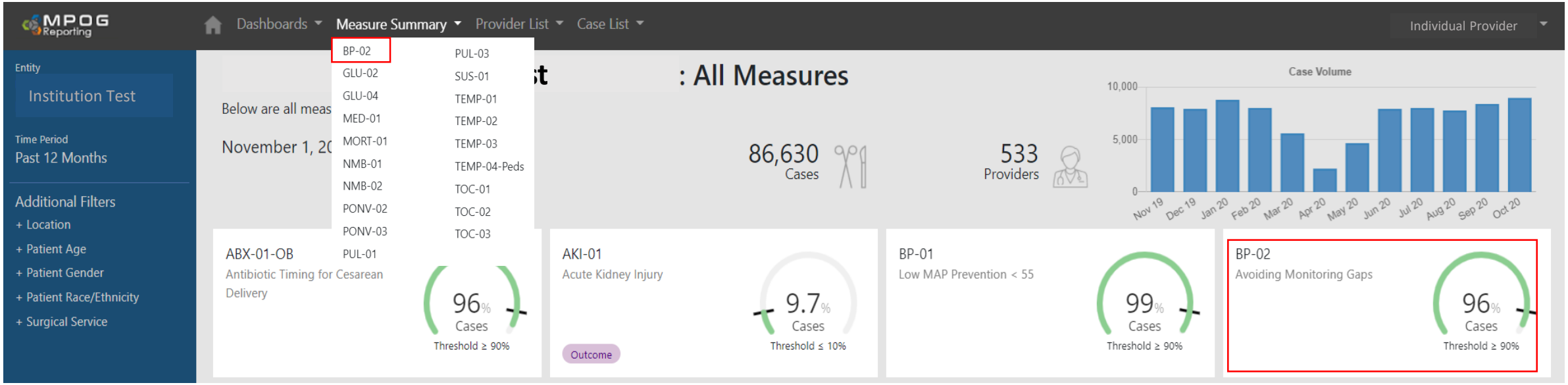
- Once you have logged into your account, you will be directed to your Site Selected Dashboard. Measures displayed here are those that are included in your institution's monthly provider feedback emails.



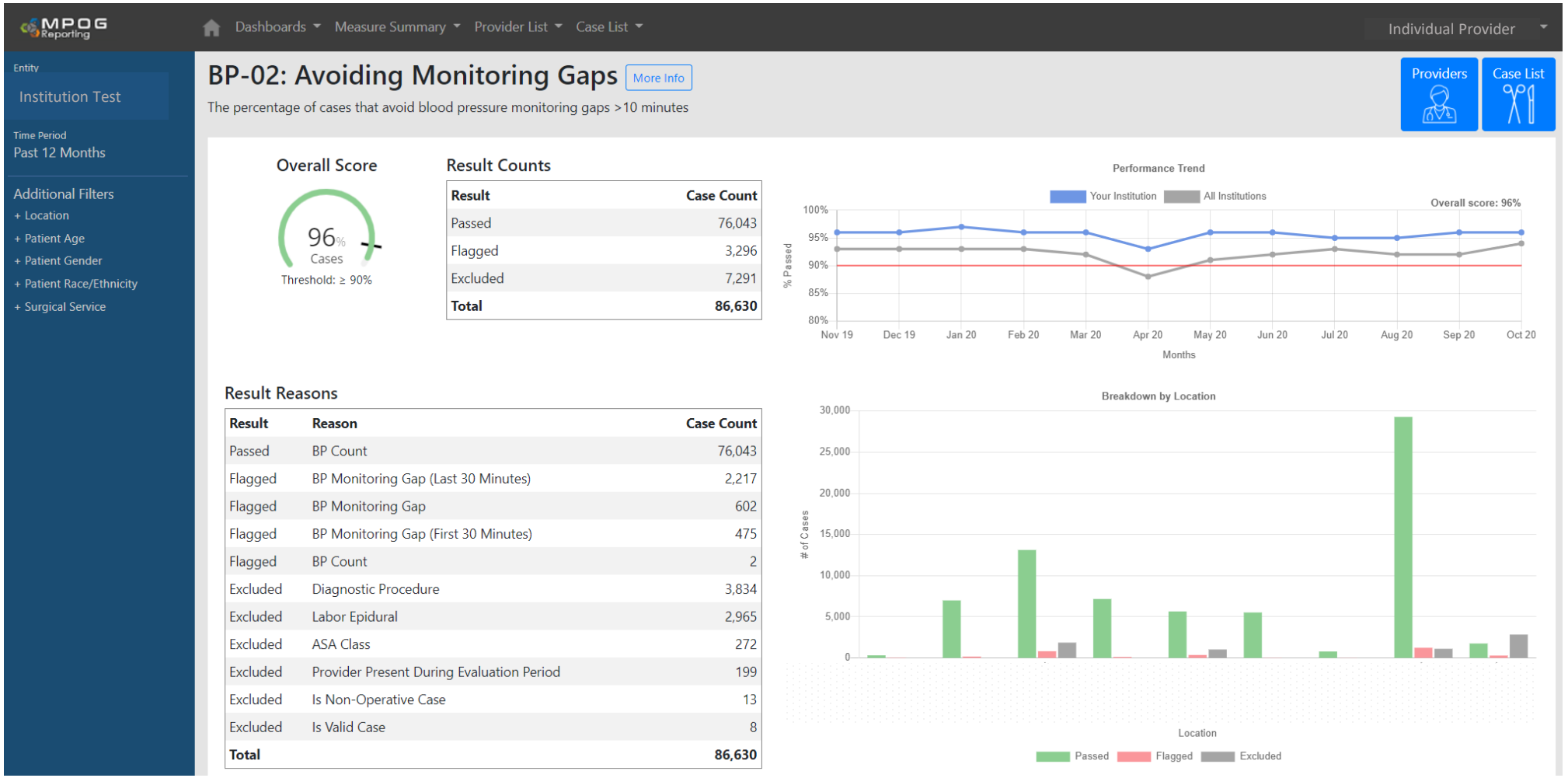
- To view performance on all measures MPOG offers, select the ‘Dashboards’ drop down and select ‘All Measures’. Other selections include Pediatric, Obstetric and Cardiac specific measure dashboards



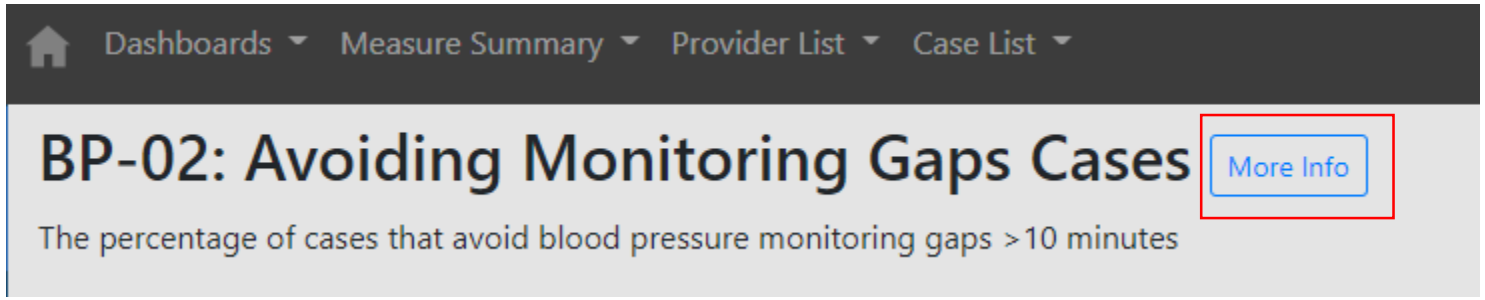
- To review a performance summary for any measure, select the measure of interest via the measure summary drop down or by simply clicking any measure ‘card’.
- Each measure displays the institutional performance (or individual performance depending on login permissions) and the targeted performance threshold.



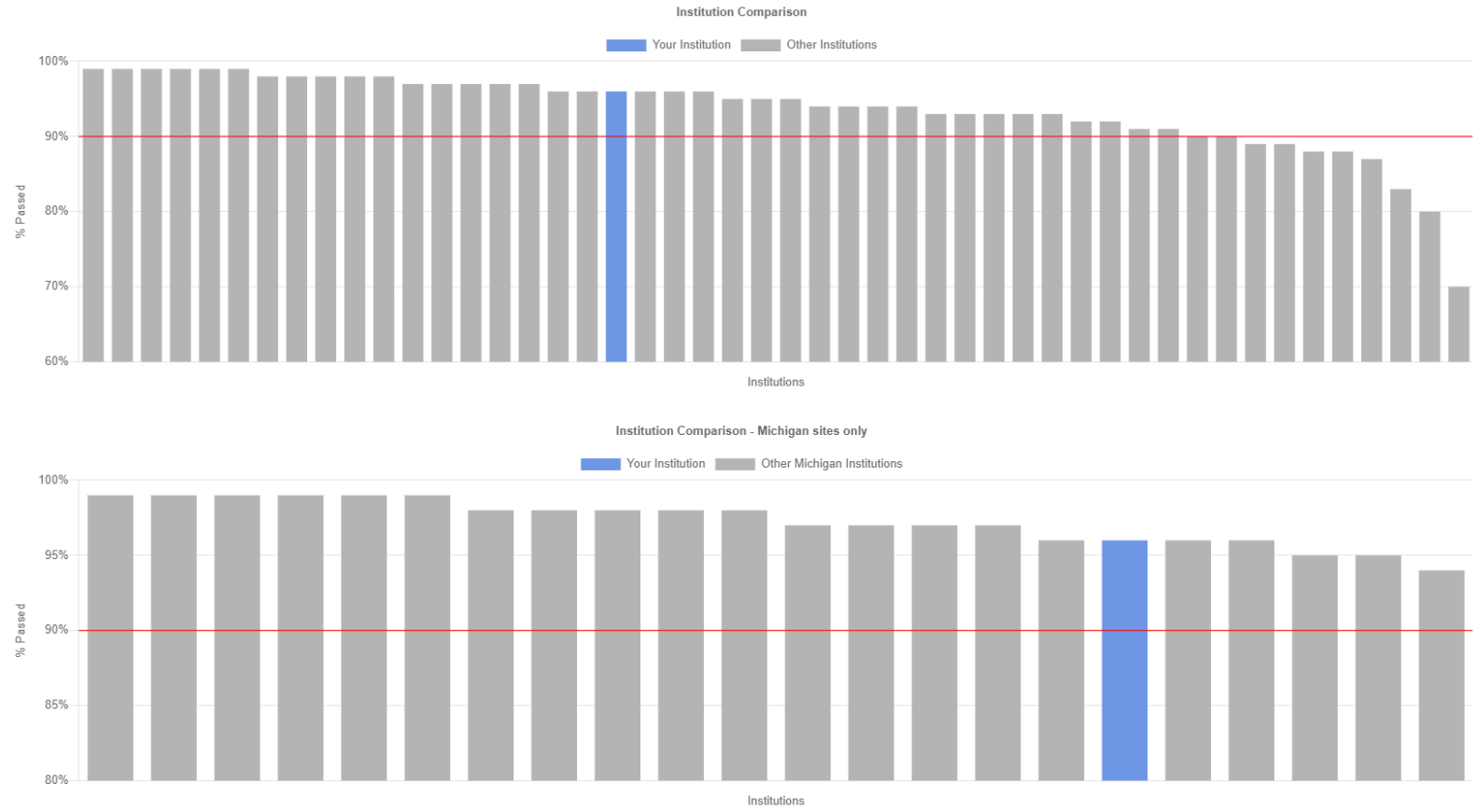
Measure Summary: includes overall performance, case counts, trend over time, breakdown of primary case attribution and breakdown by location.



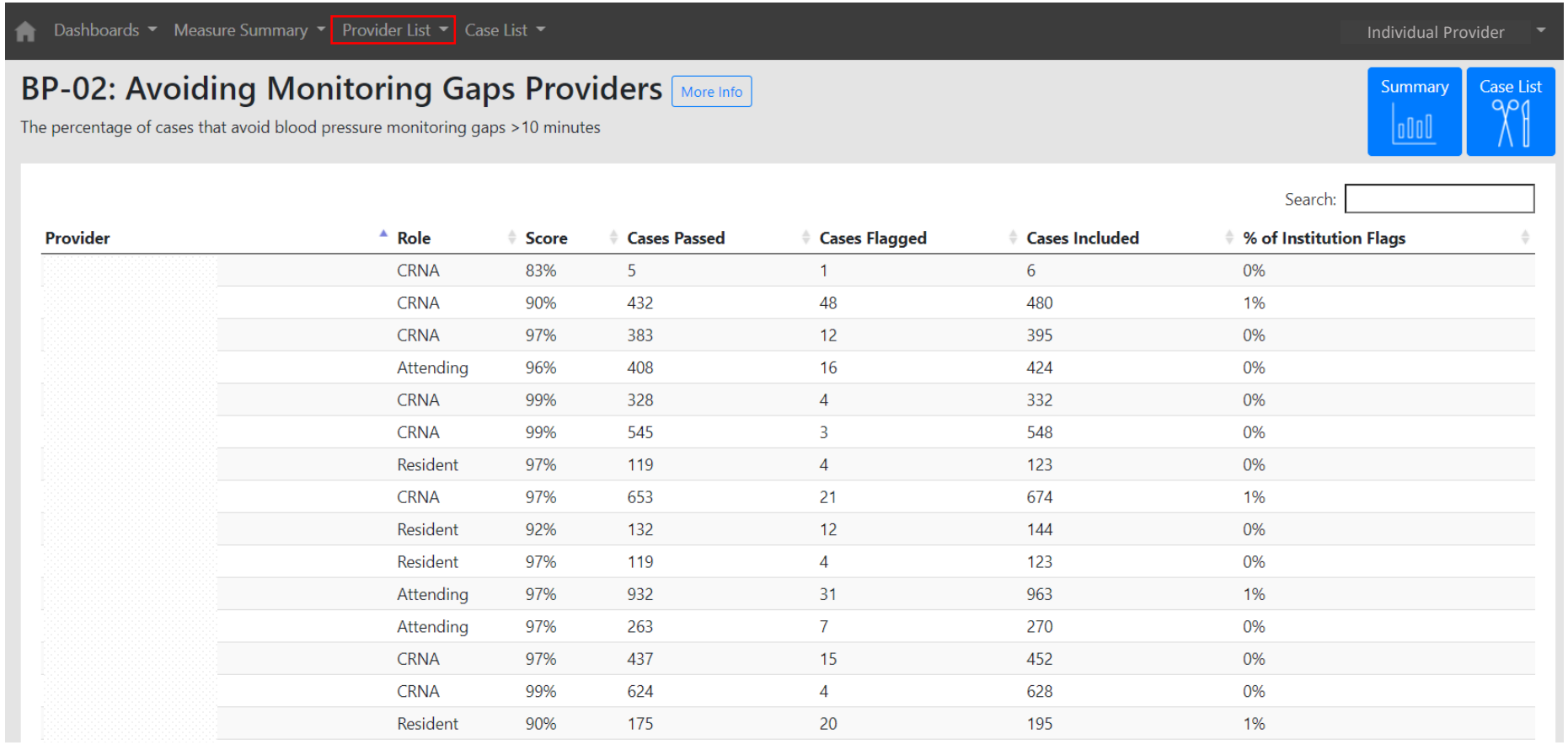
To review the full measure specification, click on the “More Details” located after the measure description



Each measure summary has an anonymized institution comparison graph for benchmarking purposes across all MPOG sites. If your institution is in Michigan, there will be an additional graph comparing sites across the state.



By selecting the ‘Providers List’ drop down, you can see individual performance for all anesthesia providers within your institution for a particular measure.



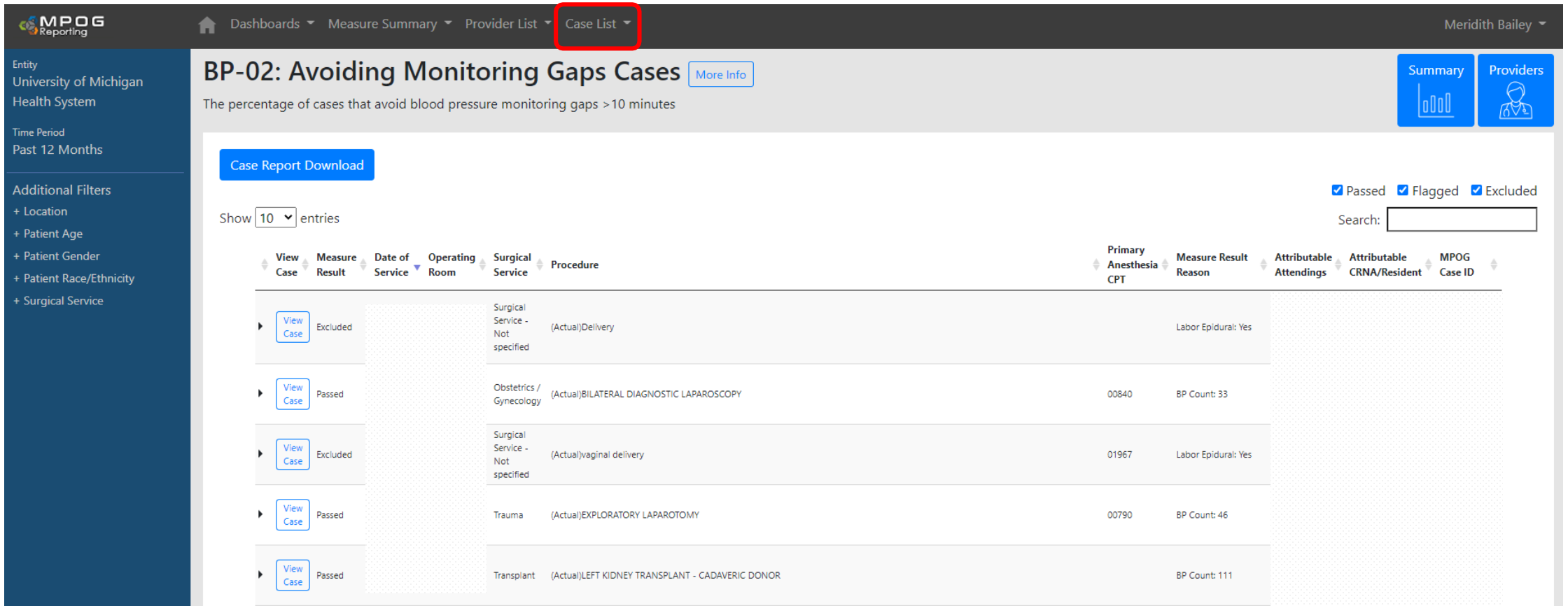
Provider	Role	Score	Cases Passed	Cases Flagged	Cases Included	% of Institution Flags
	CRNA	83%	5	1	6	0%
	CRNA	90%	432	48	480	1%
	CRNA	97%	383	12	395	0%
	Attending	96%	408	16	424	0%
	CRNA	99%	328	4	332	0%
	CRNA	99%	545	3	548	0%
	Resident	97%	119	4	123	0%
	CRNA	97%	653	21	674	1%
	Resident	92%	132	12	144	0%
	Resident	97%	119	4	123	0%
	Attending	97%	932	31	963	1%
	Attending	97%	263	7	270	0%
	CRNA	97%	437	15	452	0%
	CRNA	99%	624	4	628	0%
	Resident	90%	175	20	195	1%

- You can sort by Provider, Role, Score, Cases Passed, Cases Flagged, Cases Included, and % Institutional Fails by clicking the column header
- To quickly search for an individual provider, enter their name or AIMS staff ID in the search filter on the right.

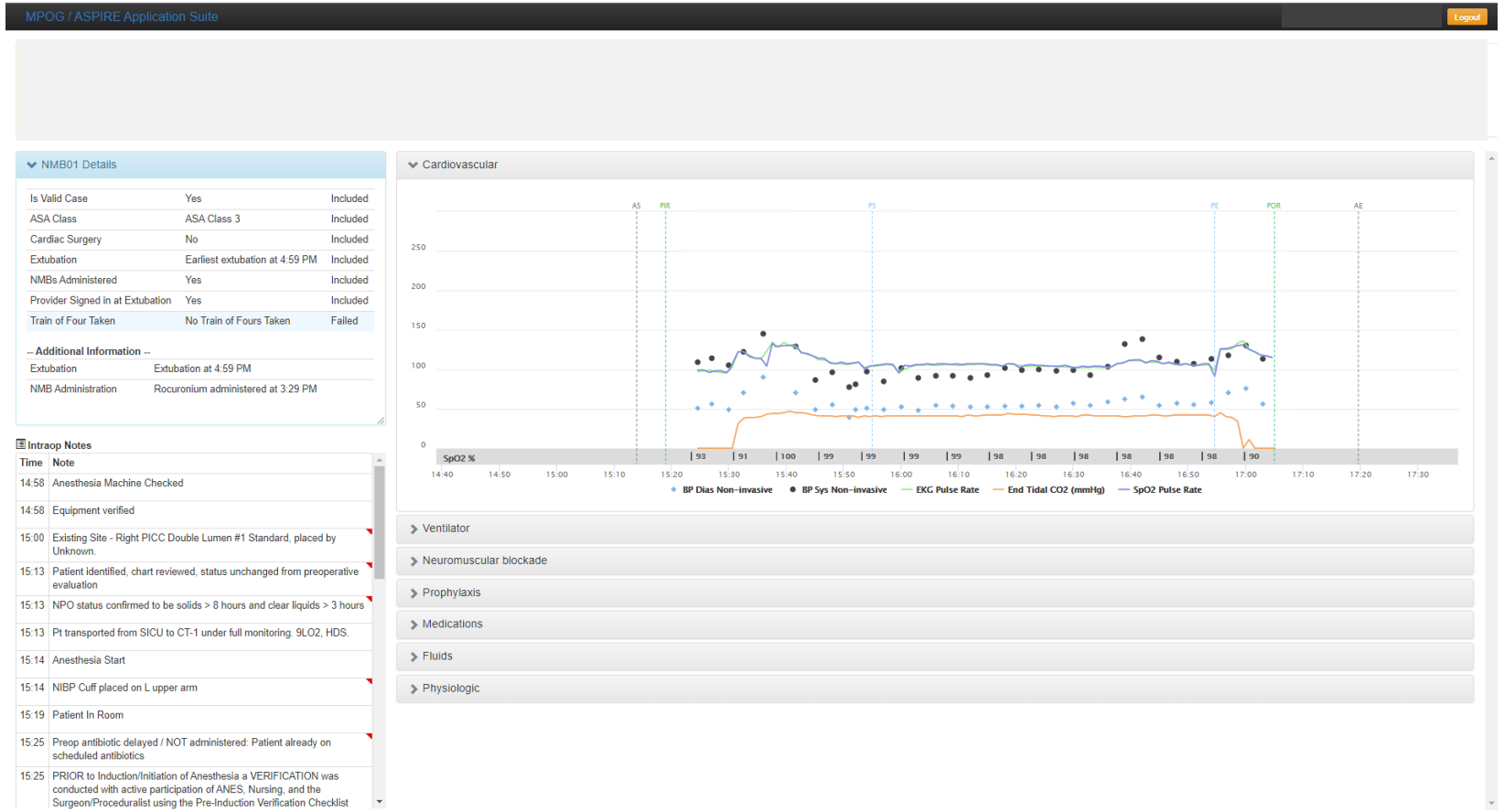
Search:

Provider	Role	Score	Cases Passed	Cases Flagged	Cases Included	% of Institution Flags
27020	CRNA	83%	5	1	6	0%
59351	CRNA	90%	432	48	480	1%

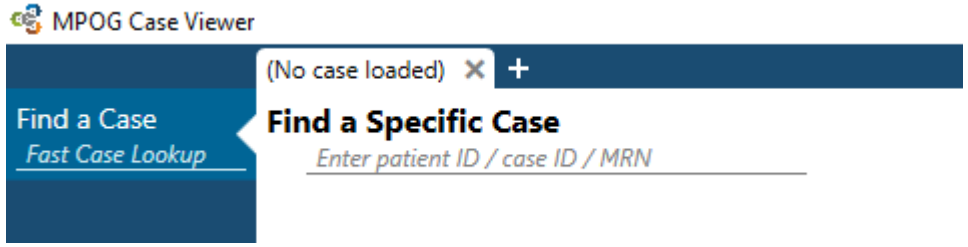
- By selecting the ‘Case Lists’ tab, all failed, passed, and excluded will appear for the specific measure. You can sort the column headers by clicking the arrows next to the title of each column.



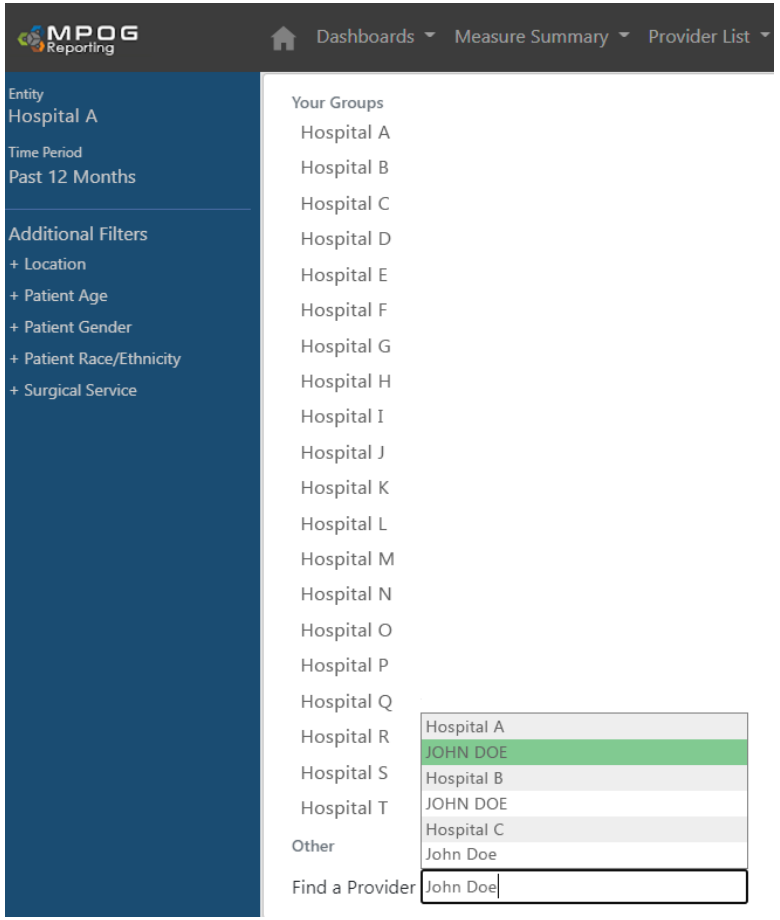
Click on ‘View Case’ from the grid above to display intraoperative case information and details in ‘Case Viewer’



- If preferred, you may copy the MPOG Case ID from the web Case Viewer (see below) and paste into Case Viewer accessible through the MPOG application suite. This will allow you to review cases in greater detail
- Once you have opened MPOG Case Viewer and searched by 'Patient or Case ID,' you may retrieve the MRN from Case Viewer to insert into the institution electronic health record to facilitate case review.



- For ACQRs and QI Champions: You may need to view the dashboard from the perspective of a specific provider in order to better answer questions
- To navigate to a specific provider's view, use 'Find a Provider' at the bottom of the entity dropdown box



MPOG
MULTICENTER PERIOPERATIVE
OUTCOMES GROUP

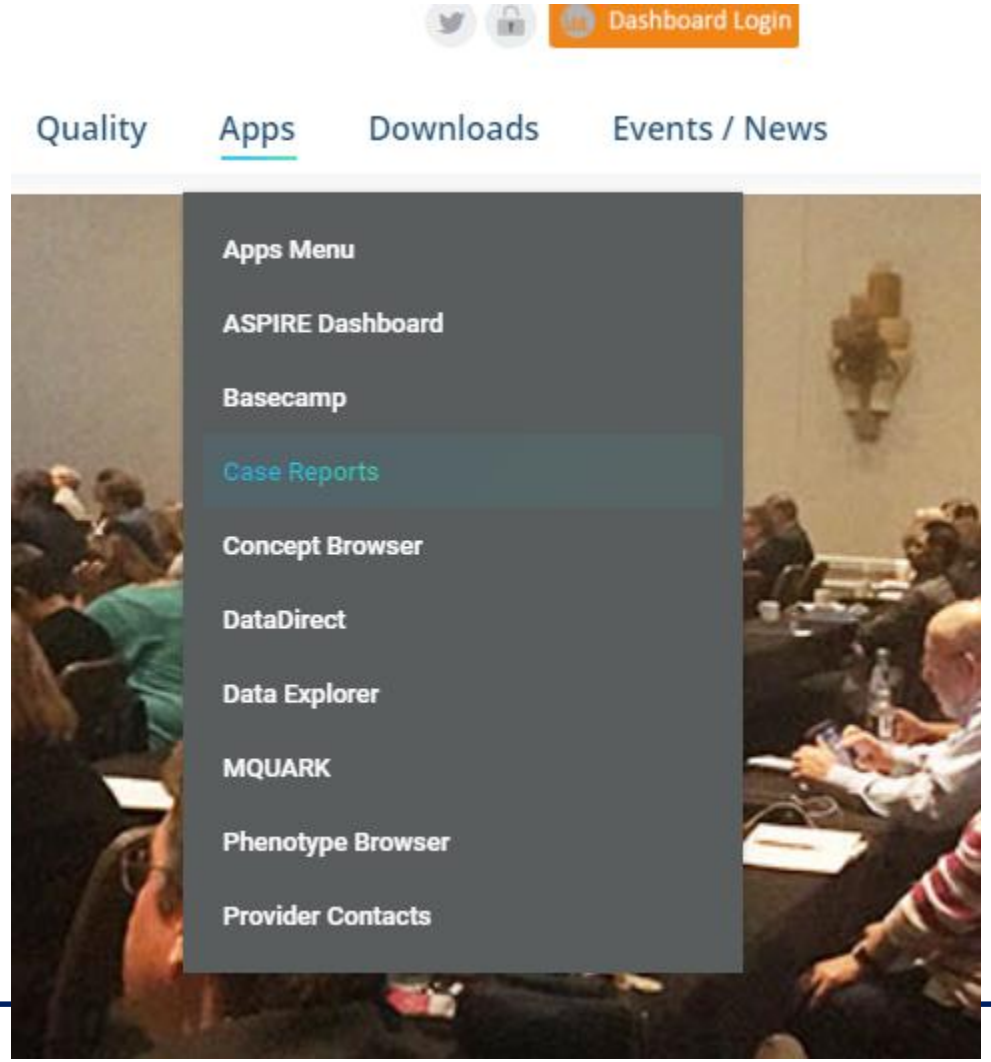
Module 13
Measure Case Report

MPOG
MULTICENTER PERIOPERATIVE
OUTCOMES GROUP

Measure Case Report Overview

- Allows users to create a passed/failed/excluded case report for a specific date range and/or specific measures.
- Each report contains case information pertinent to each measure selected.
- The purpose of this tool is to provide an organized document with all information necessary for case reviewers to use when investigating why a provider failed, passed or was excluded from a particular measure/case.

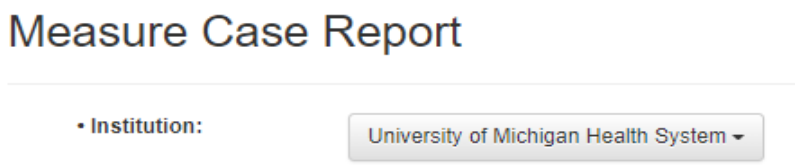
Accessing Measure Case Report



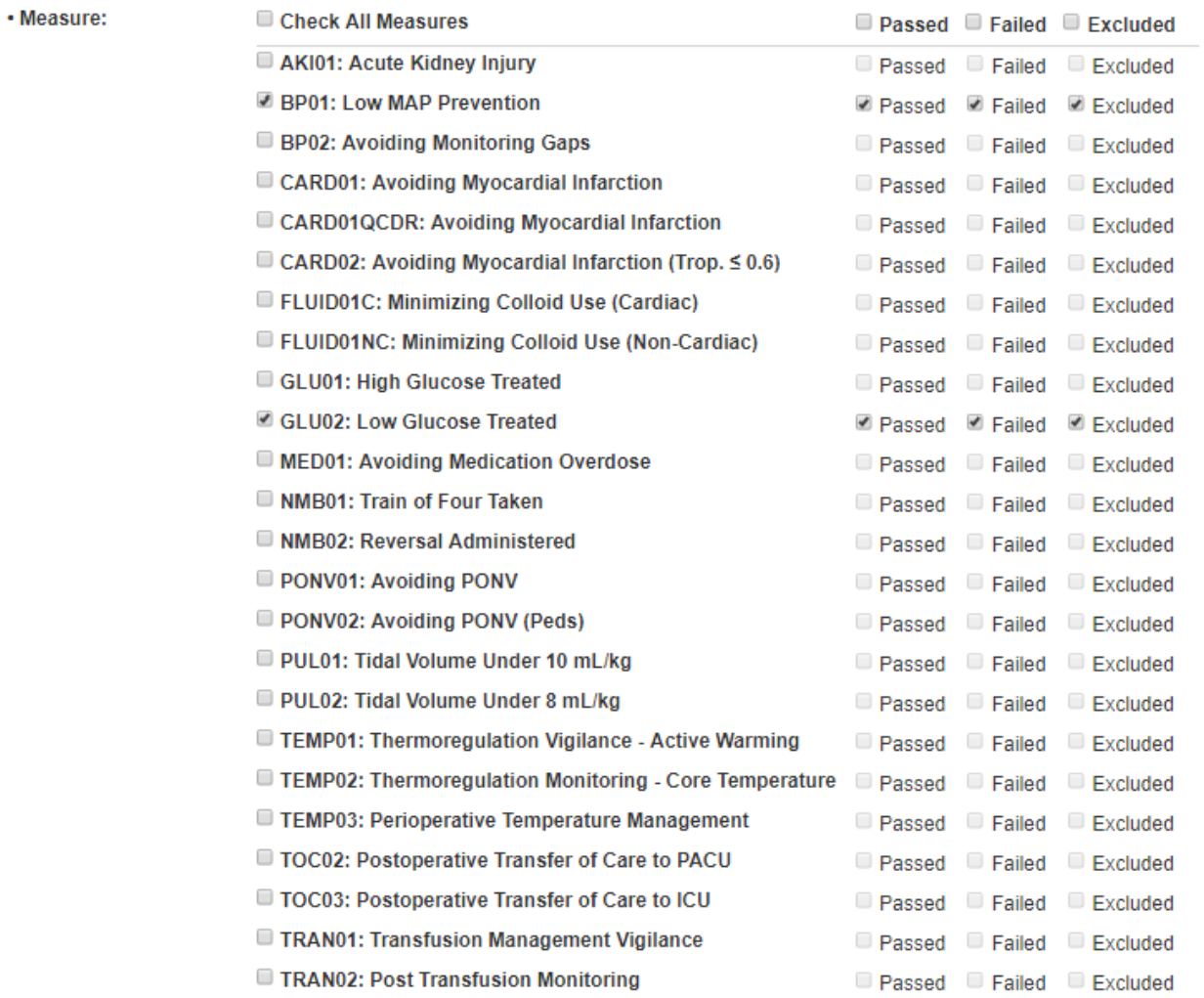
- This application can be accessed through the following link: Measure Case Report or on the MPOG website under Apps > Case Report

Login using your ASPIRE account information

1. Select your institution from the dropdown menu

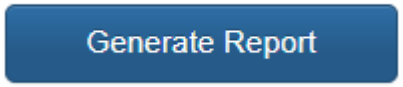


1. Select the date range you are interested in reviewing

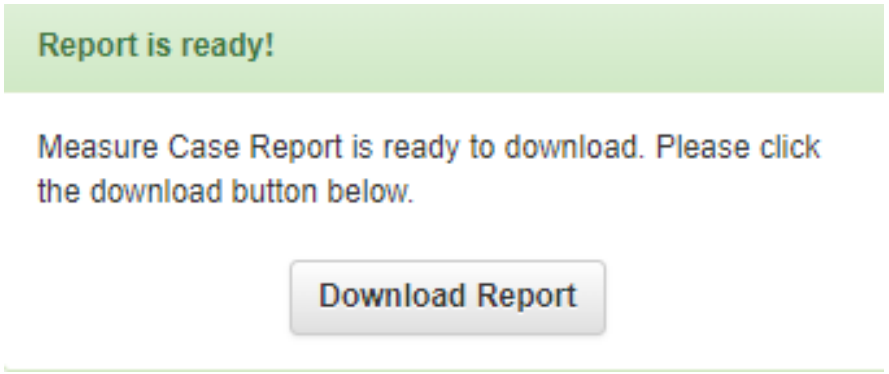


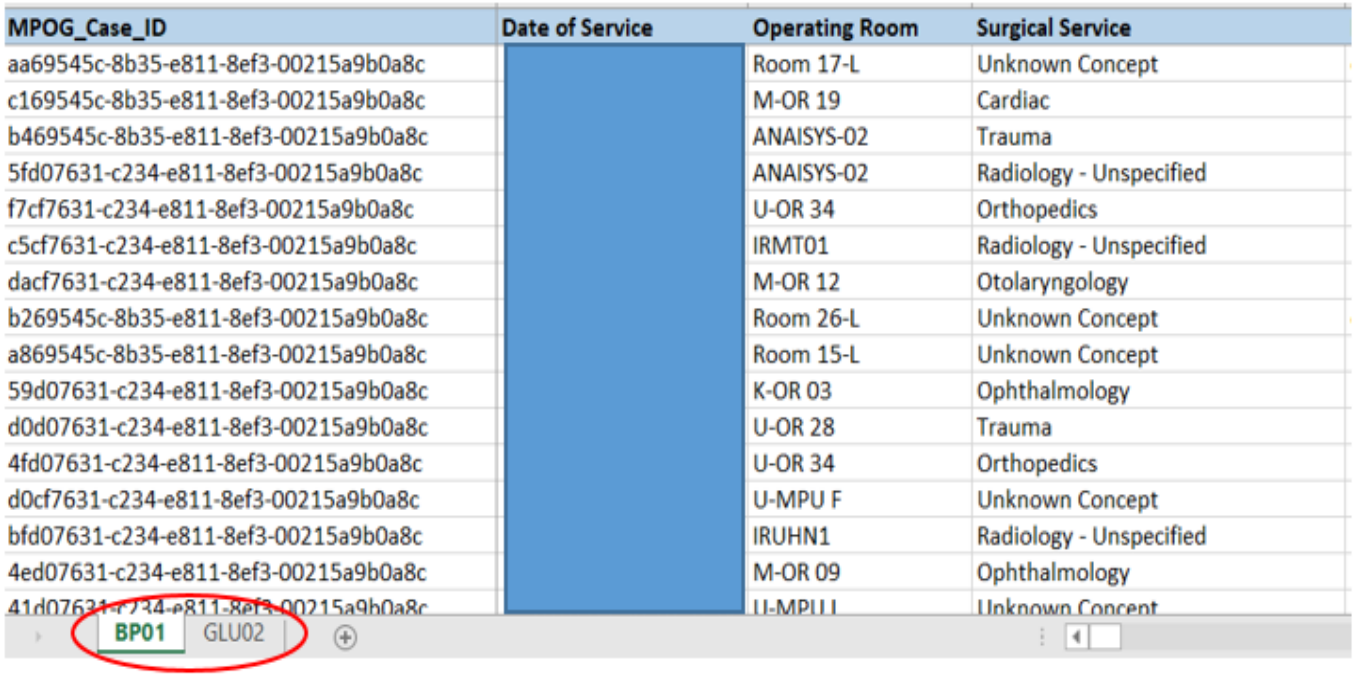
- Select the box next to each measure you wish to include in your report.
- For each measure of interest, select the boxes next to “passed”, “failed” and/or “excluded” to determine what types of results you would like included.
- *To include all passed, failed and excluded cases and/or to include all measures in your report, select the top box over each column (i.e. “Check all measures”)

- Once you have selected the measures of interest, click “Generate Report” located at the bottom:



- An approximate processing time will then display. Choosing multiple measures for the report will increase processing time. Once report is ready, click “download report”





MPOG_Case_ID	Date of Service	Operating Room	Surgical Service
aa69545c-8b35-e811-8ef3-00215a9b0a8c		Room 17-L	Unknown Concept
c169545c-8b35-e811-8ef3-00215a9b0a8c		M-OR 19	Cardiac
b469545c-8b35-e811-8ef3-00215a9b0a8c		ANAISYS-02	Trauma
5fd07631-c234-e811-8ef3-00215a9b0a8c		ANAISYS-02	Radiology - Unspecified
f7cf7631-c234-e811-8ef3-00215a9b0a8c		U-OR 34	Orthopedics
c5cf7631-c234-e811-8ef3-00215a9b0a8c		IRMT01	Radiology - Unspecified
dacf7631-c234-e811-8ef3-00215a9b0a8c		M-OR 12	Otolaryngology
b269545c-8b35-e811-8ef3-00215a9b0a8c		Room 26-L	Unknown Concept
a869545c-8b35-e811-8ef3-00215a9b0a8c		Room 15-L	Unknown Concept
59d07631-c234-e811-8ef3-00215a9b0a8c		K-OR 03	Ophthalmology
d0d07631-c234-e811-8ef3-00215a9b0a8c		U-OR 28	Trauma
4fd07631-c234-e811-8ef3-00215a9b0a8c		U-OR 34	Orthopedics
d0cf7631-c234-e811-8ef3-00215a9b0a8c		U-MPU F	Unknown Concept
bfd07631-c234-e811-8ef3-00215a9b0a8c		IRUHN1	Radiology - Unspecified
4ed07631-c234-e811-8ef3-00215a9b0a8c		M-OR 09	Ophthalmology
41d07631-c234-e811-8ef3-00215a9b0a8c		U-MPU I	Unknown Concept

BP01 GLU02

- Measure case reports are exported in an excel spreadsheet. Each measure included in the report is separated by tabs in the bottom right hand corner.
- Once saved on your computer, the report is ready to import into the Batch MRN lookup tool which matches MRNs to MPOG Case IDs allowing the case reviewer to quickly compare data to the source system.
- *Step by step instructions for this process are located in **Module 14: Batch MRN Lookup Tool**

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Module 14
Batch MRN Lookup

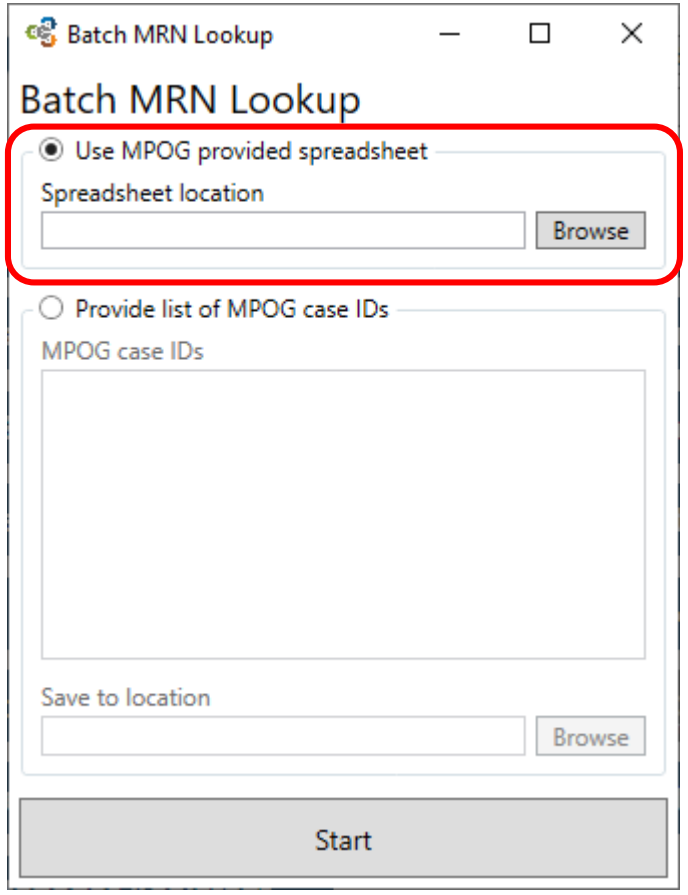
MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Batch MRN Lookup Overview

- Used to retrieve the MRN associated with an MPOG Case ID for multiple cases at a time. There are two methods for adding a column of MRNs to an existing measure case report:
    1. **Spreadsheet method**: Upload a saved Excel document that has an MPOG Case ID column the saved Case Grids into the Batch MRN Lookup Tool. For more information about how to export cases from the Measure Case Report, see Module 13 of the MPOG Training Manual.
    2. **List Method**: Copy MPOG IDs and paste them into the designated field in the Batch MRN Lookup Tool.

Accessing Batch MRN Lookup

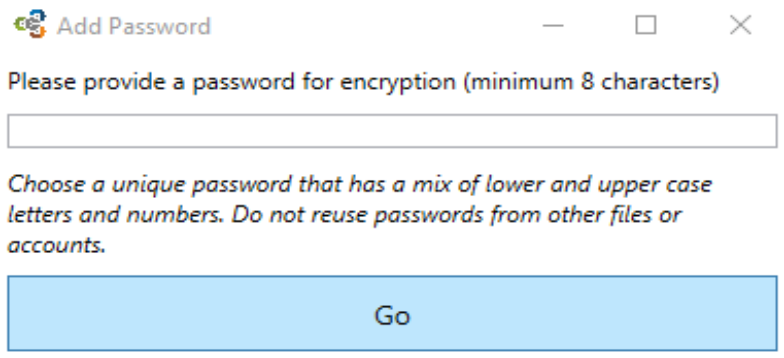
Spreadsheet Method



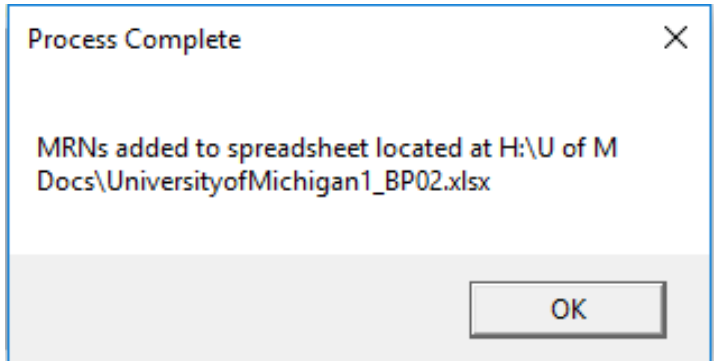
- First, locate the file that was exported from the measure case report tool (and saved to your computer) by selecting 'Browse'
- Next, simply double click on the file to load it into the 'Spreadsheet location'. Click 'Start.'

*Note the spreadsheet you are uploading cannot be opened on your computer at the same time as upload

Follow the prompt and enter a password with at least 8 characters for encryption purposes. Click ‘Go’ to continue.

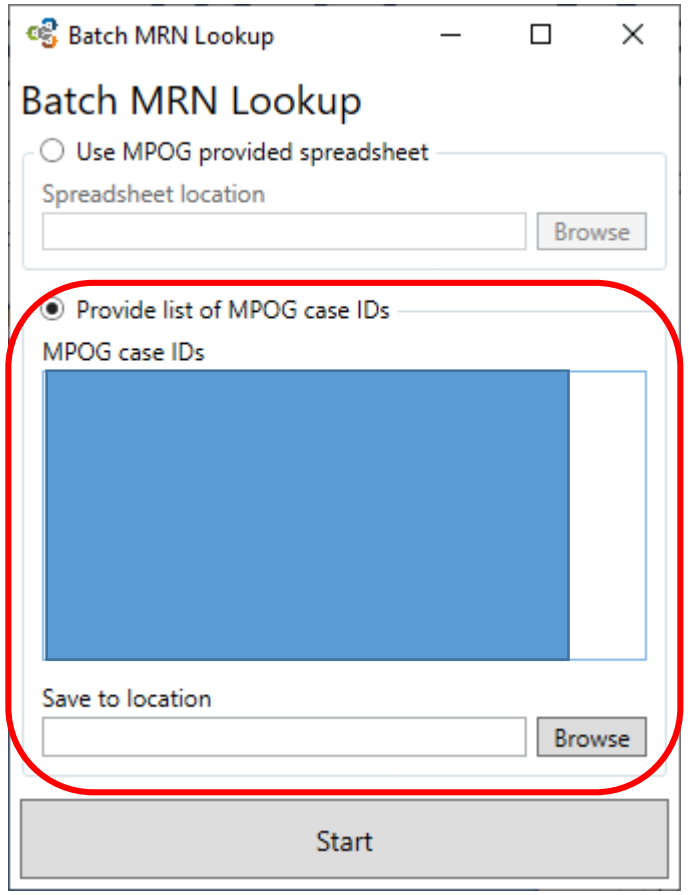


Once a password is set and the MRN column has been successfully added to that file, you will receive a notification. Click ‘OK’



- Go to the folder where the spreadsheet is saved and open in Excel.
- Upon opening, you will be prompted to enter the password you previously entered to view the modified Case Grid. Enter your password and click ‘OK.’
- A new column titled MRN will appear to the left of the MPOG Case ID column in your existing spreadsheet. The encrypted file will automatically save

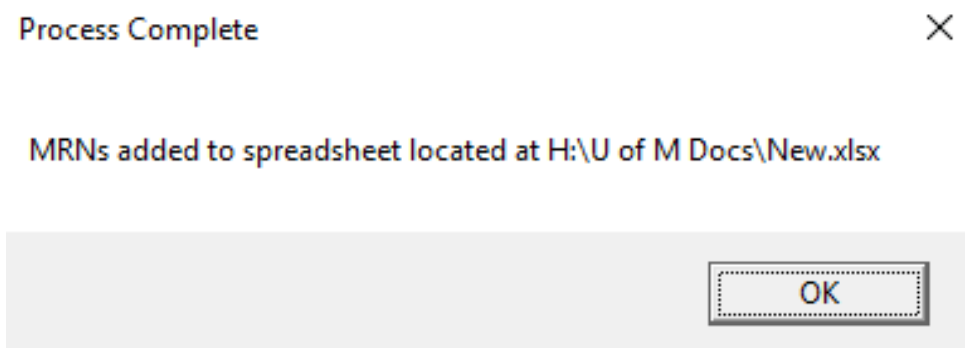
Case ID List Method



- Select the second radio dial: 'Provide list of MPOG case IDs'
- Copy and Paste all MPOG Case IDs into the text box and click 'Browse' to select a location for the new spreadsheet to be saved. Click 'Start'

*You will be prompted to set a password similar to spreadsheet mode.

- After clicking ‘Go’ you will receive a message saying the process is complete. Go to the saved file and open
- Enter your password when prompted and the MPOG Case IDs you submitted with their associated MRNs will be visible. Again, the encrypted file will automatically save.



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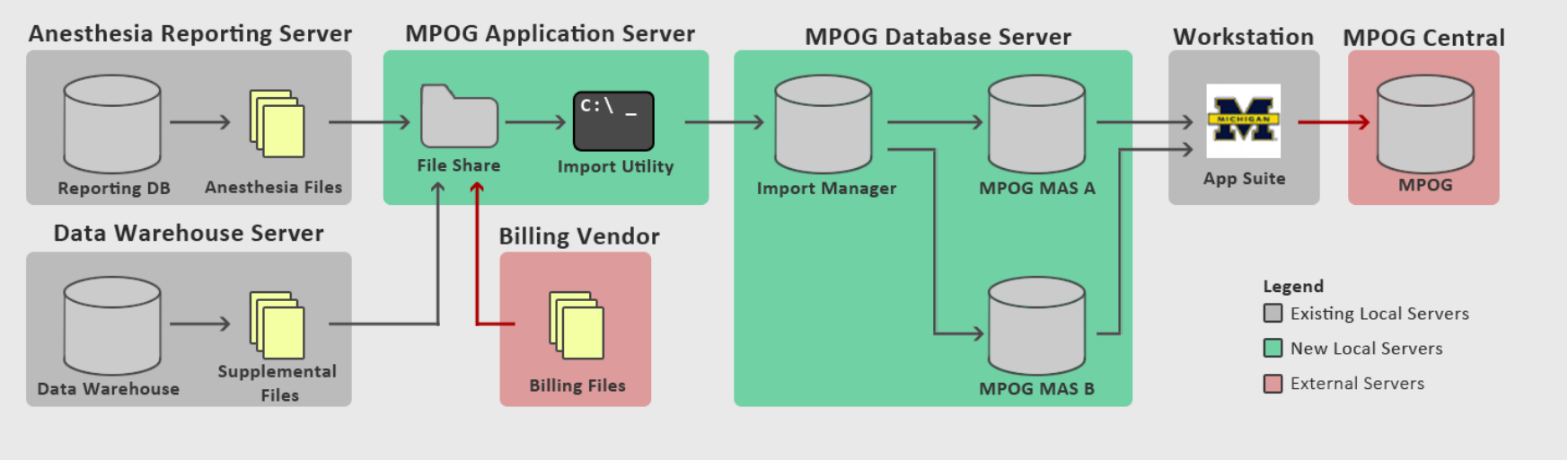
Module 15
Import Manager Assistant

MPOG
MULTICENTER PERIOPERATIVE OUTCOMES GROUP

Import Manager Assistant Overview

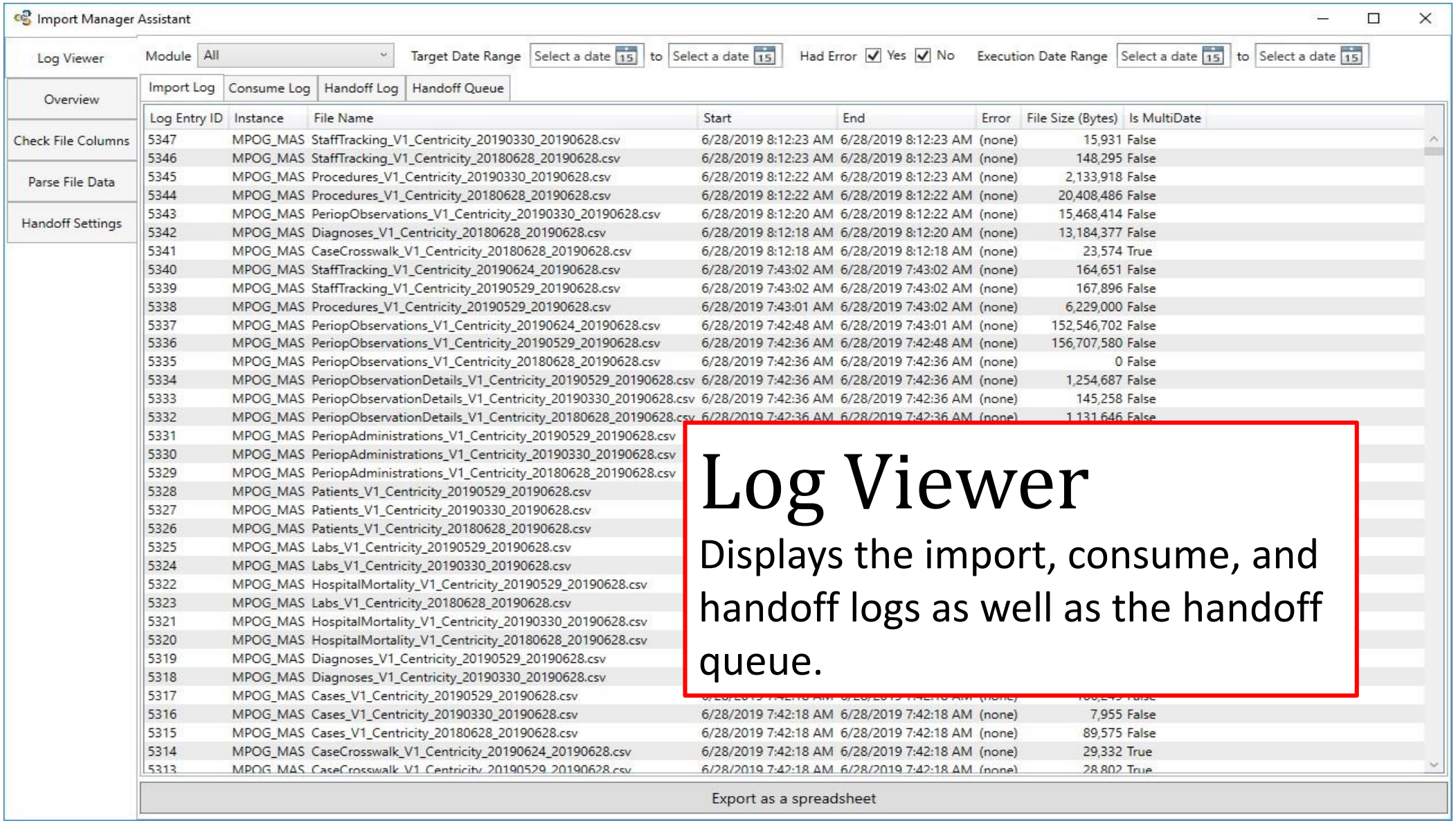
IM Assistant provides organized information file processing errors and their current location within the import manager file pipeline.



- Note: Site technical teams supporting the MPOG project will want to download the application suite to access IM Assistant.

Import Manager Assistant

- ***Log Viewer***: This tab displays the various import manager logs and the handoff queue.
- ***Overview***: This tab contains a color-coded grid representing the current status of import manager.
- ***Check File Columns***: This tab enables the user to see which rows in an imported file have the incorrect number of columns.
- ***Parse File Data*:** This tab enables the user to view the contents of an imported file.
- ***Handoff Settings*:** This tab contains the current settings for handoff for this instance.

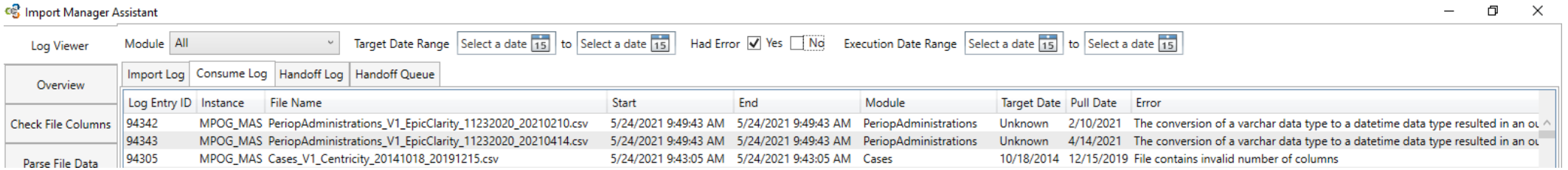


Log Viewer

Displays the import, consume, and handoff logs as well as the handoff queue.

Log Viewer

- Import Log
  - Displays the list of files that have been imported, including those with errors.
  - Files with recent errors are likely still present in the folder designated for the Import Utility and will continue to be retried until they are removed or corrected.
- Consume Log
  - Displays the list of Modules and Target Dates that have been consumed, including those with errors.
  - Errors that have been resolved will still show in the log, but any recent errors may indicate missing data and require attention.

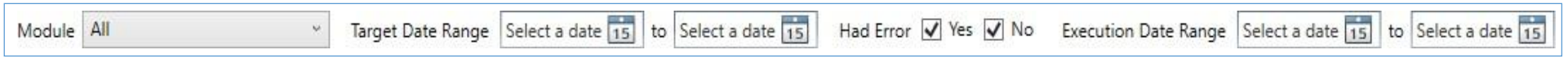


Log Viewer

- Handoff Log
  - Displays the modules (and corresponding Target Dates) that have been exported to the MPOG_MAS database(s).
  - Errors that have been resolved will still show in the log, but any recent errors may indicate missing data and require attention.
- Handoff Queue
  - Displays any modules (and corresponding Target Dates) currently queued to be exported to the MPOG_MAS database(s).
  - The assigned Priority helps indicate why the item was queued:
    - Priority 10 = New Data
    - Priority 20 = Re-Imported Data
    - Priority 30 = New Mappings
    - Priority 50 = Missing from MPOG_MAS, Reason Unknown
    - Priority 60 = Missing from MPOG_MAS, Reason Unknown (Patient Level Data)

Log Viewer

- The filters at the top of the window allow the user to filter by a variety of criteria.



- *Module*: refers to the type of data.
- *Target date range*: filters the data based on case date of service.
- *Error filtering*: allows the user to view log records with or without errors. Please keep in mind that an error that has occurred may have since been resolved.
- *Execution date range:* filters the data based on date file processing occurred

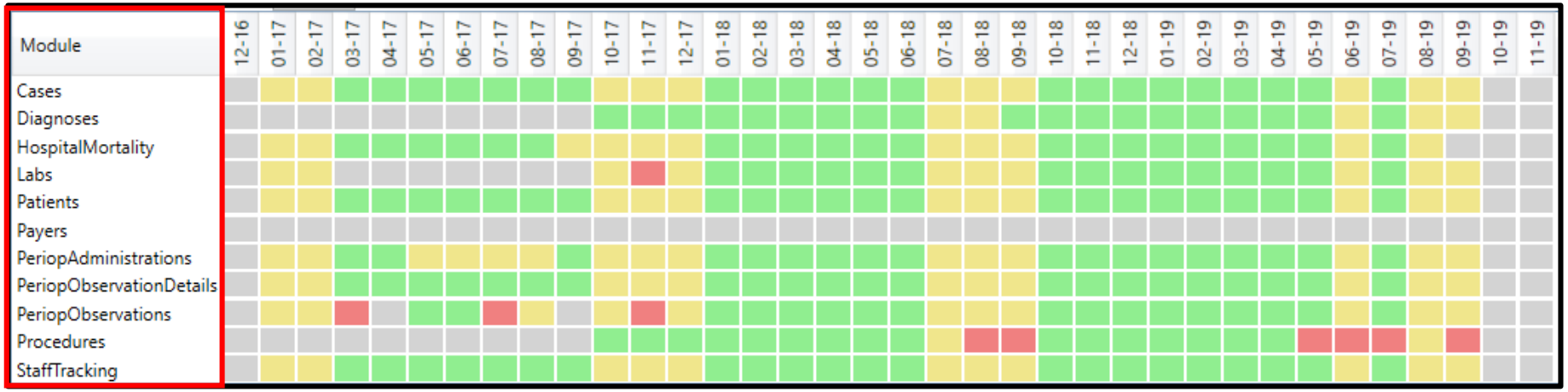
Log Viewer

- The Log Viewer is limited to the most recent 10,000 rows from each log; however, exporting the logs as a spreadsheet has no row limit and will display all rows.
- To export the logs, click the “Export as a spreadsheet” button at the bottom of the Import Manager Assistant window.

- Please include this log when contacting MPOG support about any errors encountered during the Import/Consume/Handoff processes.

Overview

- Provides a color-coded grid representing the current status of files that were imported. The main grid shows the status broken down by module or “data type” (viewed in rows) and date of service month/year (viewed in columns). Each box represents one month of data.



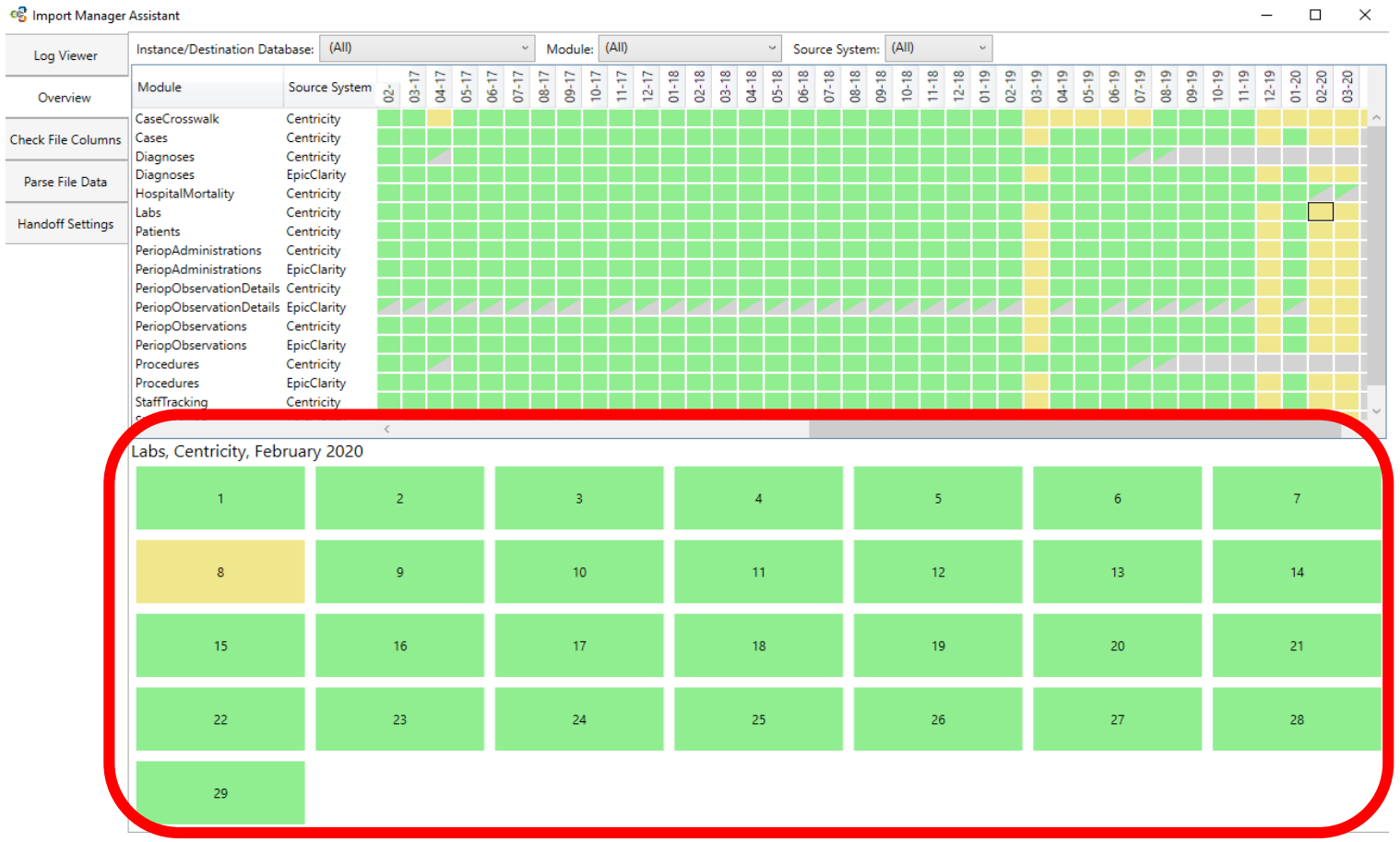
Module	Data Included
Cases	Date of Service Operating Room Admission Type Surgical Service Procedure Text Diagnosis Text Organizations (used to determine which MPOG_MAS database to use)
Diagnoses	Hospital Discharge Diagnosis and Professional Fee Diagnosis Codes
HospitalMortality	Date of Death (in hospital only)
Labs	Formal Labs and Point-of-care Labs
Patients	Patient Name MRN Gender Ethnicity Race
	(continued on next slide)

Module	Data Included
Payers	Insurance and other payer data
PeriopAdministrations	Fluids and Medications
PeriopObservations	Preoperative Notes Intraoperative Notes Monitor Data
Procedures	Professional Fee Procedure Codes Hospital Discharge Procedure Codes
StaffTracking	Staff sign ins/outs and role (eg attending)

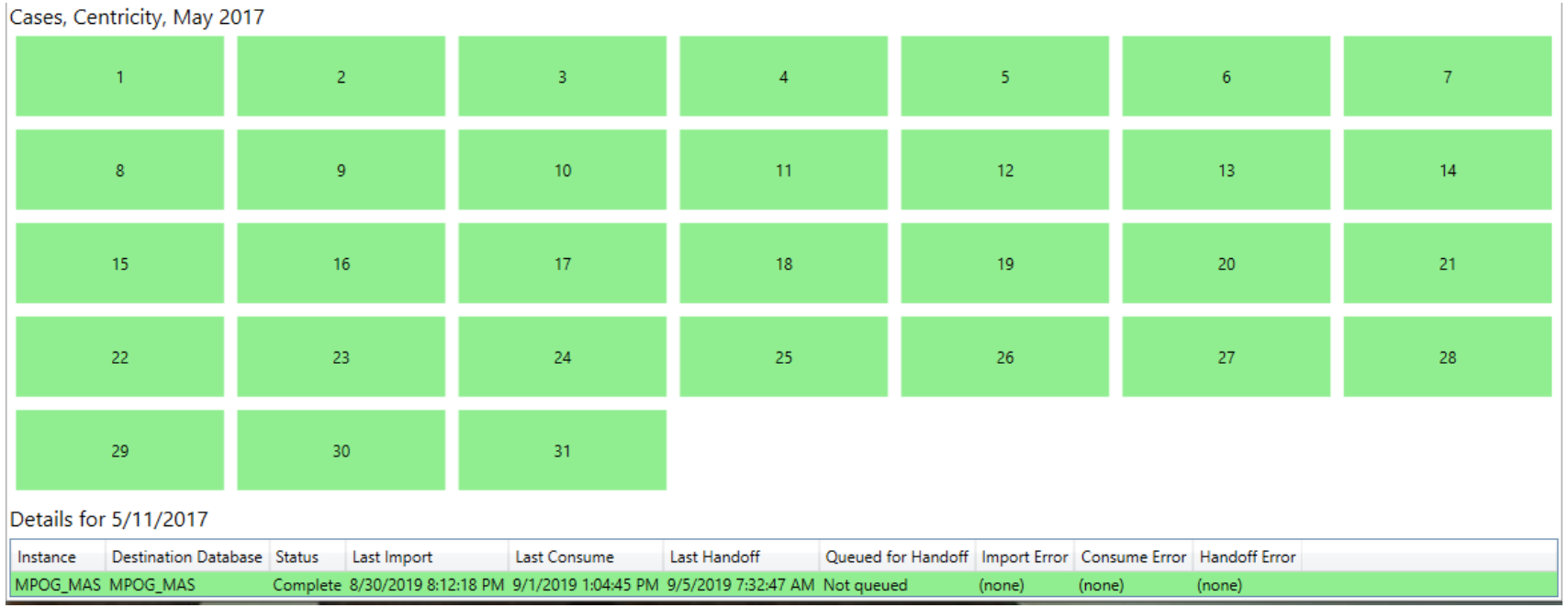
The color of each box indicates the data status within each month:

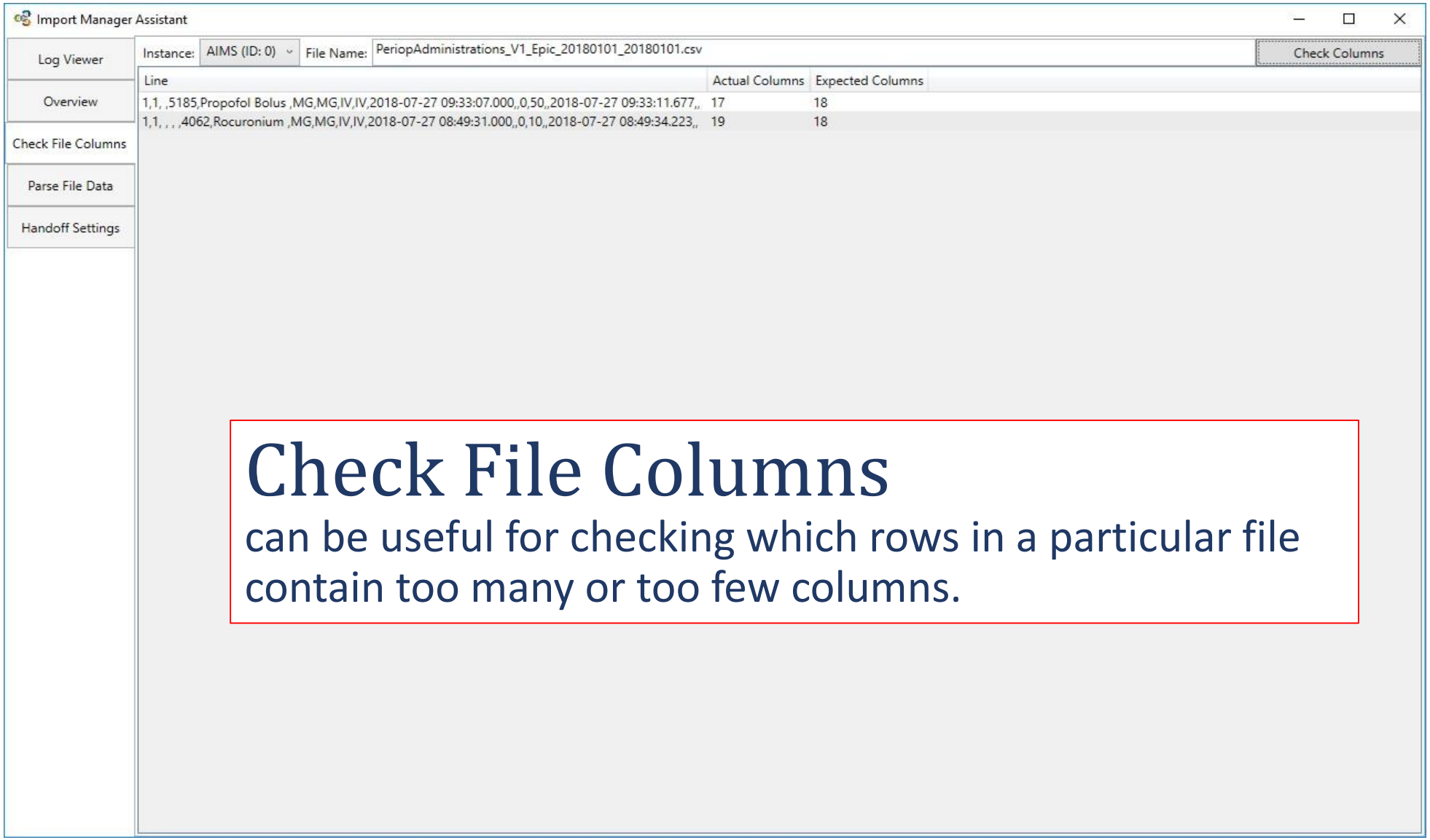
- Green- indicates data that has successfully completed all Import Manager steps. If every day of the month has successfully completed processing, display green
- Yellow- indicates data that has successfully completed some steps, but still has further steps to complete. If there are not any errors but data is still being processed for one or more days, display yellow.
- Red- indicates one or more errors. If there are any errors for any day that month, display the month as red.
- Grey- indicates missing data. If there are not any errors, no data is being processed, but there are one or more days without any data, display grey.
- Green/Grey- indicates that there is partial missing data. Some days may be green and some may be grey.

Clicking on any box will show the status of that module per day of that month.



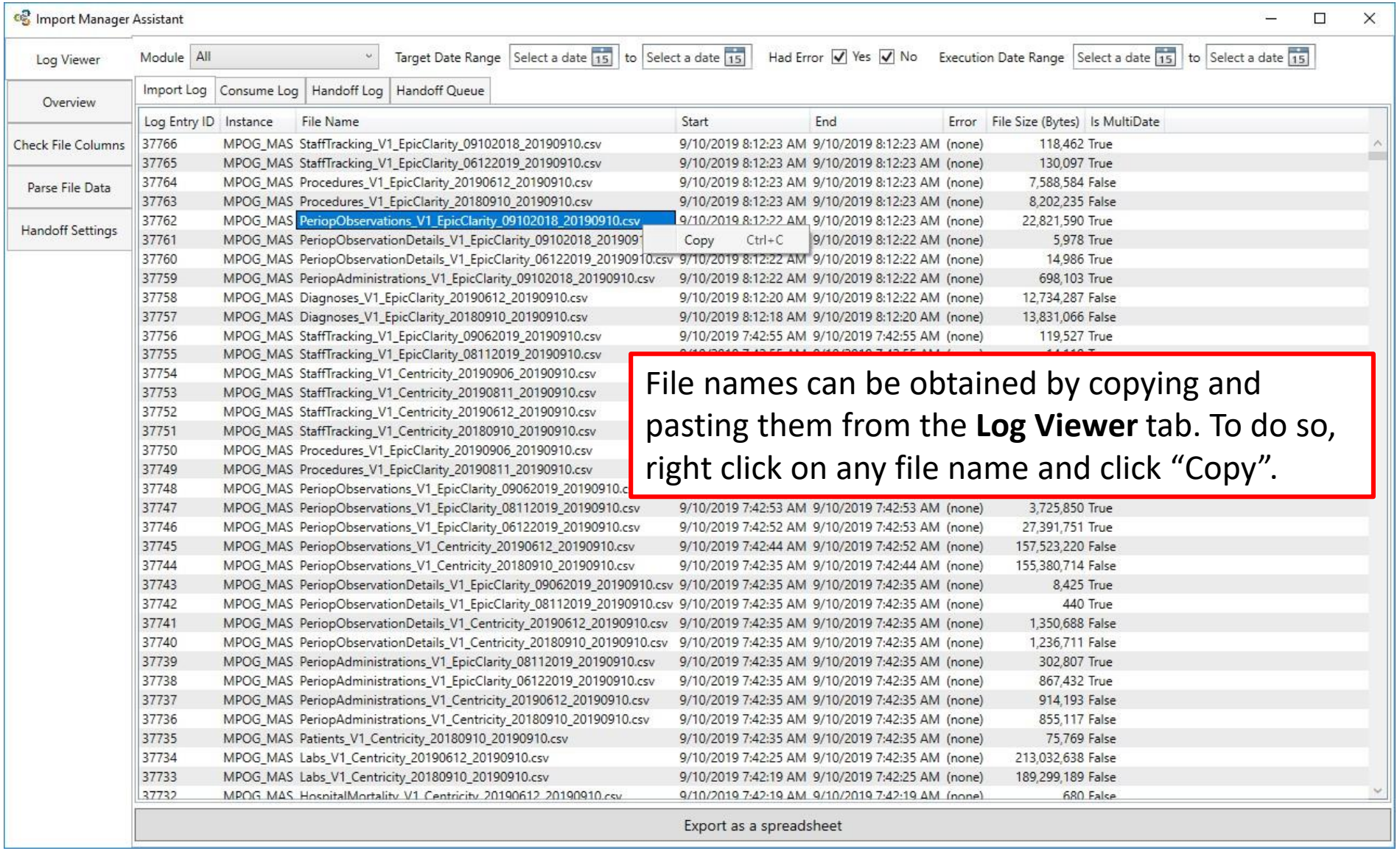
- Select any day of the month to reveal the breakdown by source system.
- The source system information will tell you from where the data was extracted from (electronic health record, billing software, etc.).
- You can also see more details about where/what errors may have occurred.
- The status column will show where the data currently is in the transfer process.



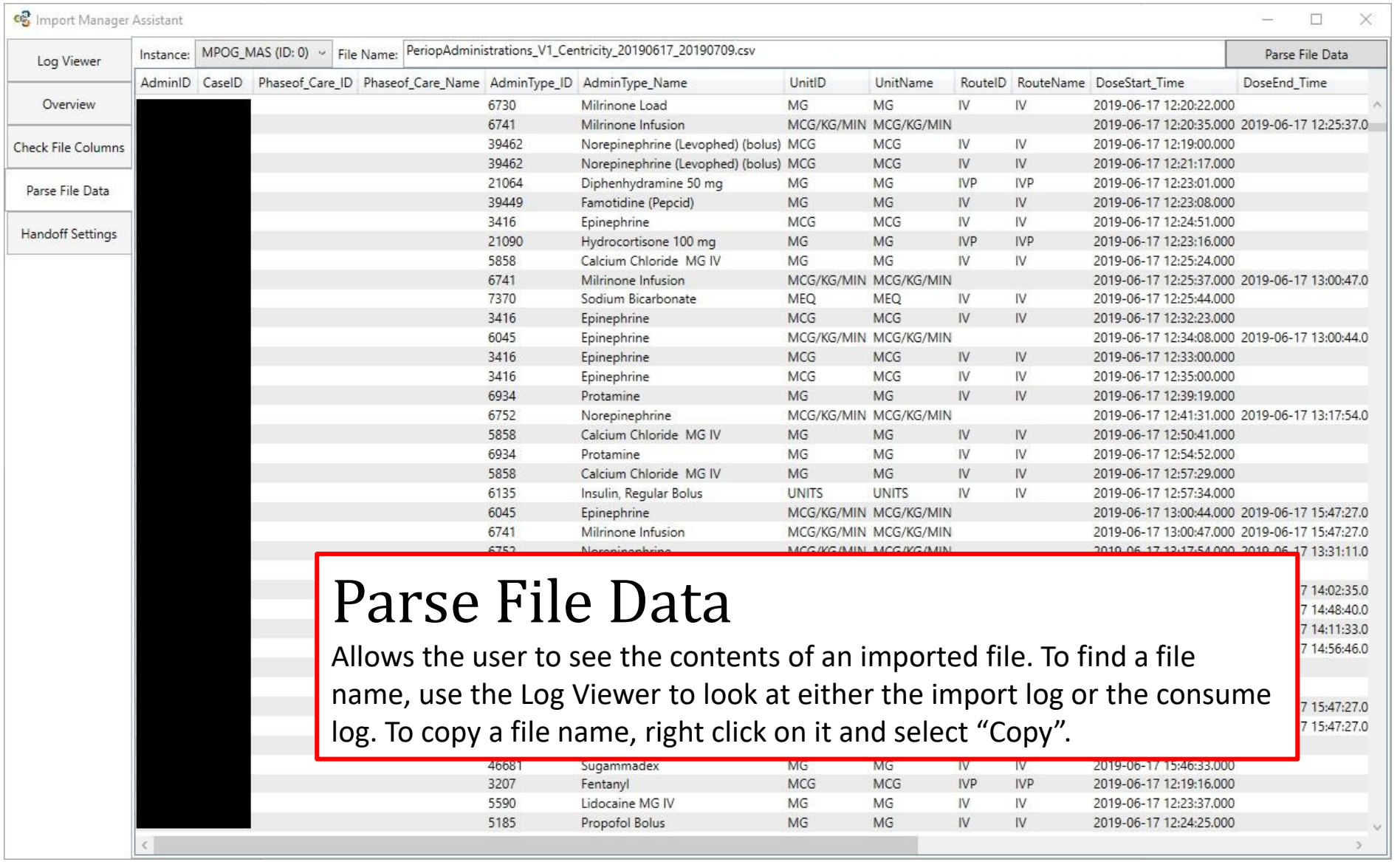


Check File Columns

can be useful for checking which rows in a particular file contain too many or too few columns.

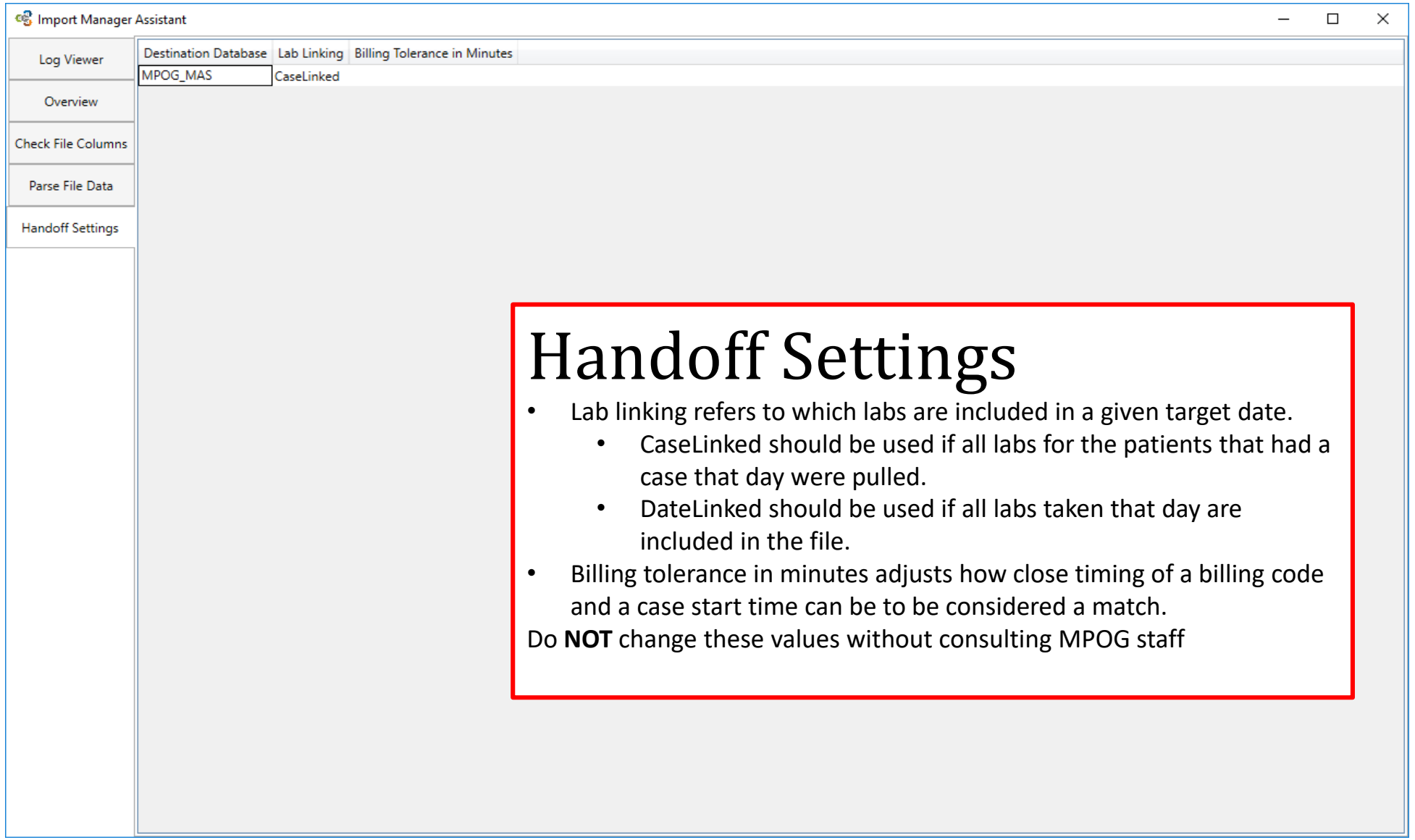


File names can be obtained by copying and pasting them from the **Log Viewer** tab. To do so, right click on any file name and click “Copy”.



Parse File Data

Allows the user to see the contents of an imported file. To find a file name, use the Log Viewer to look at either the import log or the consume log. To copy a file name, right click on it and select “Copy”.



Handoff Settings

- Lab linking refers to which labs are included in a given target date.
  - CaseLinked should be used if all labs for the patients that had a case that day were pulled.
  - DateLinked should be used if all labs taken that day are included in the file.
- Billing tolerance in minutes adjusts how close timing of a billing code and a case start time can be to be considered a match.

Do **NOT** change these values without consulting MPOG staff

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Module 16

MOCA® Part IV Attestation Guide

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MOCA Part IV Provider Feedback Program

- Eligible providers enrolled in the MOCA® Part IV MPOG Provider Feedback program can attest to reviewing their failed cases in order to earn MOCA® Part IV credit.
- Through the MPOG Quality emails, providers can click on a MOCA® link that will direct them to the attestation page.
- Each month, providers must attest to reviewing the auto-populated failed cases for each of their selected MOCA® measures

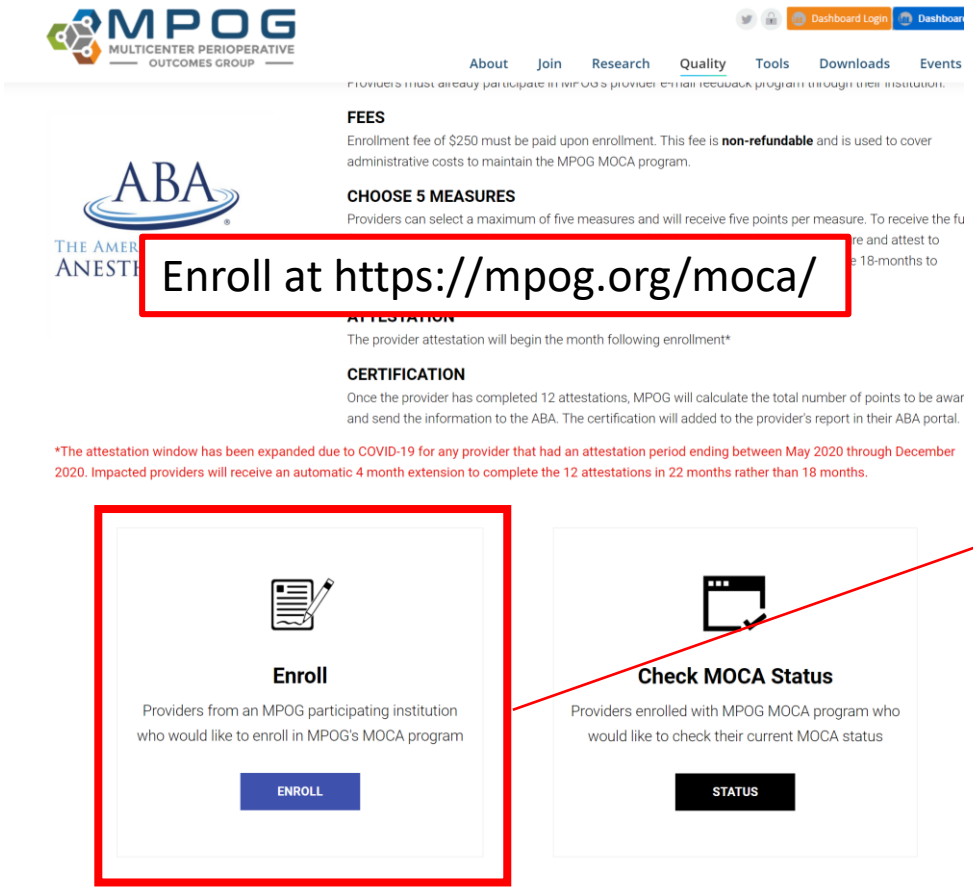
MOCA Part IV Provider Feedback Program

- To earn the full five (5) points per measure, providers review and attest to 12 feedback emails and show improvement or maintain performance above threshold for each measure.
- A maximum of 25 points can be earned upon completion of one 12-month period.

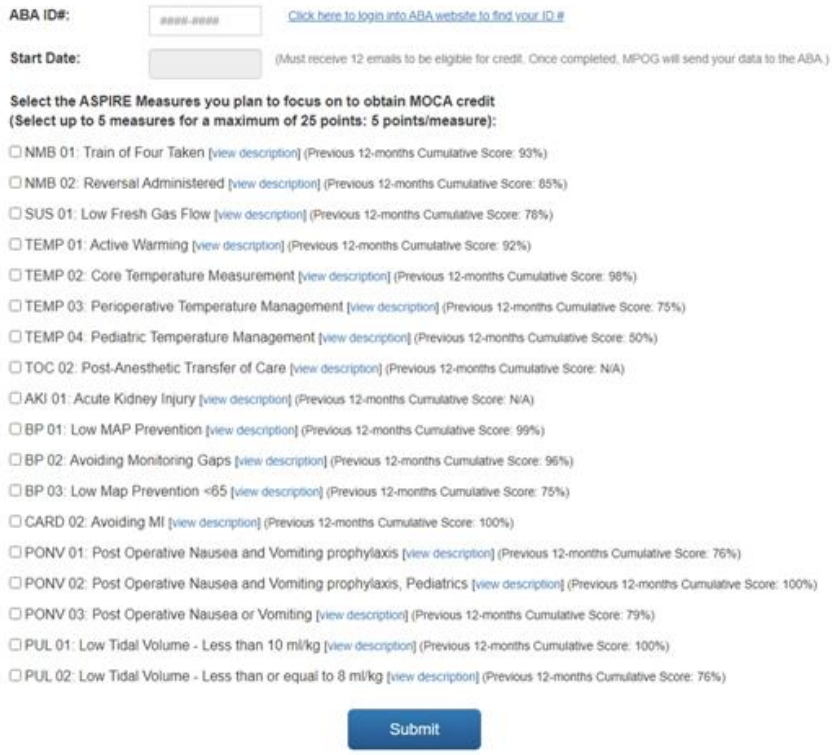
MOCA Part IV Provider Feedback Program

- MPOG will communicate the number of points received as well as final scores to the individual before attesting to the American Board of Anesthesiology (ABA) on the provider's behalf.
- For more information on MOCA® Part IV, please visit the MOCA page on the MPOG website https://mpog.org/quality/moca/

MOCA Part IV Enrollment



Enroll at https://mpog.org/moca/



Getting Started

- Begin the MOCA® Attestation process by clicking the link in the upper right hand corner your MPOG Provider Feedback Email:

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Claim MOCA® Credit

Hello John Doe,

Below is your new MPOG Quality performance report. For a case-by-case breakdown of each measure's result, click on the graph's label and you will be taken to our reporting website (login required).

If you have any questions, please read our FAQ or send them to QIChampion@mpog.org. Thank you for your participation in MPOG Quality.

Sincerely,
The MPOG Team

Your Performance vs All Other Attendings
12/1/2017 to 12/31/2017

- After being directed to the MPOG/ASPIRE Login page, enter your User Name and Password

- Once you have logged into MPOG, you will be directed to your personal Attestation MOCA® Part IV ASPIRE Provider Feedback Activity.
- From here, you can review the auto-populated failed cases for each selected measure for a specific month.
- The MPOG Quality Measures you selected for MOCA® credit will display (see next slide for example)

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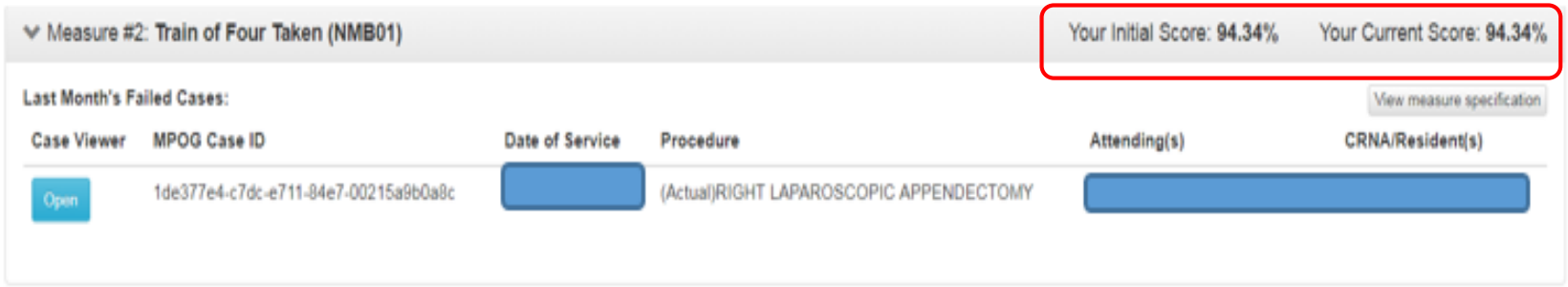
January 2018 Attestation MOCA Part 4 ASPIRE Provider Feedback Activity
* Your initial score is from January 2018.
Measure #1: Avoiding Monitoring Gaps (BP02)
Your Initial Score: 95.53%
Your Current Score: 95.53%
Last Month's Failed Cases:
View measure specification
Case Viewer
MPOG Case ID
Date of Service
Procedure
Attending(s)
CRNA/Resident(s)
Open
[redacted]
(Actual)UNKNOWN BONE MARROW BIOPS UNKNOWN SPINAL TAP
[redacted]
Measure #2: Train of Four Taken (NMB01)
Your Initial Score: 94.34%
Your Current Score: 94.34%
Last Month's Failed Cases:
View measure specification
Case Viewer
MPOG Case ID
Date of Service
Procedure
Attending(s)
CRNA/Resident(s)
Open
[redacted]
(Actual)RIGHT LAPAROSCOPIC APPENDECTOMY
[redacted]
Measure #3: Reversal Administered (NMB02)
Your Initial Score: 100.00%
Your Current Score: 100.00%
Last Month's Failed Cases: N/A
View measure specification
Measure #4: Thermoregulation Vigilance - Active Warming (TEMP01)
Your Initial Score: 98.26%
Your Current Score: 98.26%
Last Month's Failed Cases: N/A
View measure specification
Measure #5: Thermoregulation Monitoring - Core Temperature (TEMP02)
Your Initial Score: 94.14%
Your Current Score: 94.14%
Last Month's Failed Cases:
View measure specification
Case Viewer
MPOG Case ID
Date of Service
Procedure
Attending(s)
CRNA/Resident(s)
Open
[redacted]
(Actual)BILATERAL BOTOX INJECTION
[redacted]
Open
(Actual)BILATERAL BOTOX INJECTIO BILATERAL PHENOL INJECTION
Attention: To earn 5 points per measure, the provider must review failed cases and complete the attestation form once per month for 12 months. In addition to reviewing cases, providers must maintain quality measure performance above threshold or show improvement between the 1st and 12th performance feedback email. Providers can earn 5 points per measures for 5 measures, for a total of 25 points.
By clicking the acknowledgment button below, I attest that I have reviewed this month's failed cases.
Yes, I've reviewed my failed cases.

- To open the case(s) listed under each measure, click the **Open** button to view case details. You will also notice your performance measurement for the selected measure in the top right corner for each measure.



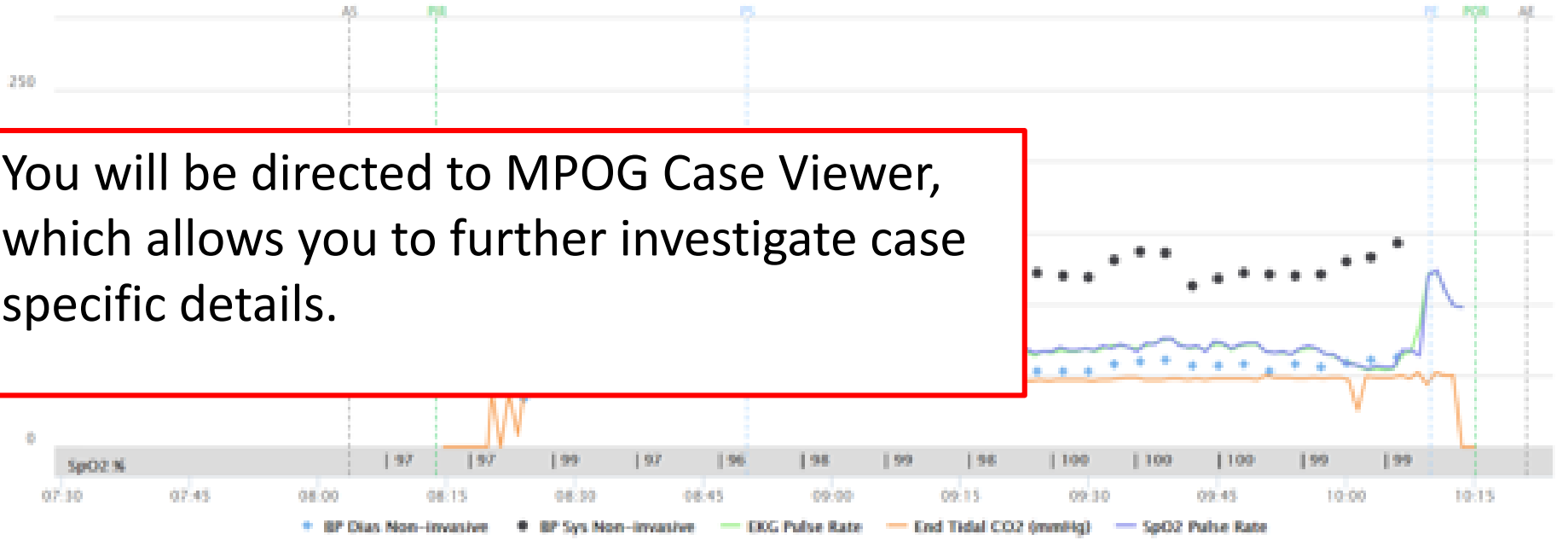
[redacted]
ASA Status: 3E
82.3 kg, 172.7 cm (IBW: 68.47)
Admission Type: Inpatient
Operating Room: [redacted]

University of Michigan Health System
[redacted]
Anes Duration: [redacted]
Procedure: RIGHT LAPAROSCOPIC APPENDECTOMY
Diagnosis: appendicitis

[redacted]
view all lab values

Time	Note
10:02	Patient in Facility
06:47	Assigned PreOp
07:16	Equipment verified
07:54	Room Ready
08:03	Anesthesia Start
08:13	Patient identified, chart reviewed, status unchanged from preoperative evaluation
08:13	Pre-Anesthesia evaluation completed and discussed with Attending
08:13	NPO status confirmed to be solids > 8 hours and clear liquids > 3 hours
08:13	Patient In Room
08:18	PRIOR to Induction/Initiation of Anesthesia a VERIFICATION was conducted with active participation of ANES, OR Nursing, and the Surgeon/Proceduralist using the Pre-Induction Verification Checklist
08:19	Standard monitors placed, vitals checked
08:19	Existing Site - Left Antecubital 22 g, placed by Unknown in ED.
08:21	Mask ventilation Grade 1: Ventilated by mask
08:24	Eyes taped shut
08:26	Anesthesia Induction End
08:30	Orally intubated using Direct laryngoscopy: MacIntosh #3: Grade 1 - Full view of Vocal Cords.

Cardiovascular



You will be directed to MPOG Case Viewer, which allows you to further investigate case specific details.

Ventilator

Neuromuscular blockade

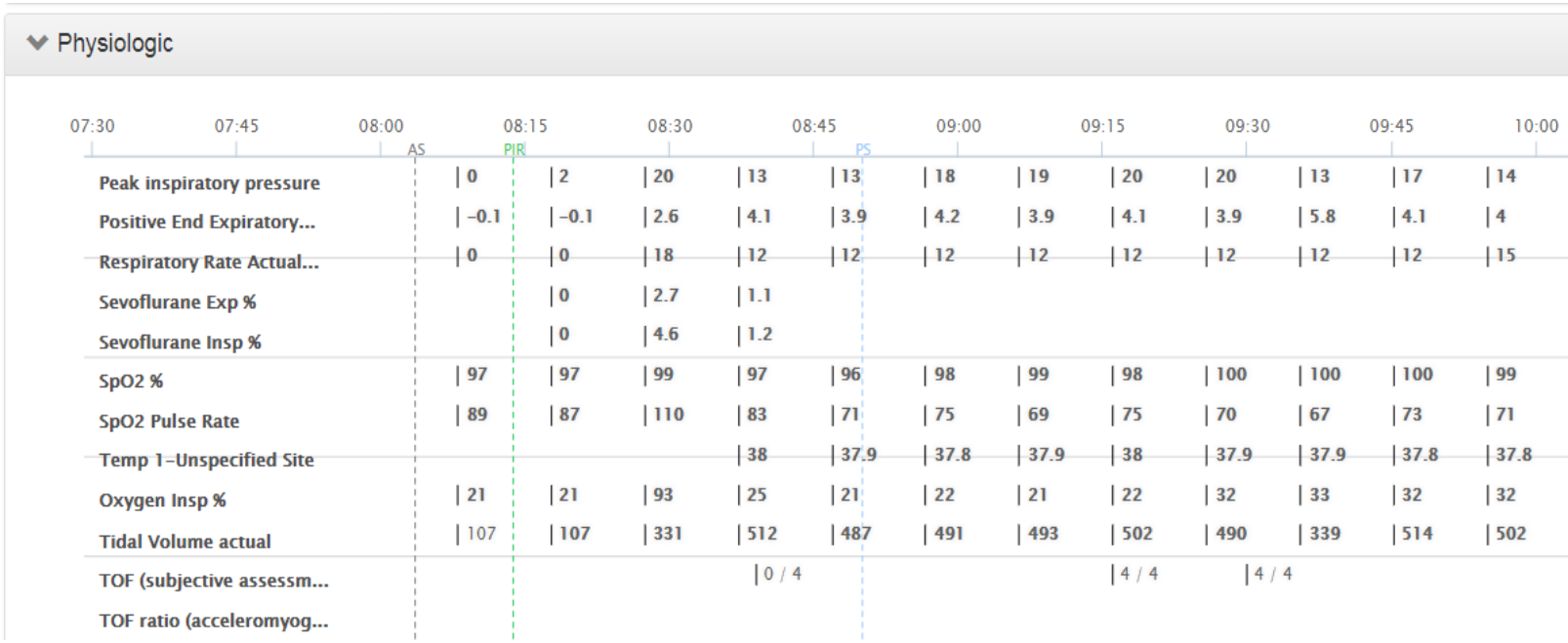
Prophylaxis

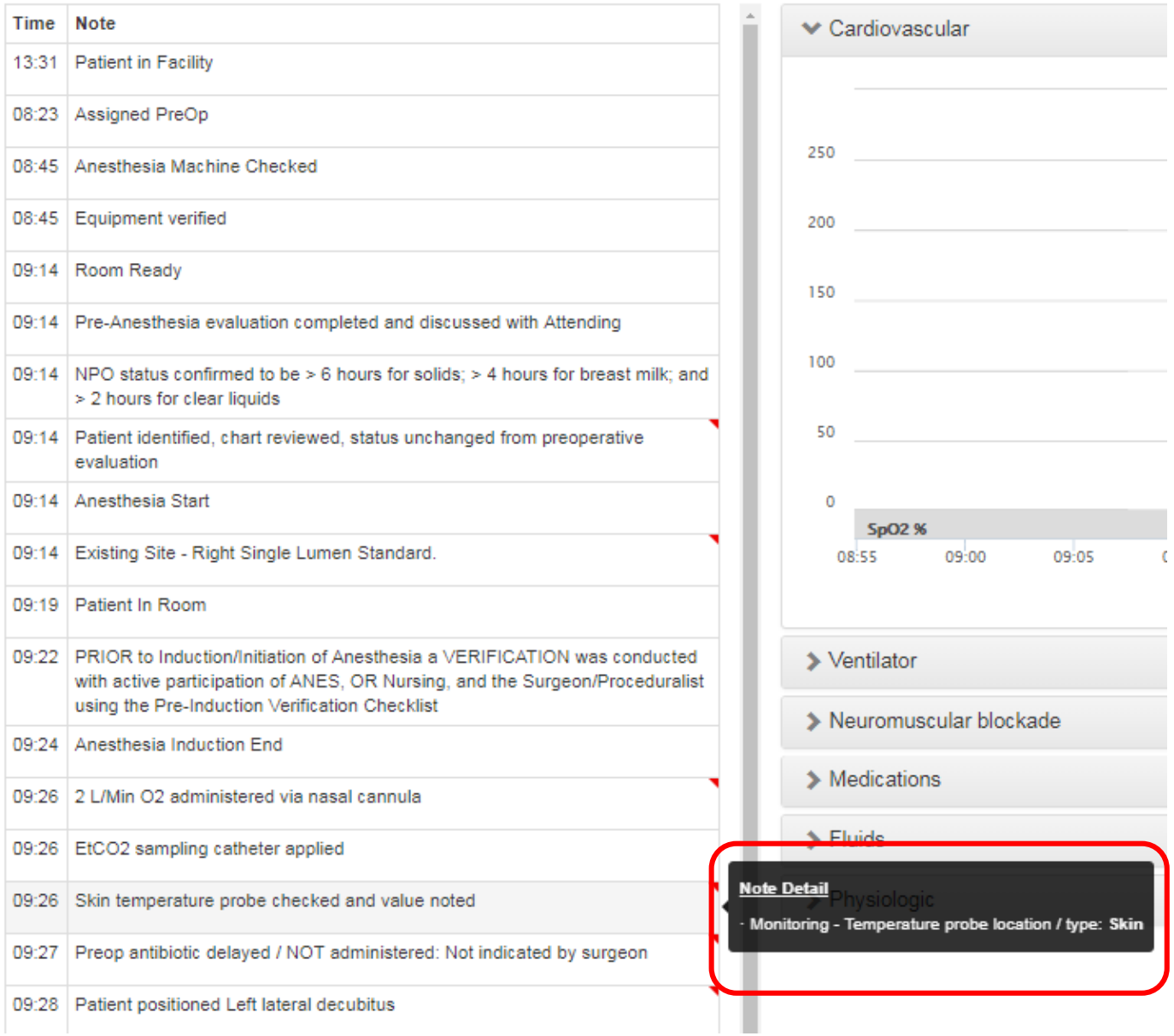
Medications

Fluids

Physiologic

- By clicking on the arrow to the left of the following terms (**Cardiovascular, Ventilator, Neuromuscular blockade, Prophylaxis, Medications, and Fluids**), you can view additional timed details associated with each term, such as dosages, settings, measurements, vital signs, etc. for each variable.





- If you notice a red triangle in the intraoperative notes section of MPOG Case Viewer, you can hover over the area to display specific note details.

- To the right of each measure you will find a link to the MPOG Measure Specification. Simply click ‘View measure specification’ as shown below to view complete measure specification details.

- After you have reviewed failed cased for the month, you will click the acknowledgment button below, attesting that you have reviewed the month's failed cases

- To earn the full five (5) points per measure, providers must review and attest to 12 feedback emails.
- A maximum of 25 points can be earned upon completion of 12 feedback attestations in a 18 month period.
- MPOG will communicate the number of points received as well as final scores to the individual before attesting to the American Board of Anesthesiology (ABA) on the provider's behalf.

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Module 17
NSQIP Import Tool

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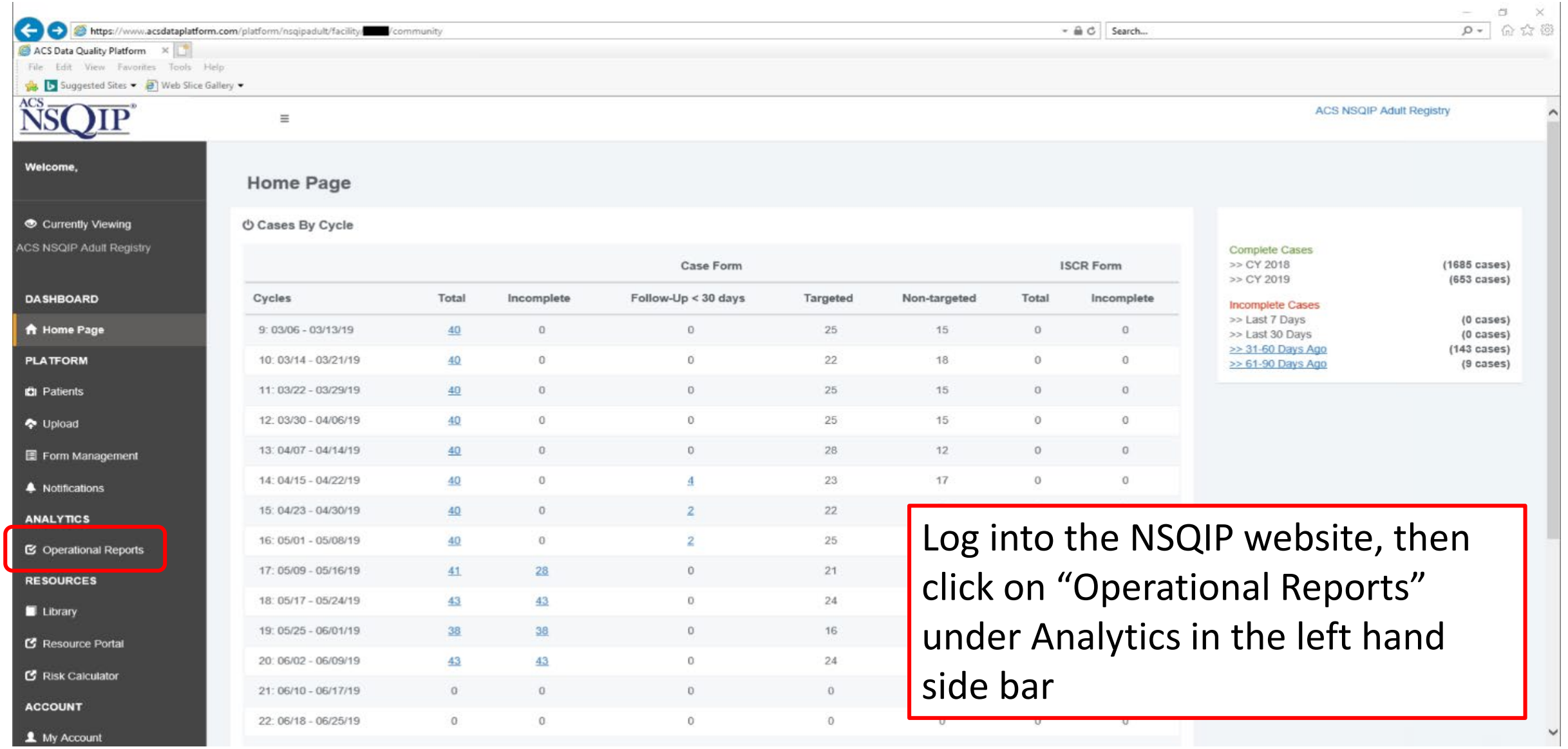
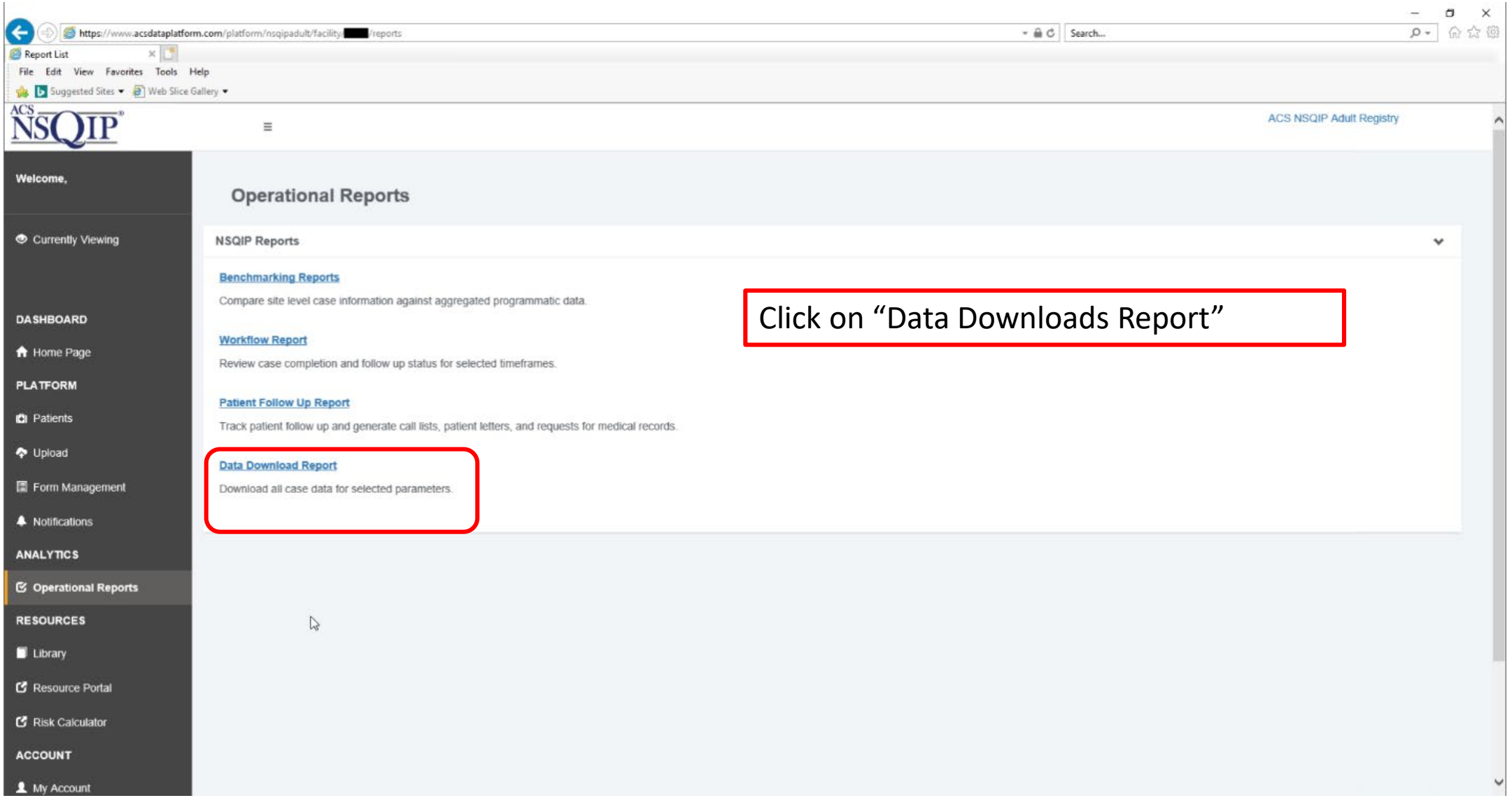
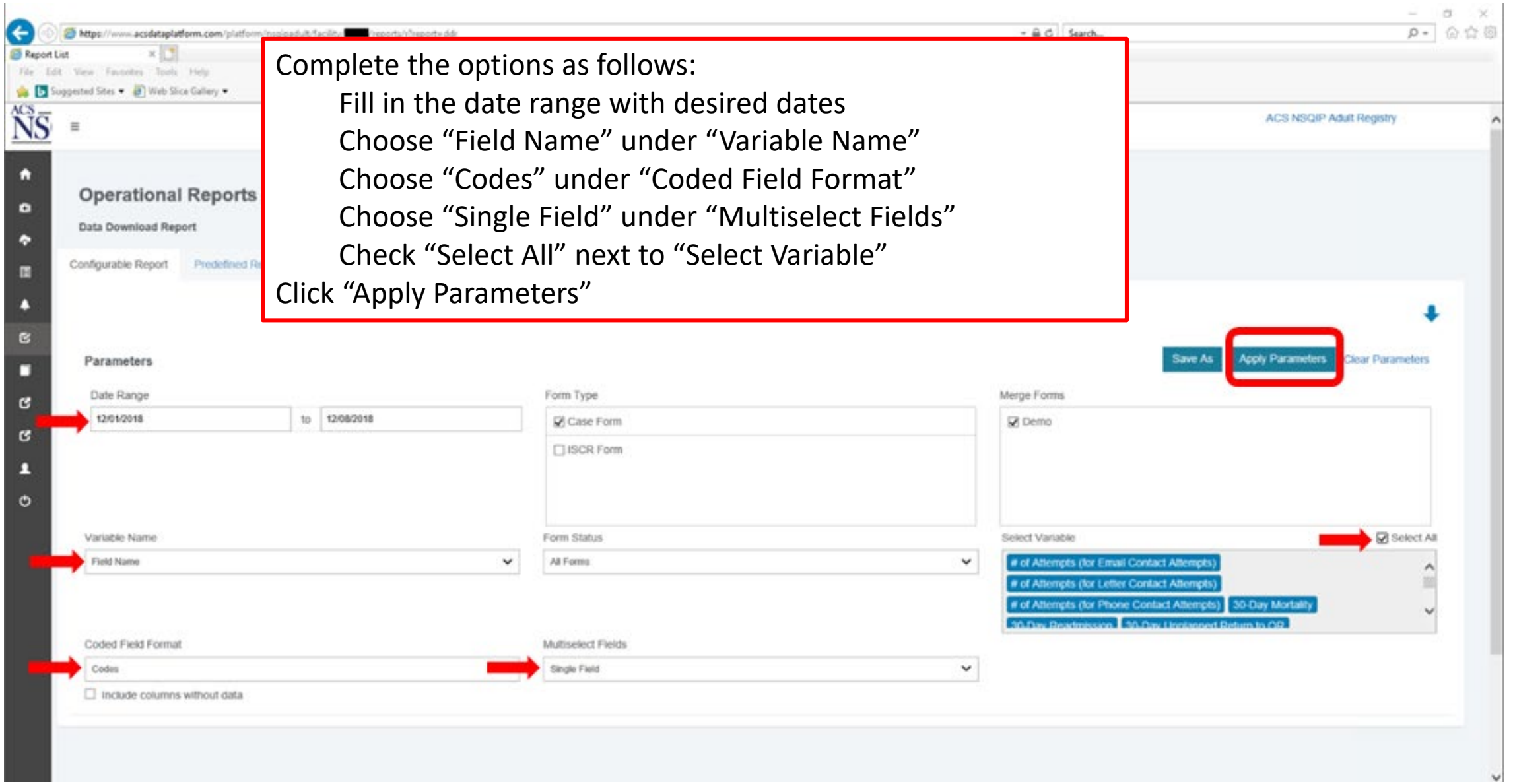
NSQIP Import Tool

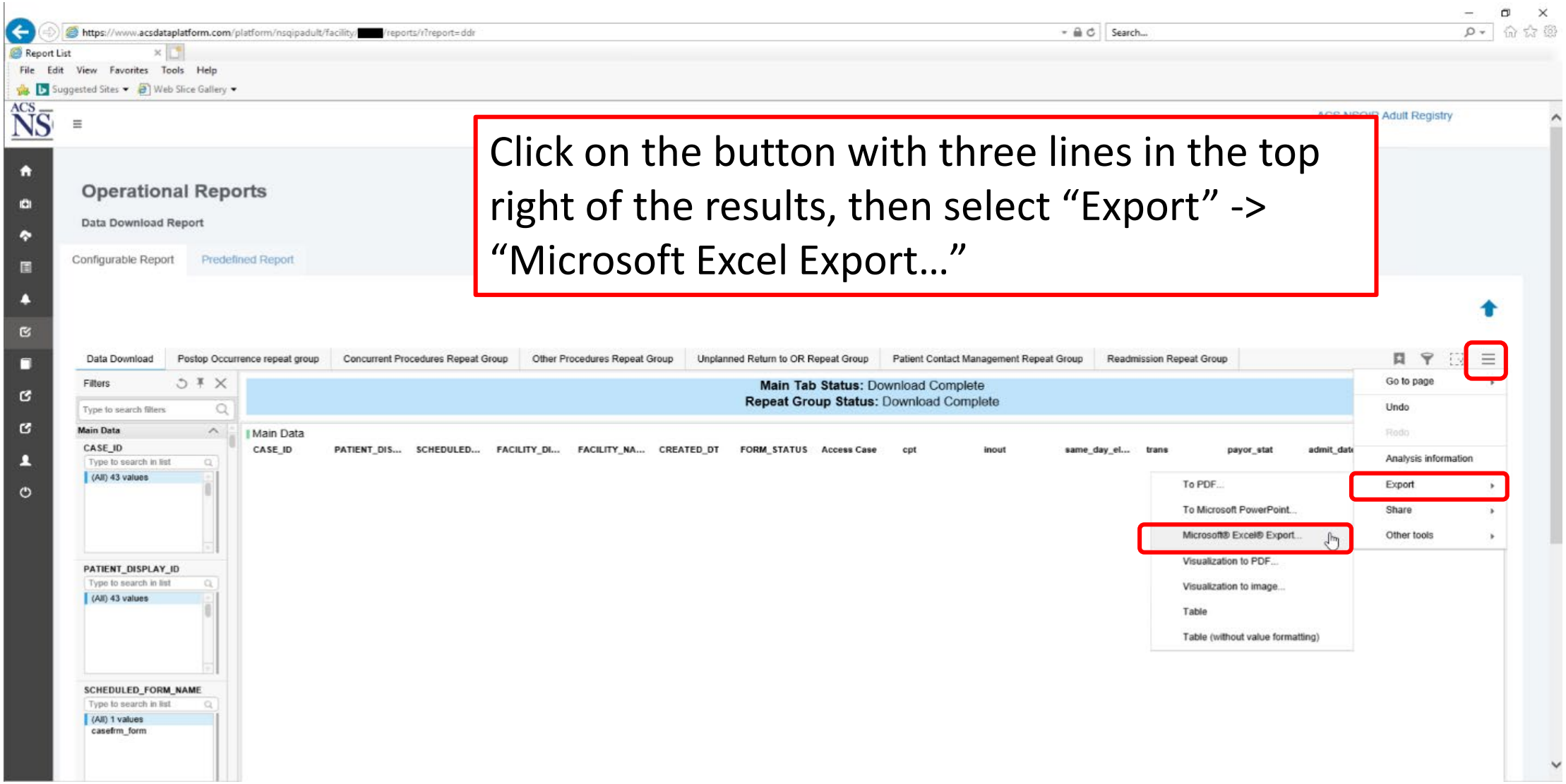
- Allows the site to merge the surgical data abstracted for NSQIP with the MPOG anesthesia data.
- Log into the NSQIP website at https://www.acsdataplatform.com/login



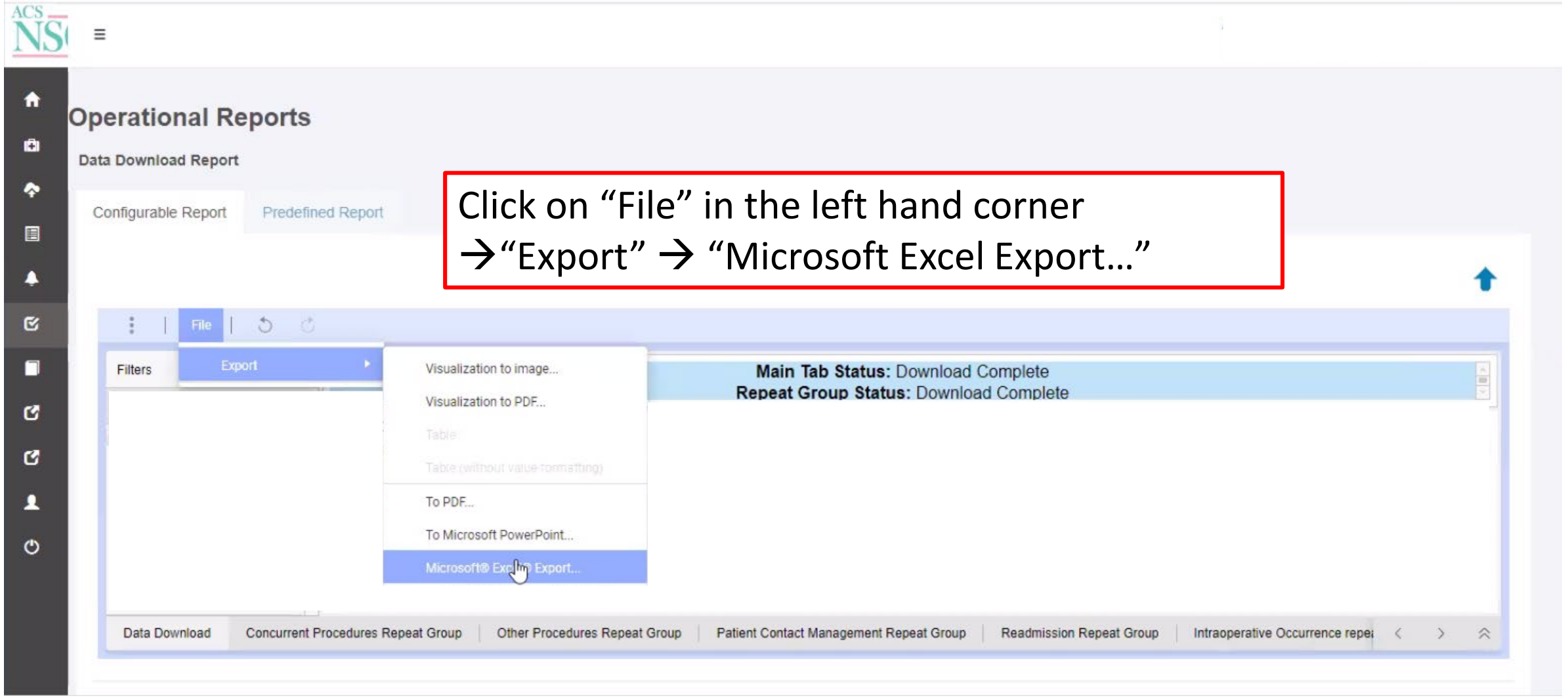
Log into the NSQIP website, then click on “Operational Reports” under Analytics in the left hand side bar

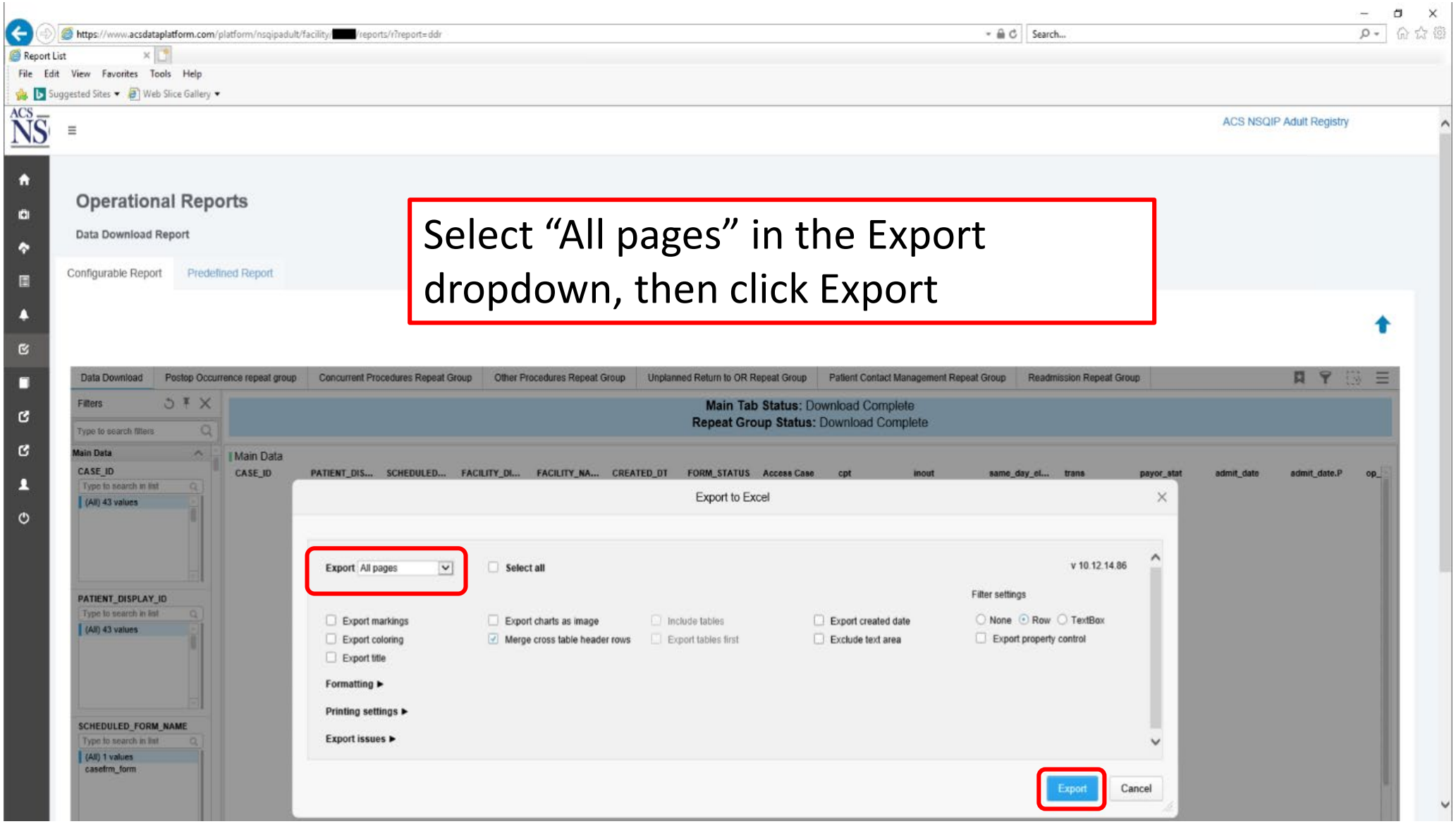

Report List
File Edit View Favorites Tools Help
Suggested Sites
Web Slice Gallery
ACS NSQIP
ACS NSQIP Adult Registry
Welcome,
Currently Viewing
DASHBOARD
Home Page
PLATFORM
Patients
Upload
Form Management
Notifications
ANALYTICS
Operational Reports
RESOURCES
Library
Resource Portal
Risk Calculator
ACCOUNT
My Account
Operational Reports
NSQIP Reports
Benchmarking Reports
Compare site level case information against aggregated programmatic data.
Workflow Report
Review case completion and follow up status for selected timeframes.
Patient Follow Up Report
Track patient follow up and generate call lists, patient letters, and requests for medical records.
Data Download Report
Download all case data for selected parameters.
Click on “Data Downloads Report”


Complete the options as follows:
Fill in the date range with desired dates
Choose “Field Name” under “Variable Name”
Choose “Codes” under “Coded Field Format”
Choose “Single Field” under “Multiselect Fields”
Check “Select All” next to “Select Variable”
Click “Apply Parameters”
ACS NSQIP Adult Registry
Operational Reports
Data Download Report
Configurable Report
Parameters
Save As
Apply Parameters
Clear Parameters
Date Range
12/01/2018
to
12/08/2018
Form Type
Case Form
ISCR Form
Merge Forms
Demo
Variable Name
Field Name
Form Status
All Forms
Select Variable
Select All
# of Attempts (for Email Contact Attempts)
# of Attempts (for Letter Contact Attempts)
# of Attempts (for Phone Contact Attempts)
30-Day Mortality
Coded Field Format
Codes
Multiselect Fields
Single Field
Include columns without data

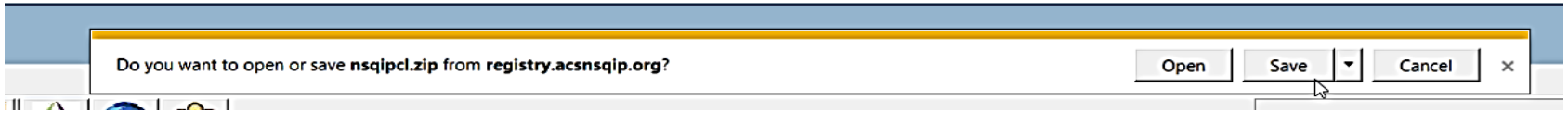

Click on the button with three lines in the top right of the results, then select “Export” -> “Microsoft Excel Export…”
Operational Reports
Data Download Report
Configurable Report
Predefined Report
Data Download
Postop Occurrence repeat group
Concurrent Procedures Repeat Group
Other Procedures Repeat Group
Unplanned Return to OR Repeat Group
Patient Contact Management Repeat Group
Readmission Repeat Group
Main Tab Status: Download Complete
Repeat Group Status: Download Complete
Go to page
Undo
Analysis information
Export
Share
Other tools
To PDF...
To Microsoft PowerPoint...
Microsoft® Excel® Export...
Visualization to PDF...
Visualization to image...
Table
Table (without value formatting)

NSQIP-Pediatrics Export

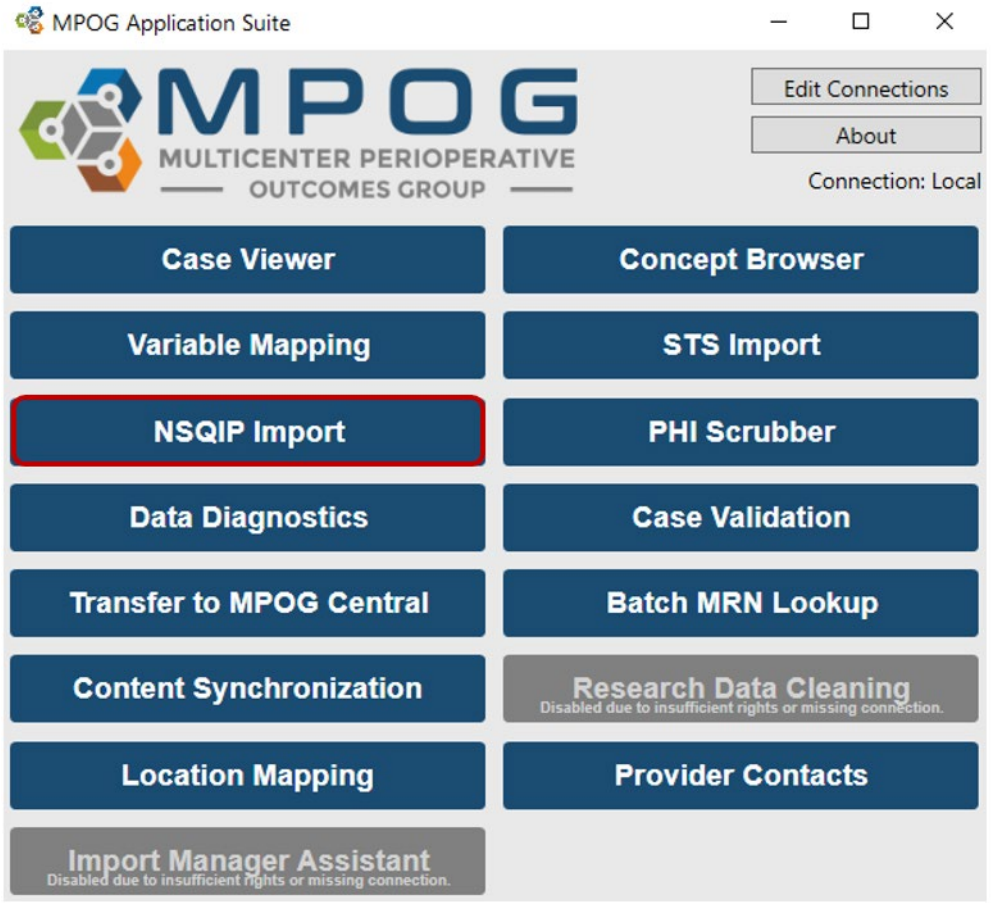



Select “All pages” in the Export dropdown, then click Export
ACS NSQIP Adult Registry
Operational Reports
Data Download Report
Configurable Report
Predefined Report
Export to Excel
Export All pages
Select all
Export markings
Export coloring
Export title
Export charts as image
Merge cross table header rows
Include tables
Export tables first
Export created date
Exclude text area
Filter settings
None
Row
TextBox
Export property control
Formatting ►
Printing settings ►
Export issues ►
Export
Cancel

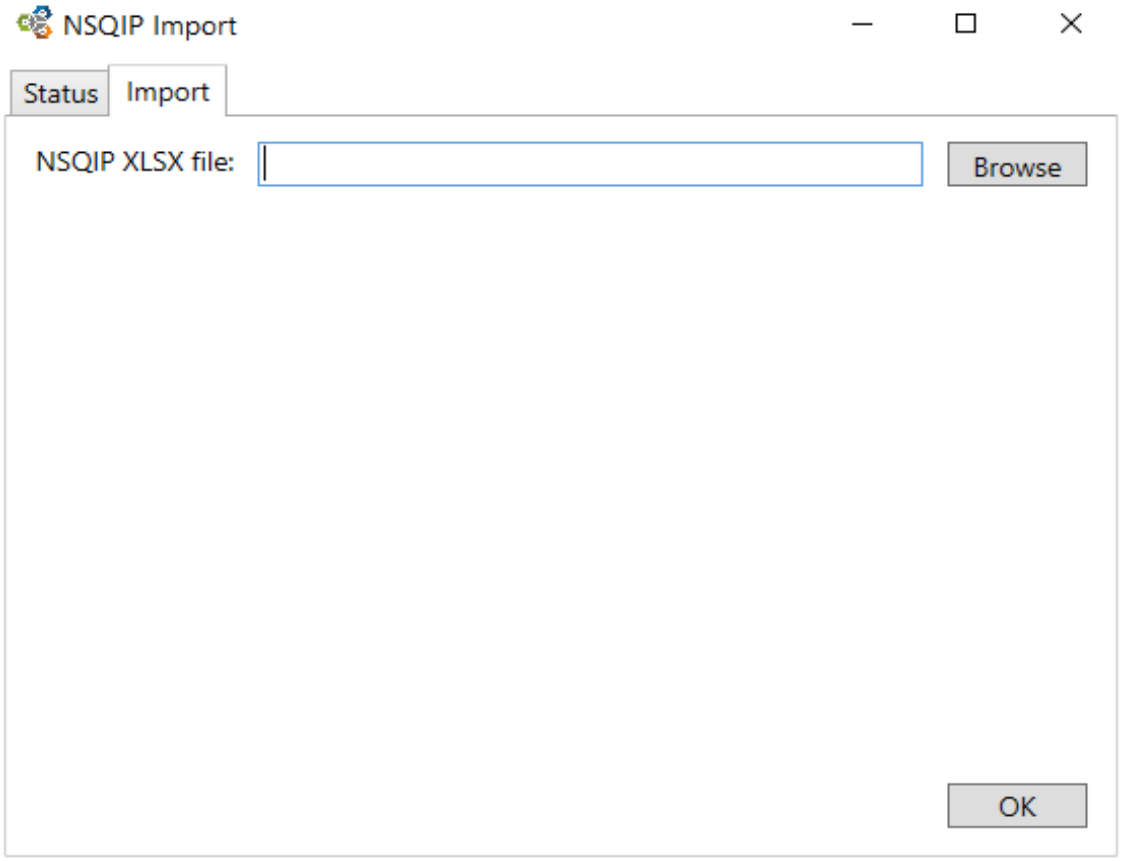
After clicking on the link shown in Step 5, the following prompt will display at the bottom of the screen. Click on ‘Save.’ Save the file in a secure location that you can access again.



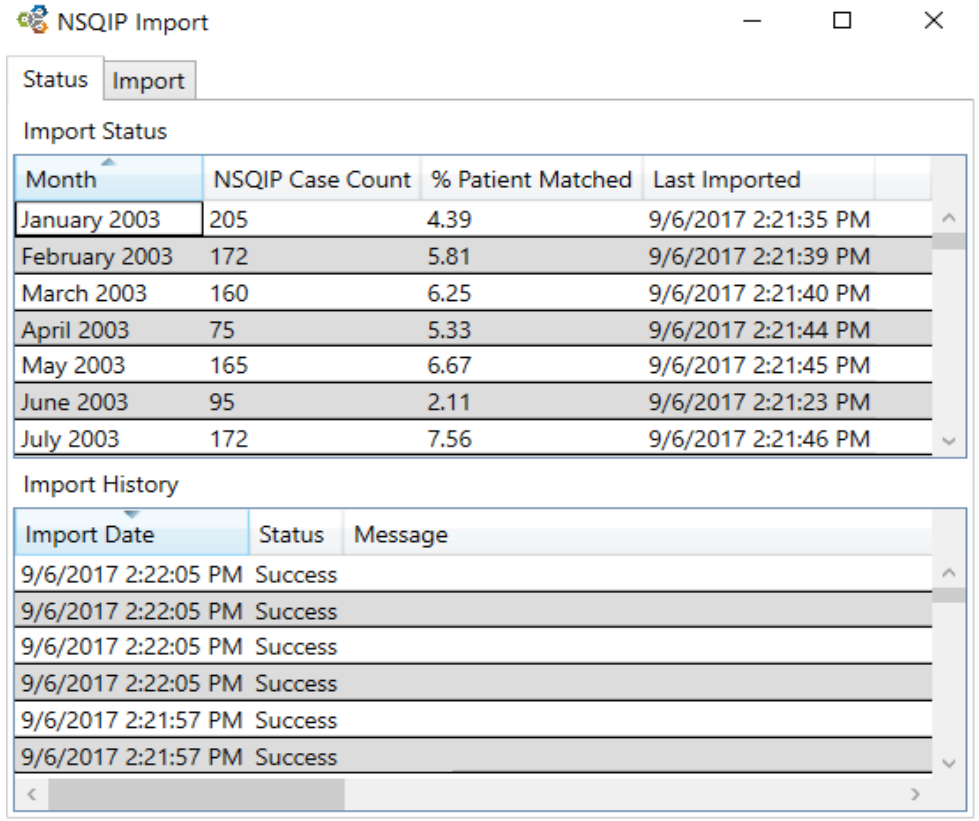
- Open the MPOG Application Suite and run the NSQIP Import Tool.



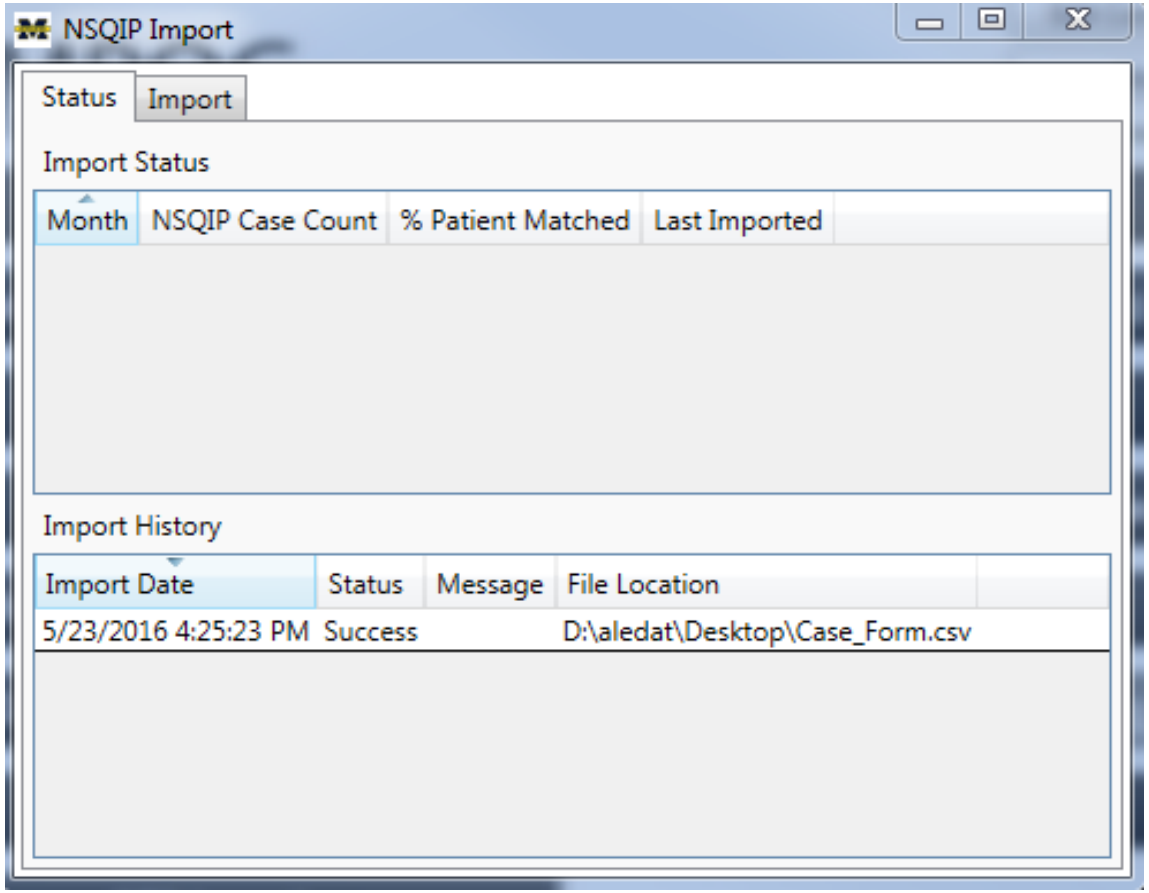
Under the Import tab, click the ‘Browse’ button. Select the .xlsx file downloaded previously. Click ‘OK.’



The application will now insert the NSQIP data into the local database and automatically perform patient matching to existing MPOG patients. Matched data will be sent to the central repository when the patient data is next uploaded.



To check historical import status, click on the ‘Status’ tab within the NSQIP Import application.



Recommended Import Schedule Options

- There are 46 cycles of 8 days each during which NSQIP data is entered.
- However, changes can be made to a NSQIP record up to 90 days after the date of service.
- After 90 days, the record is “locked” from modification.
- For this reason, MPOG recommends importing on either a monthly or quarterly basis using the schedule on the next slide

Monthly Import Schedule

Month	Extract Date Ranges
January	September of the previous year
February	October of the previous year
March	November of the previous year
April	December of the previous year
May	January of the previous year
June	February of the previous year
July	March of the same year
August	April of the same year
September	May of the same year
October	June of the same year
November	July of the same year
December	August of the same year

Quarterly Import Schedule

Month	Extract Date Ranges
January	Q3 of previous year (Jul 1 – Sep 30)
April	Q4 of previous year (Oct 1- Dec 31)
July	Q1 of same year (Jan 1- Mar 31)
October	Q2 of same year (Apr 1-Jun 30)

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Module 18:
MQUARK Audit Tool

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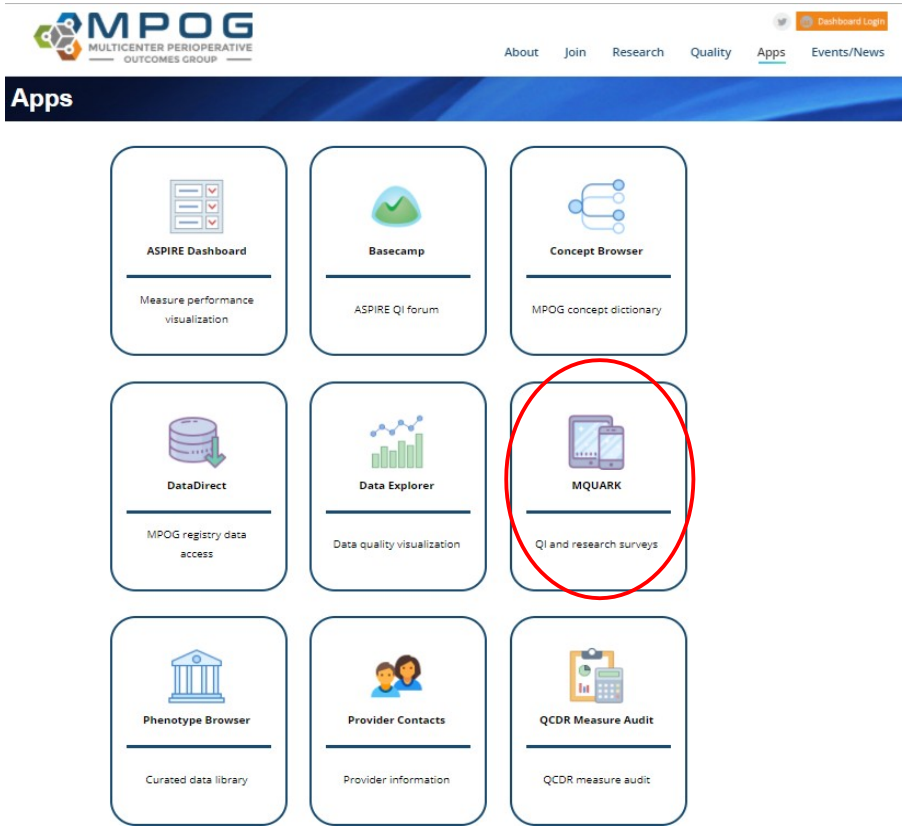
MQUARK Audit Tool

- Allows sites to collect additional data for research or quality purposes
- In the phase one release of the application, the Coordinating Center will be responsible for building forms used for all quality audits.
- If you are interested in conducting an audit for a particular ASPIRE measure or research project, please contact the Coordinating Center (mpog-quality@med.umich.edu).

Considerations Prior to Conducting an Audit

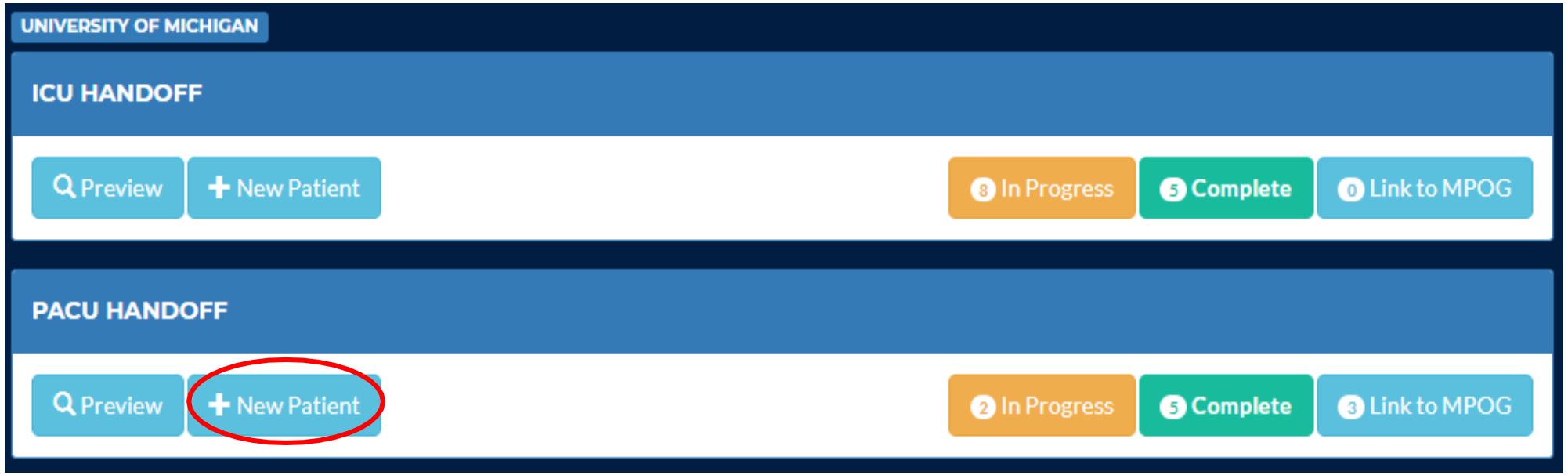
- Notify administration of the unit you plan to conduct the audit on and complete any necessary paperwork for compliance.
- Obtain a tablet or electronic device to conduct the audits with. The audit tool is compatible with both Apple and Android products.

How to Conduct an Audit



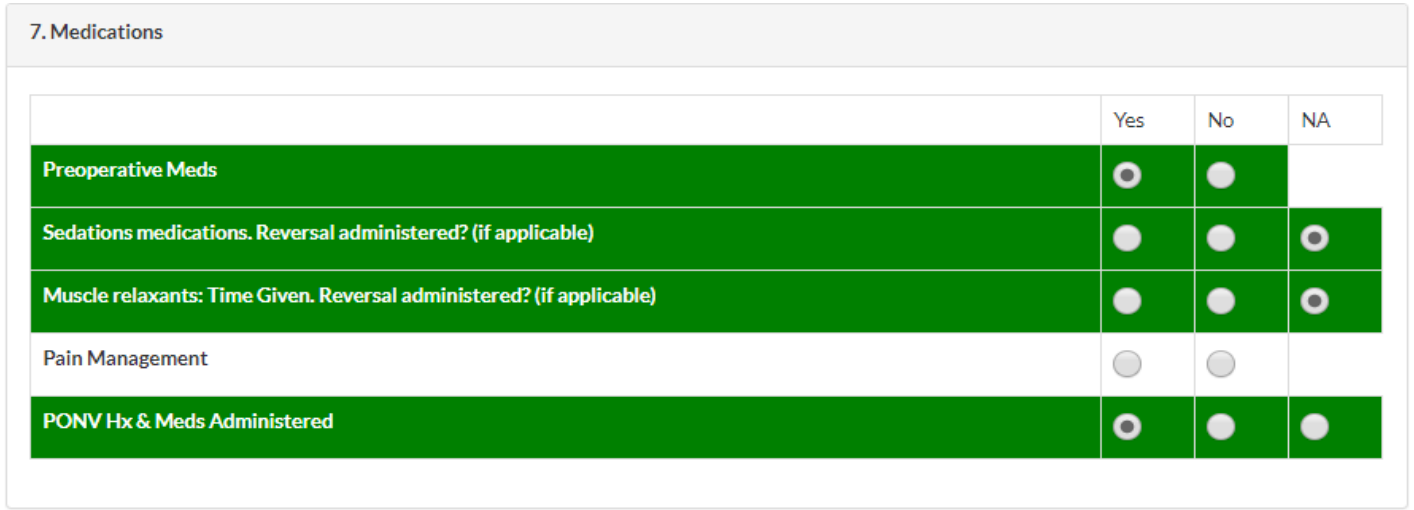
- To receive MQUARK login permissions, email the Coordinating Center: support@mpog.zendesk.com
- Once access has been granted, the MQUARK audit tool can be found in the 'Apps' tab on the website or via the following link: https://mquark.mpog.org

- Upon login to MQUARK, ensure your institution name is listed in the top left hand corner. To begin a new audit, click *'+ New Patient'* for the audit you are interested in.



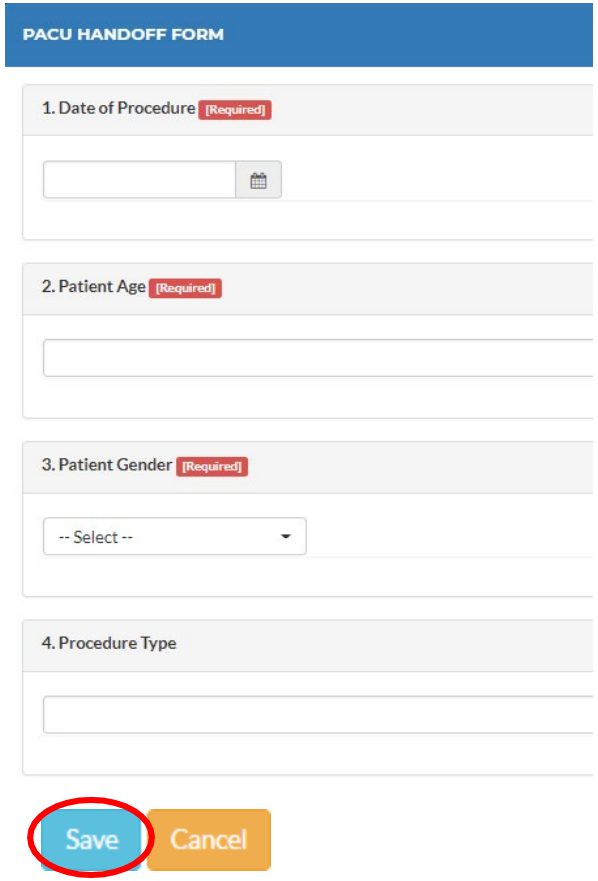
- The selected audit form is then displayed and an anonymized patient ID will be assigned.

- While observing the handoff, select ‘YES’ as the listed topics are addressed.
- Once the handoff is complete, select ‘NO’ for items that were not discussed and select ‘NA’ if an item does not apply to that particular patient.
- As each line item is completed it will turn green to outline which items were completed.


7. Medications

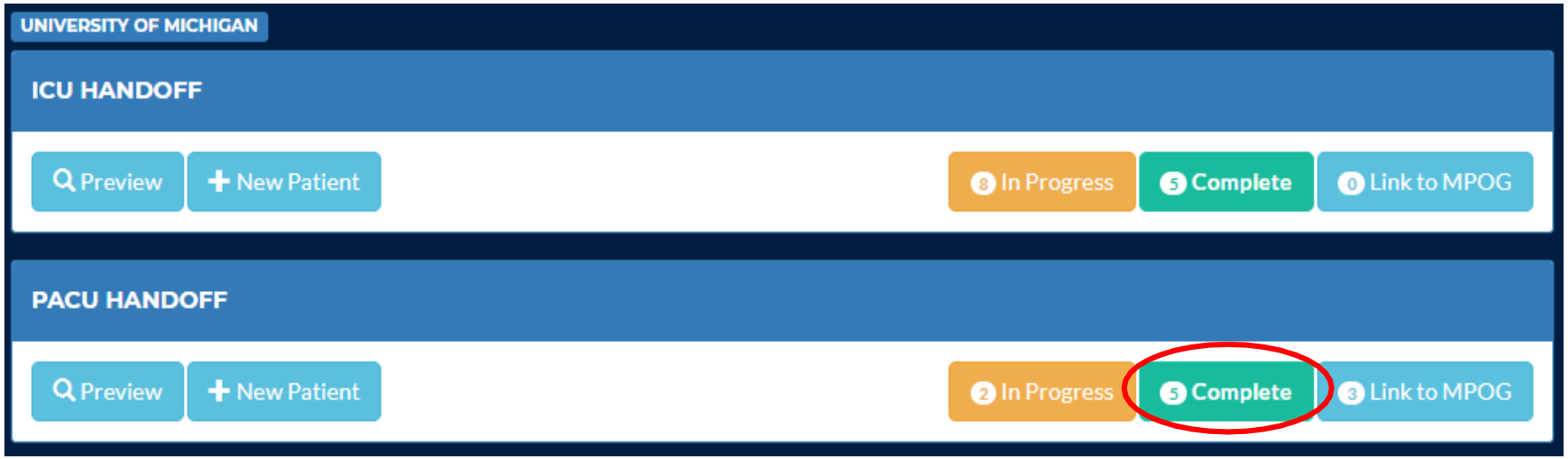
	Yes	No	NA
Preoperative Meds	◉	○	
Sedations medications. Reversal administered? (if applicable)	○	○	◉
Muscle relaxants: Time Given. Reversal administered? (if applicable)	○	○	◉
Pain Management	○	○	
PONV Hx & Meds Administered	◉	○	○

- A comments section is available at the end of the audit and is optional if you wish to note any other pertinent information regarding the audit. Do NOT include any PHI in the comment section.

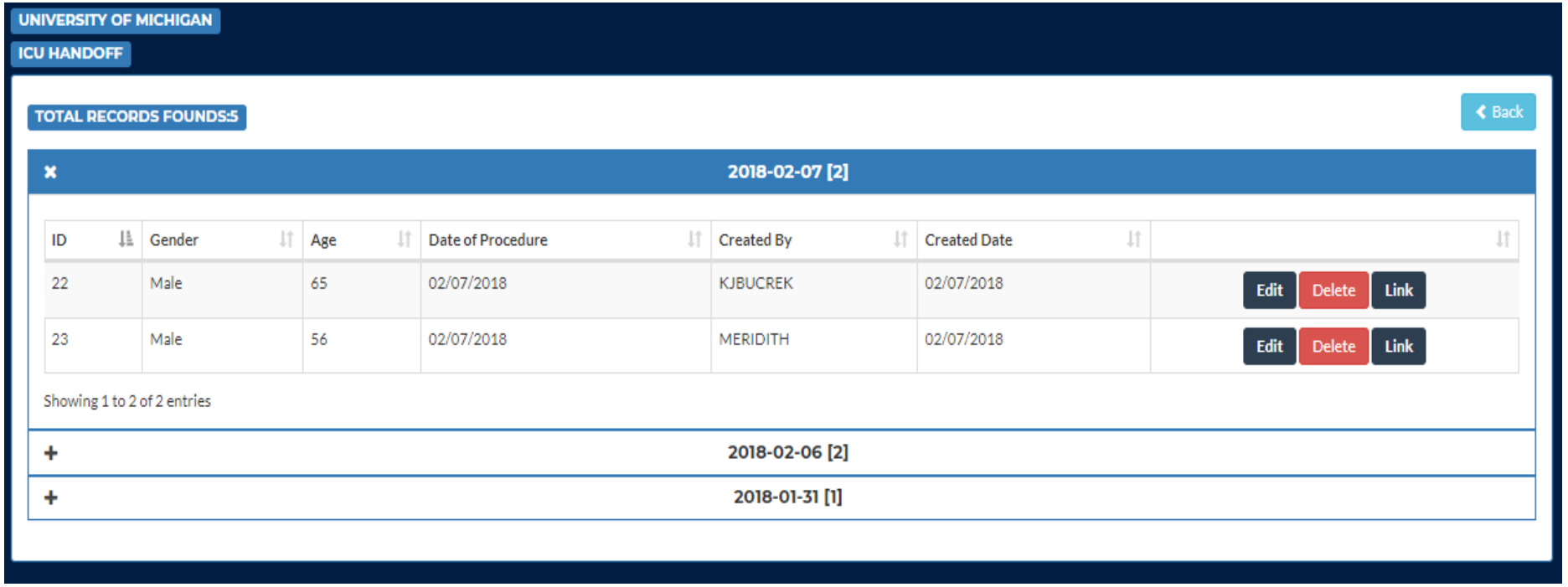


- Once the handoff is complete, enter the required patient specific information: date of procedure, patient age and patient gender.
- In order to link an audit to an MPOG Case ID you must complete these fields.
- Procedure type is an optional field and is helpful when returning to review the audit.
- Click ‘save’ to finish the audit

- This will bring you back to the home page where you will see a running tally of ‘Complete’ or ‘In Progress’ tab increase.
- The ‘Complete’ tab tally will have increased if all items in the audit were addressed (minus procedure type). If any items are missing, your audit is sent to the ‘In Progress’ tab. By clicking this tab, you may edit the additional information necessary to complete.



- Clicking on the ‘Complete’ tab will bring up a comprehensive list of audits organized by date that have had all questions completed. The ‘Progress’ tab will show a list of audits that do not have all fields completed. Both tabs have the option to edit the audit form answers if necessary.

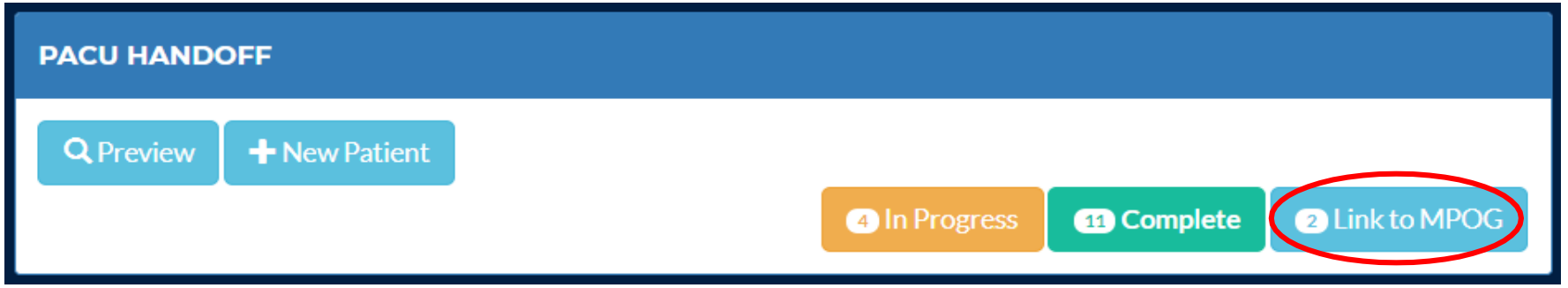


Auditing Tips

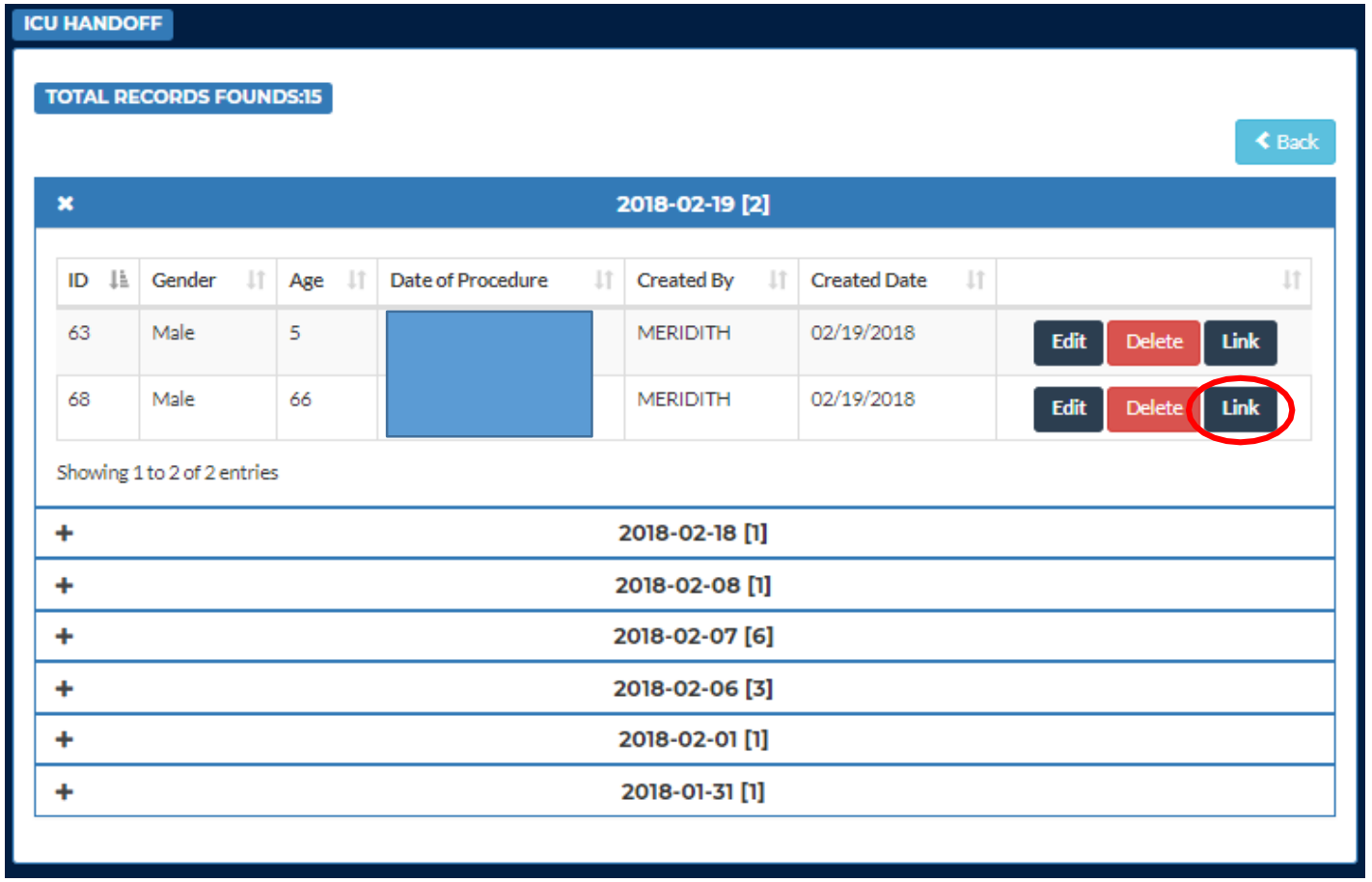
- Review the audit form and how to grade providers prior to observation day to familiarize yourself with the items you are listening for.
- If you know the patient specific information for cases you plan to audit ahead of time (age, gender, procedure type), it may be helpful to start a form for each patient. This will save the forms in the 'In Progress' tab where you can quickly access at the time of audit.
- While conducting an audit, wear similar scrubs/clothing to blend in with the clinical team. Follow the team into the patient room, discretely listen to the handoff that takes place and exit the room once the handoff is complete.
- When entering any patient room or bay, follow hand washing protocols of washing in and washing out.

Linking Audits to MPOG Case IDs

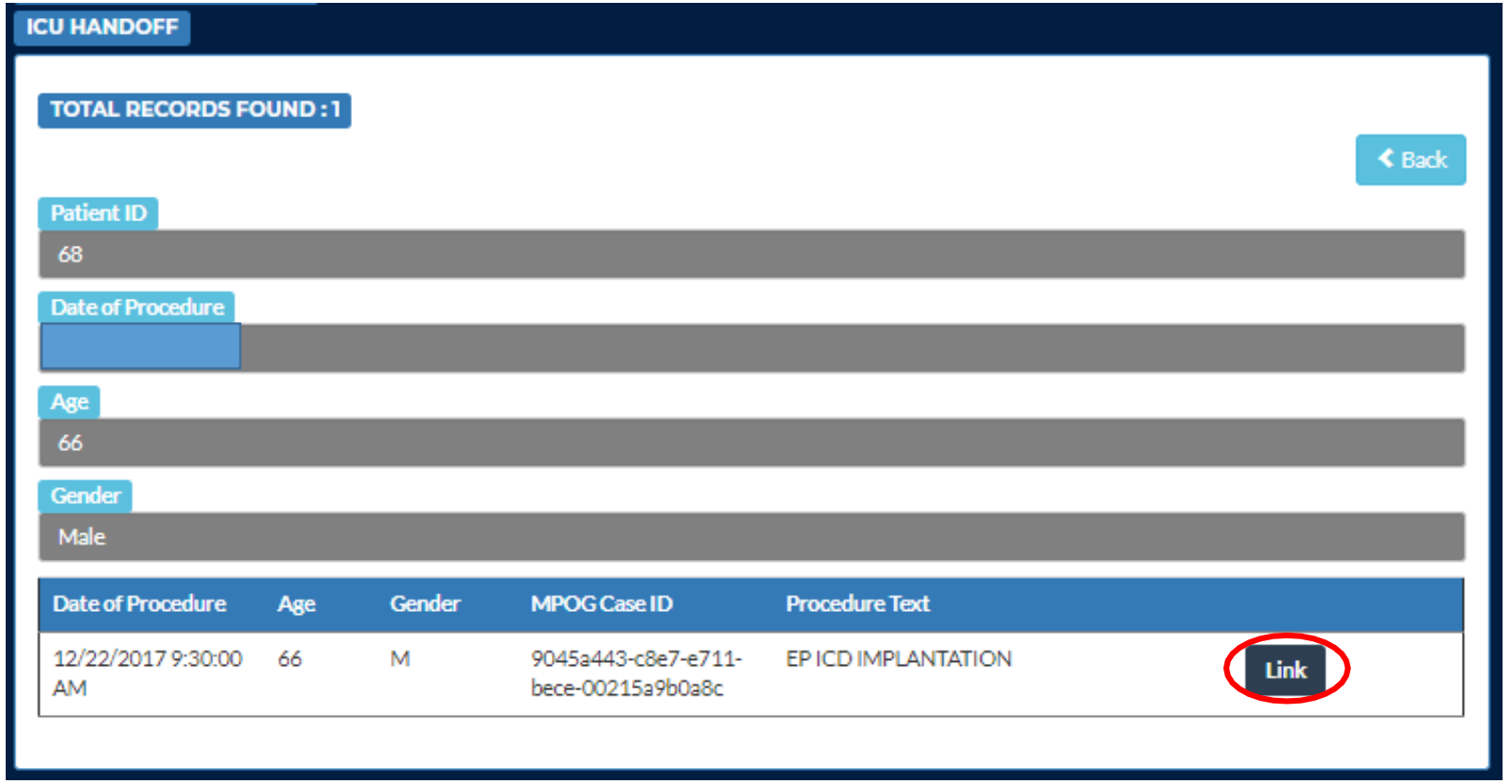
- After uploading data to the MPOG Central Database, you can link the completed audits to an MPOG Case ID. Based on the minimal case data that is provided at the end of each audit form (date of procedure, patient age and patient gender), MPOG is able to provide potential cases for linking.
- To link a handoff audit click “Link to MPOG



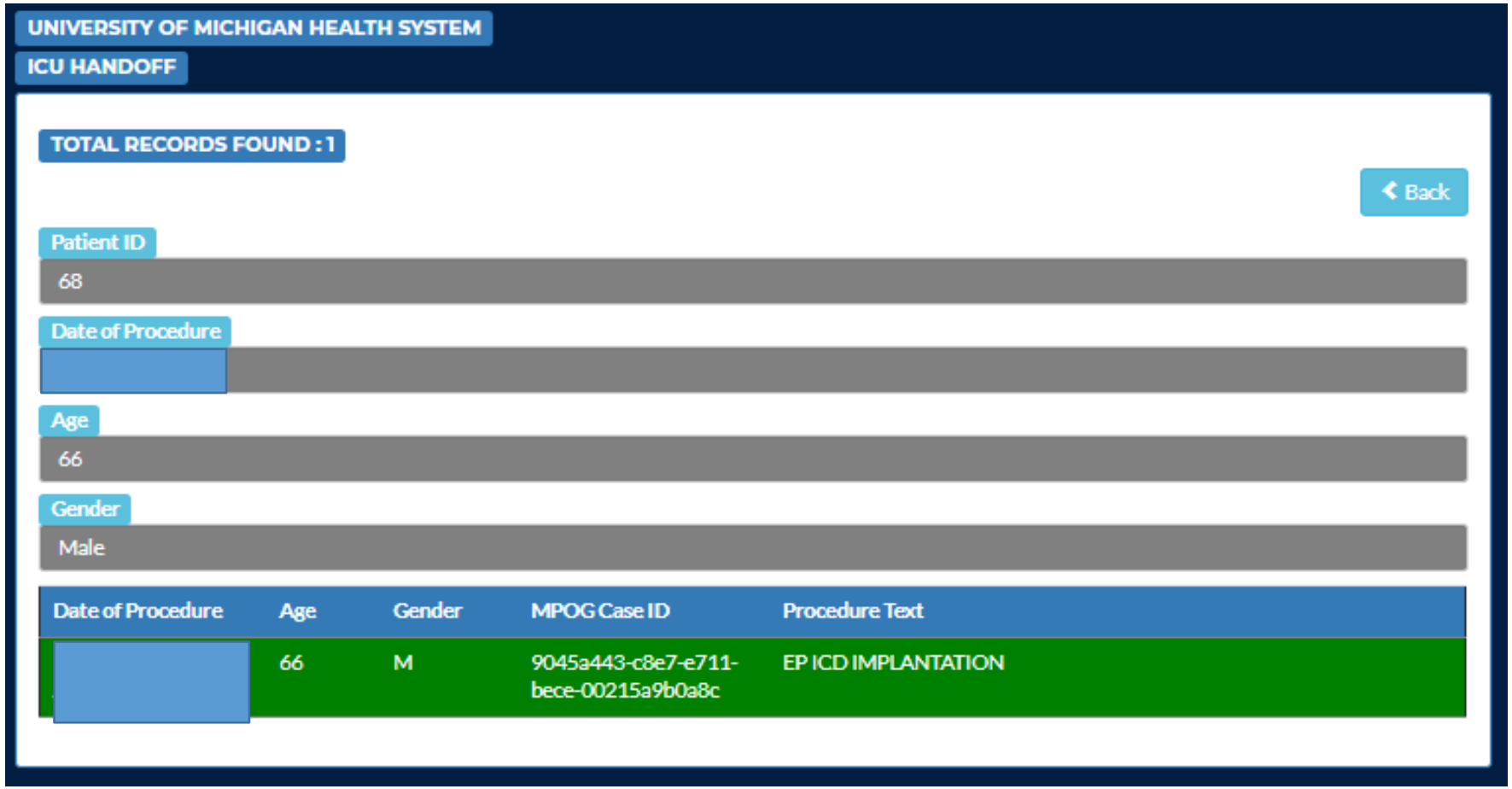
- Locate the case that you audited by patient information and click “Link”



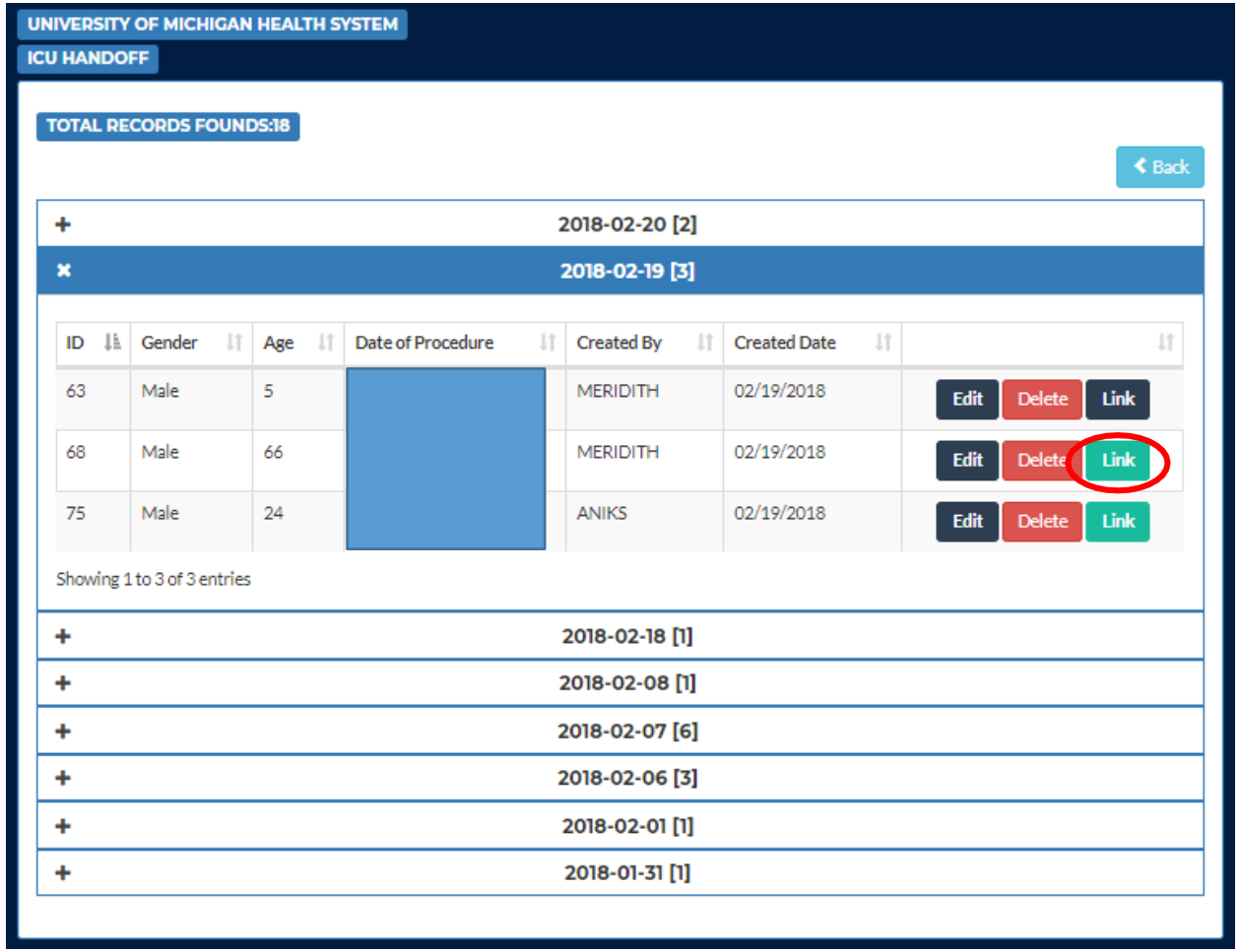
- A list of cases that were audited on that date with the same case data (age and gender) will populate. Find the correct Procedure and click “Link”



- The Procedure will then turn green, confirming that your audit has been successfully linked to the MPOG Case ID. Click “Back” to return to the linking page



- Once the audit is successfully linked to an MPOG Case ID, the link button will turn green. Click ‘Back’ to return to the home page



- As more audits are linked to MPOG Case IDs you will see the “Link to MPOG” tally increase on the home page.

- MPOG is currently working on creating an analytics page within MQUARK that will transfer directly to the ASPIRE dashboard allowing each site to see a visual representation of the quality of their handoff process

PACU Audit: Handoff Assessment

- When conducting a PACU handoff audit, please use the following slides as a guide when determining if an element of handoff was discussed.
- It is expected that monitors are placed and patient is stabilized prior to starting the handoff process.
- MPOG recommends auditors focus on more extensive cases first as more audit elements may apply to those cases

All Stop

- Identify which providers should be present for the PACU handover (i.e. PACU nurse, anesthesia provider, surgical representative…). Once all have arrived, acknowledge that everyone stops and directs attention to the provider leading the handoff.

Background

- Introductions: Following pt. stabilization, Anesthesia/Surgical/PACU team introduces themselves
  - Anesthesia provider must give name and contact info
  - Identify contact info for primary service.
- Identification of Patient: Check patient ID band. Verify Name and DOB.
- Discussion of Procedure Performed: What procedure(s) did the patient undergo?
  - Surgical course may be discussed by surgical resident or attending.
- Pertinent PMH/PSH: Discuss past medical/surgical history
- Allergies: Discuss allergies. Verbalize “no allergies” if there are none.
- Contact Precautions: Discuss if applicable

Anesthetic Management

- Type of Anesthetic: General, MAC, Regional, Sedation.
  - If sedation case, do not need to discuss airway management.
  - Do not need to mention specific medication
- Airway Management: State airway type if applicable (ETT vs LMA). If airway was difficult provide details.
- Anesthetic Complications or primary concerns
  - If no complications verbalize “No other complications”
- Discuss variations from baseline vital signs if applicable

Medications

- Preoperative Meds: Discuss medications that were given to patient in pre-op area and relevant home meds that should be given postoperatively.
- Sedation Medications: Discuss if applicable OR verbalize “None given”
  - State which medications were administered.
  - Administering reversal medications (flumazenil or narcan) is rare. If given, the provider must communicate time of last dose and patient response.

Medications

- Antibiotics Administered: Discuss antibiotics given
- Muscle Relaxants: Discuss if applicable OR verbalize “None given”
  - Medication administered and time last dose was given
  - If muscle relaxant given, provider must verbalize if the patient was reversed and the reversal agent administered.
- Pain Management: Discuss pain medications given intra-op and pain management plan.
  - Must include specific medication and last dose administered.
- PONV Hx and Meds Administered: Discuss anti-emetics given and any history of PONV if applicable.

Fluids

- Vascular Access: Discuss line access (Type, location, gauge, status)
  - Marking “NA” is acceptable if the patient’s only line access is peripheral IV
- Fluids/Blood Administered: Discuss amount of fluids and intraop blood products (if applicable)
- Intraoperative Labs: Discuss if applicable.
- If no intra-op labs were drawn, provider should verbalize “No intraop labs drawn intraop”

Expectations/Plans

- Post-operative plans: identify patient disposition (discharge to home, floor, etc).
- Allow Opportunity for Questions: Anesthesia provider asks if PACU team has any questions.

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Module 19
STS Import Tool

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STS Import Tool

- To use the STS import tool:
  - First use your STS vendor application to extract a harvest file containing MRNs (or SSNs if MRNs are not available).
  - The instructions for different vendors in subsequent slides.
  - Once you have a harvest file, use the MPOG Application Suite to input this data into your local MPOG database.
  - The data can then be PHI scrubbed and transferred to the central repository.

STS Harvest Schedule

Adult Cardiac Surgery Database - 2020

	Harvest Submission Window Start	Harvest Window End	Includes procedures performed through this date:	Report Posting	Comments
Harvest 1	Week of January 20	2/28/2020 Opt Out: 3/2/2020	1/1/2017 -12/31/2019	TBD	MIPS Star Rating
Harvest 2 and 3	Continuous	9/4/2020 Opt Out: 9/8/2020	6/30/2020	End of October 2020	Star Rating
Harvest 4	Continuous	11/20/2020 Opt Out: 11/24/2020	9/30/2020	End of January 2021	

General Thoracic Surgery Database - 2020

	Harvest Submission Window Start	Harvest Window End	Includes procedures performed through this date:	Report Posting	Comments
Spring	Week of February 10	3/6/2020 Opt Out: 3/9/2020	12/31/2019	TBD	MIPS Star Rating
Fall	Continuous	9/25/2020 Opt Out: 9/29/2020	7/1/2017 - 6/30/2020	End of December 2020	Star Rating

Congenital Heart Surgery Database - 2020

	Harvest Submission Window Start	Harvest Window End	Includes procedures performed through this date:	Report Posting	Comments
Spring/Fall	Continuous	*TBD*	7/1/2016-6/30/2020	*TBD*	Star Rating

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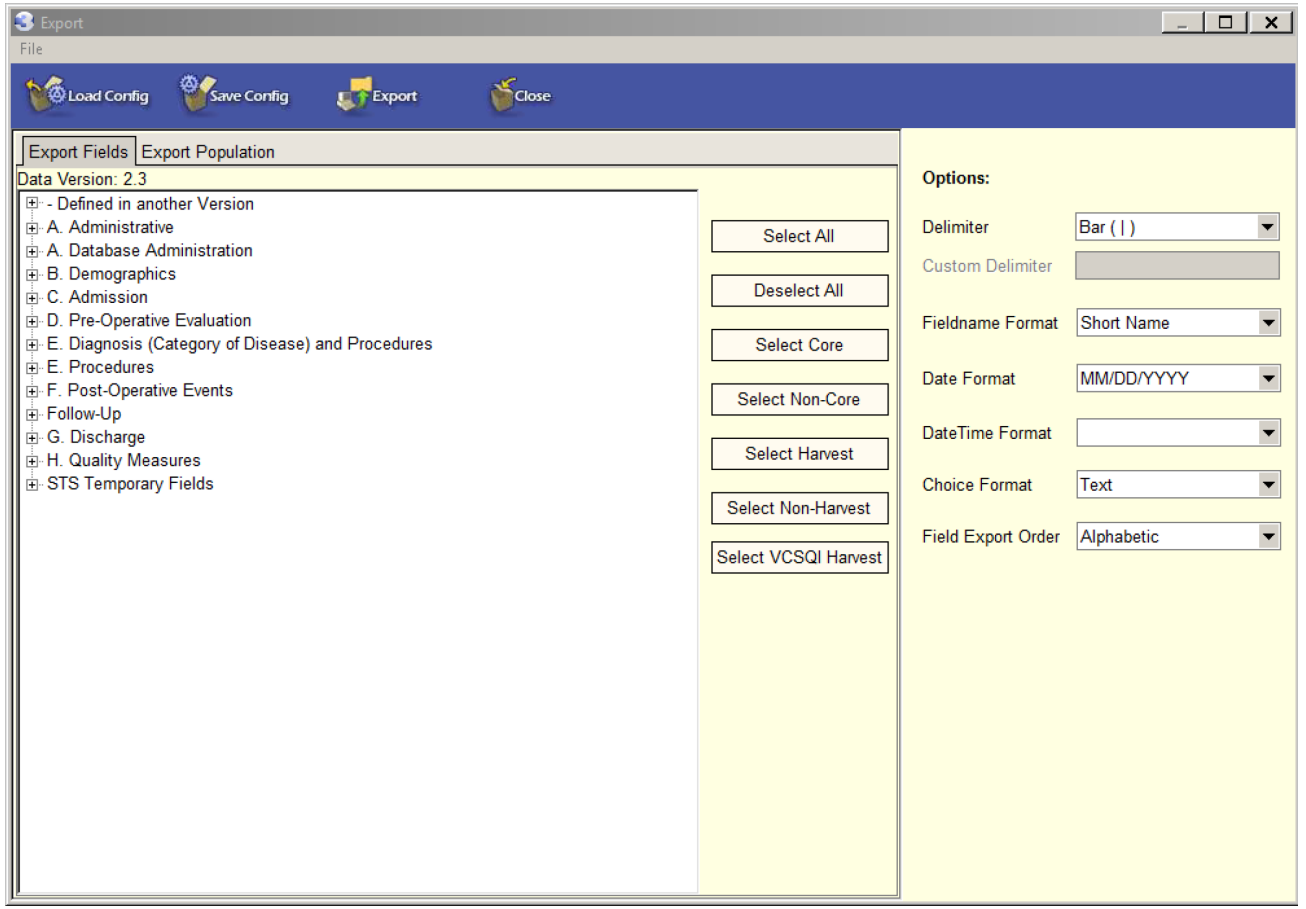
STS Harvest Schedule

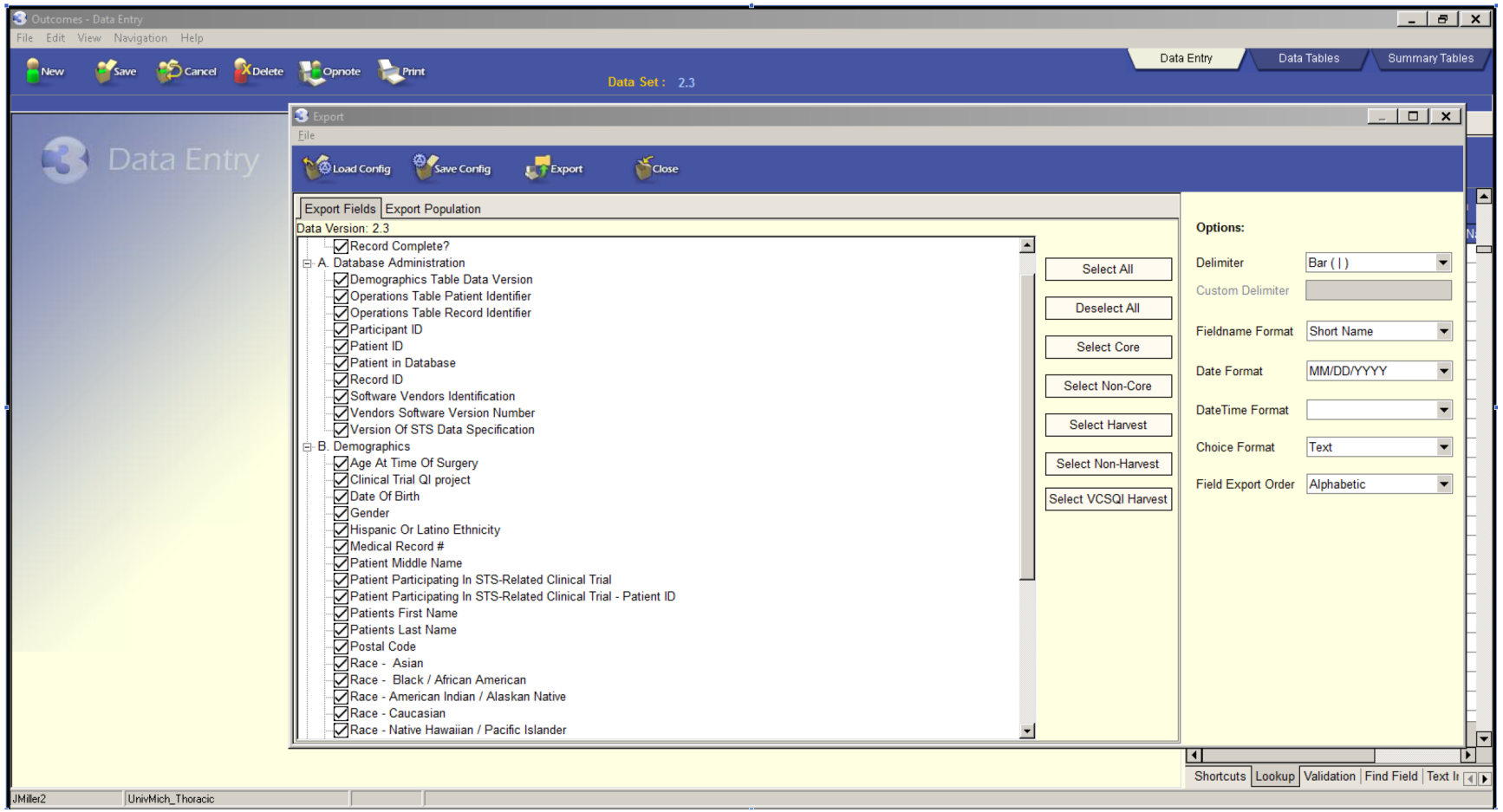
- Latest STS Harvest schedule available here

Vendor Application Instructions: ARMUS

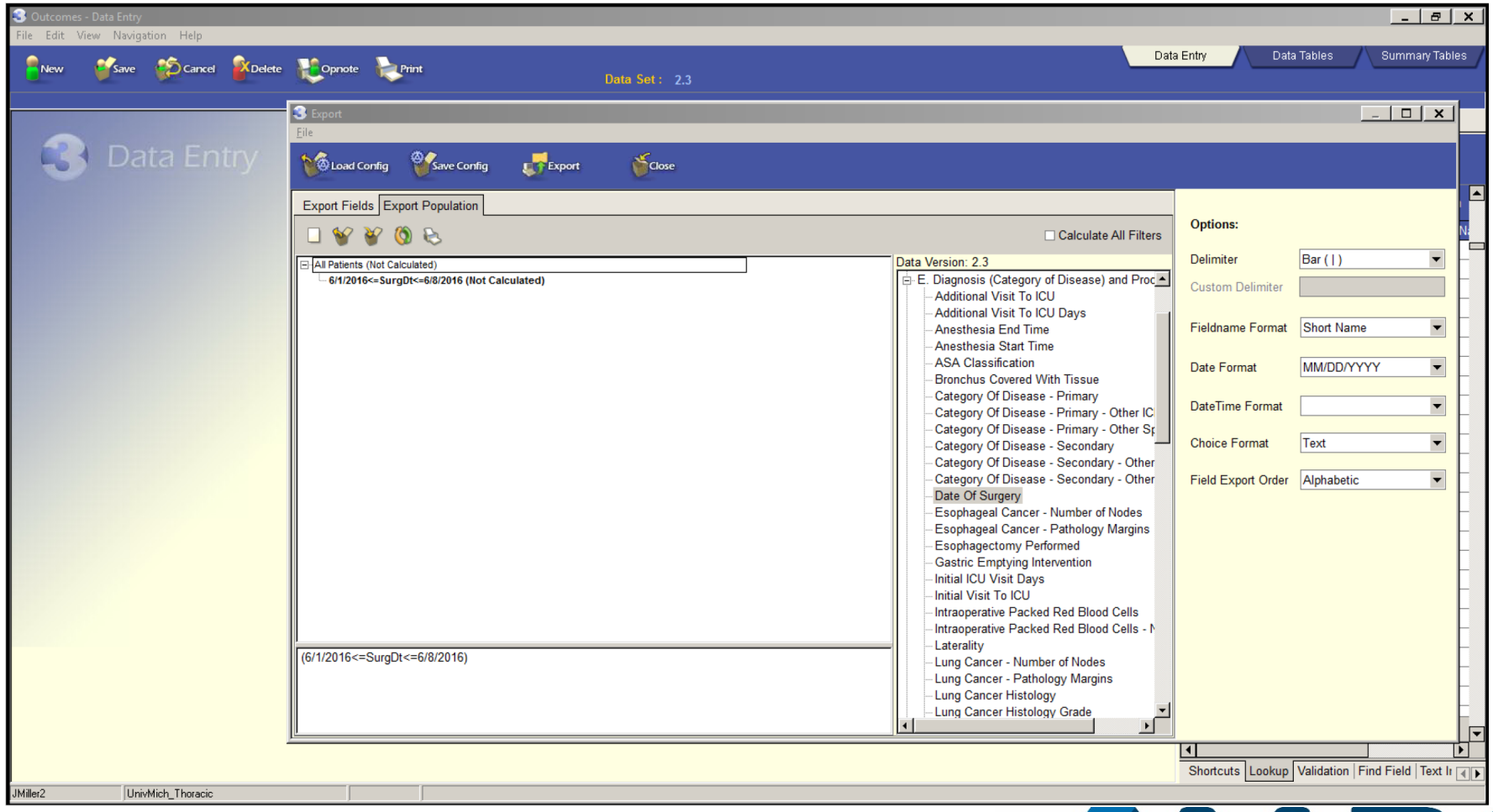
1. File → Export → Select All
2. Pick Date Range: Chose Chose field within Diagnoses and Procedures → Date of Surgery → add date range as filter
3. Fieldname Format: Short Name
4. Choice Format: Choose Harvest (codified values)
5. Field Export Order: Automatic
6. Export as a .dat file



Vendor Application Instructions: ARMUS

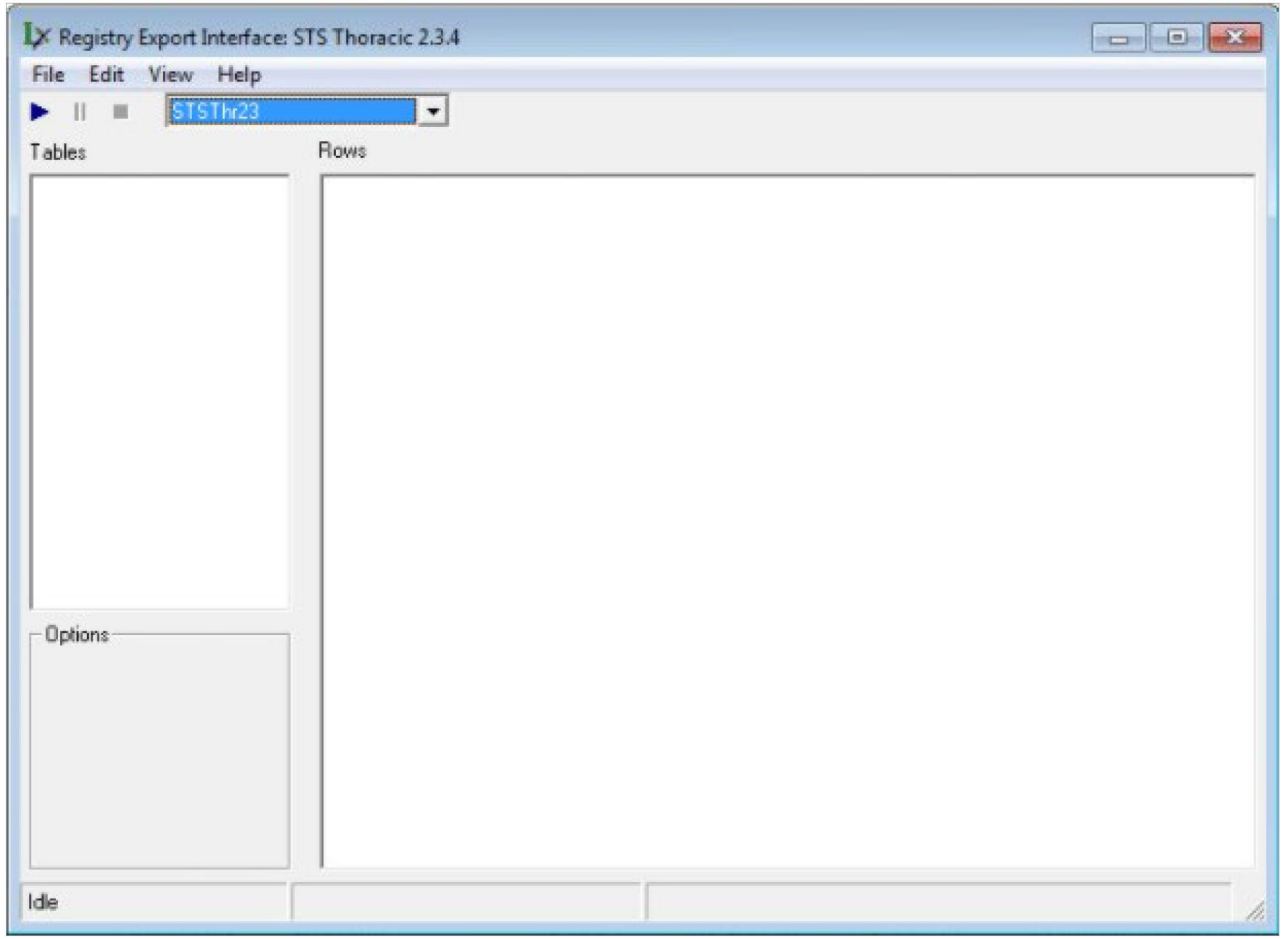


Vendor Application Instructions: ARMUS



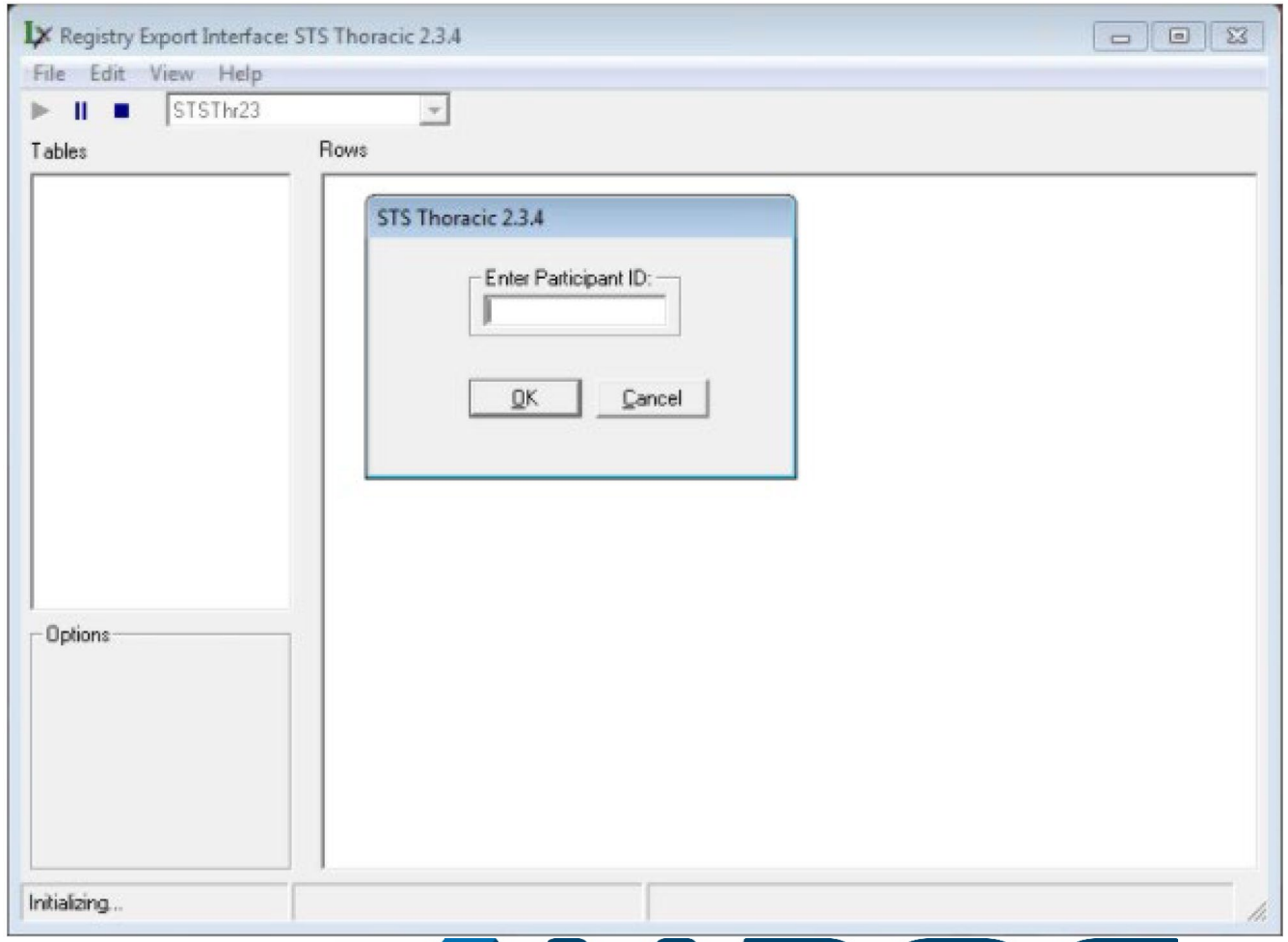
Vendor Application Instructions: LumedX

1. Select from the drop down which STS version you would like to pull data for, then click the “play” button



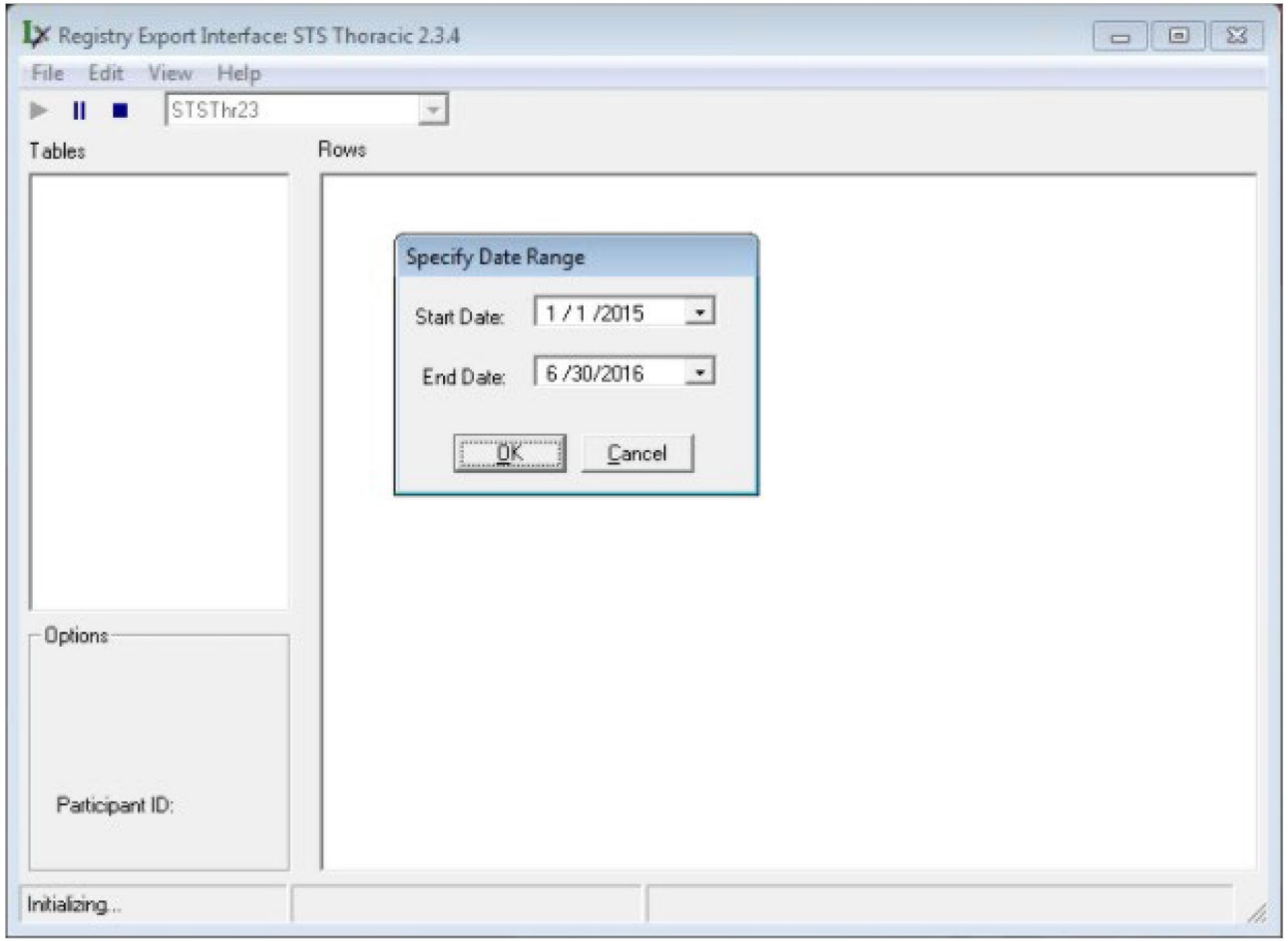
Vendor Application Instructions: LumedX

2. Enter your 5-digit participant ID into the box that pops up.



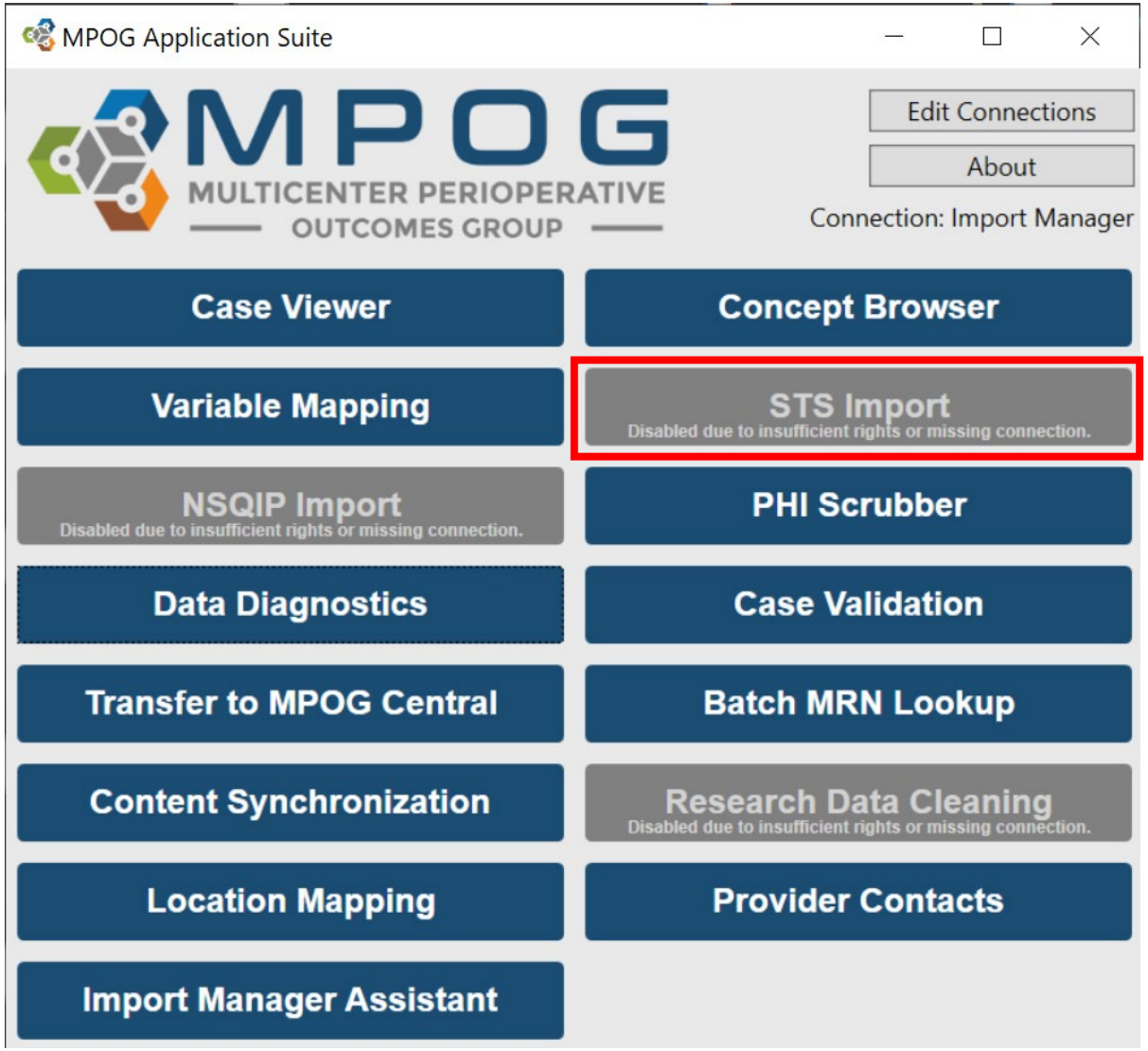
Vendor Application Instructions: LumedX

3. Specify the date range that you would like to extract data for, then click OK



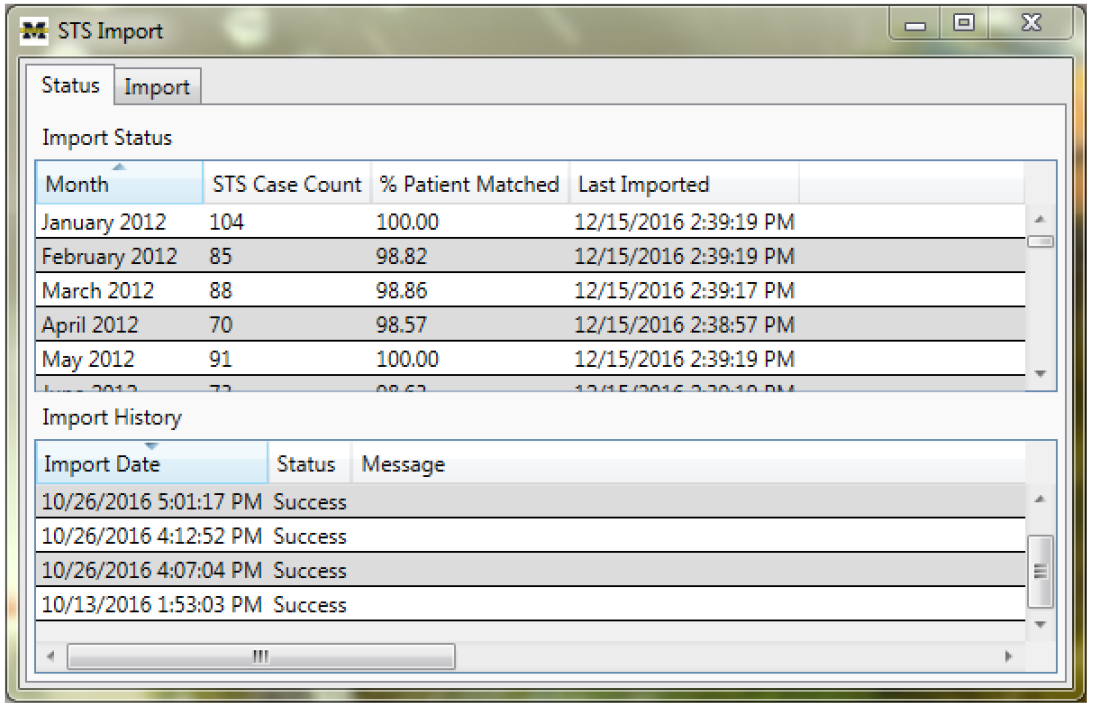
MPOG Import

1. Once you have your harvest file ready, open the MPOG Application Suite.
2. Open the STS Import application.



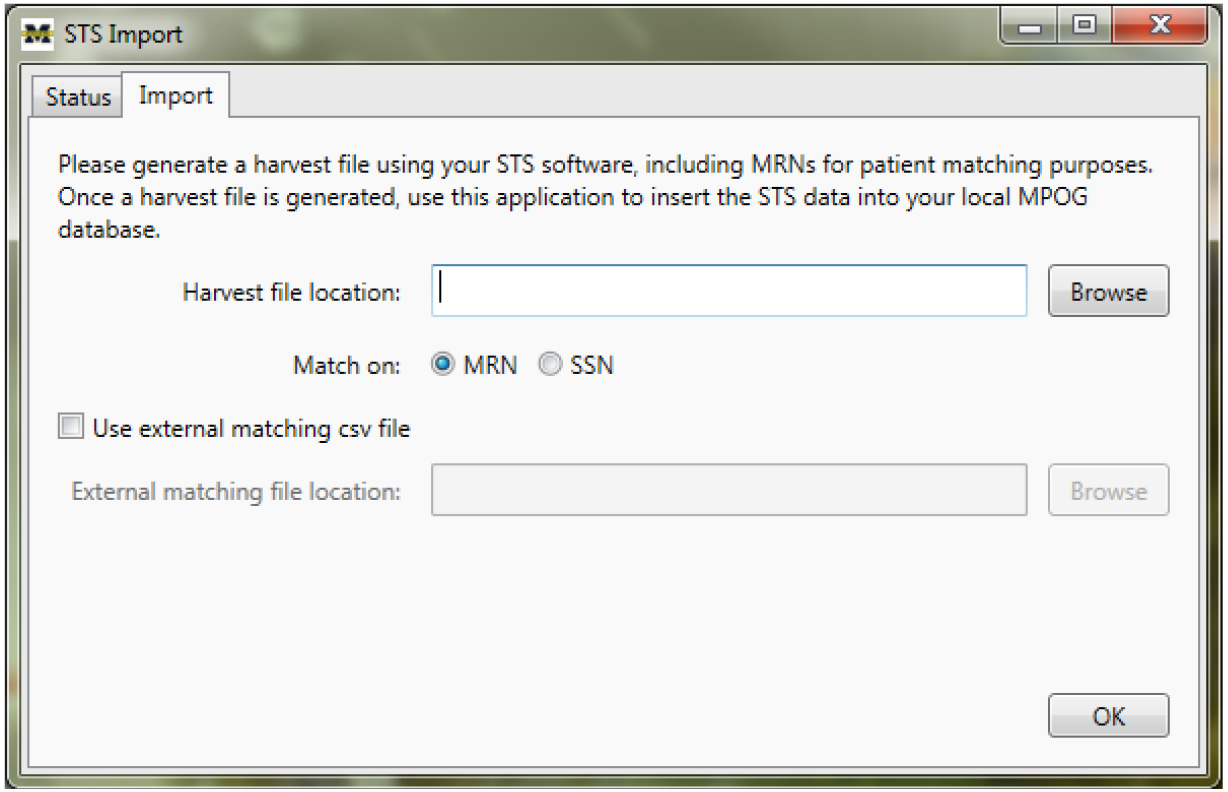
MPOG Import

3. The first screen will show you the import status (which months of data have been imported and what percentage of those STS records have been patient-matched locally). Click on the import tab to start an import of a harvest file



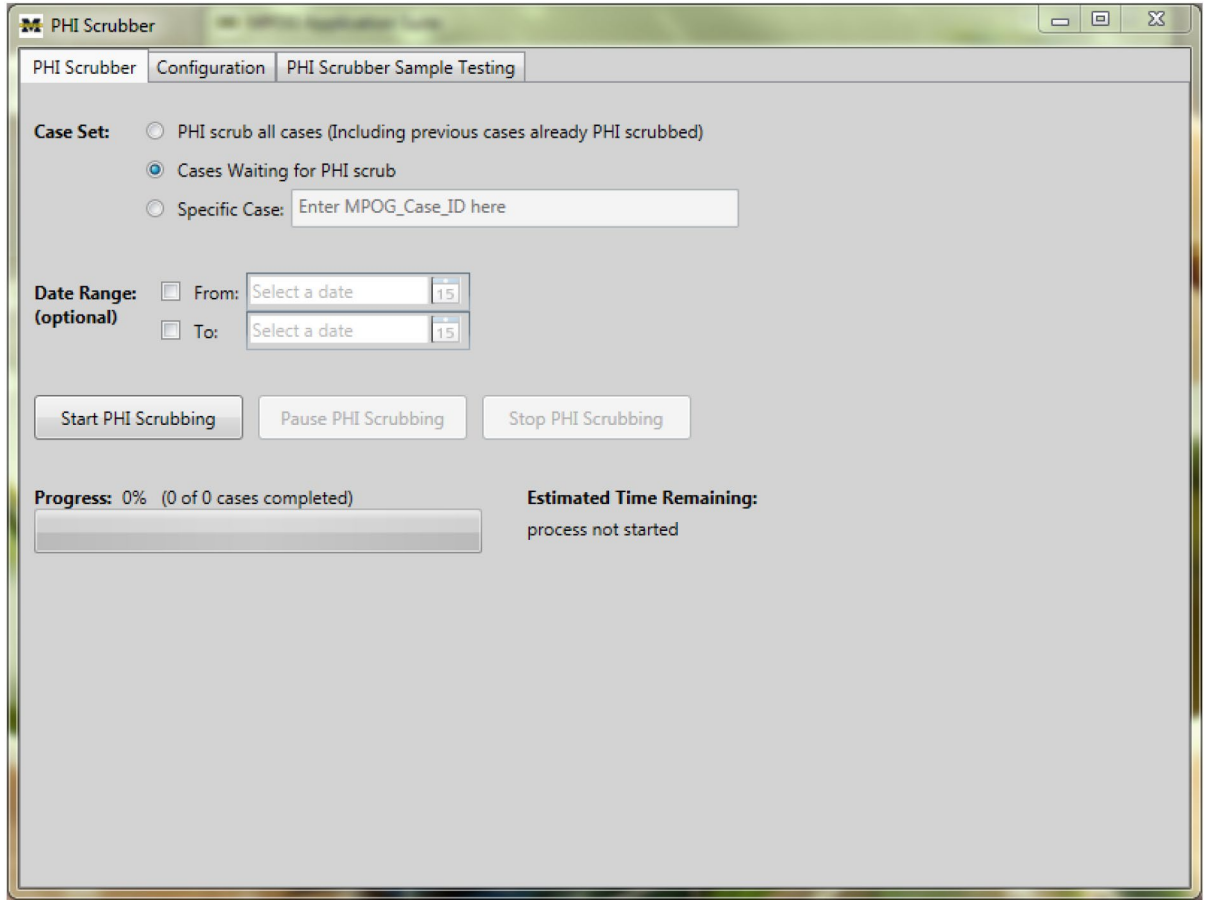
MPOG Import

4. Locate your STS harvest file using the “browse” button, then select if you are going to match on MRN or SSN (MRN preferred). Use the external matching CSV file option only in MRNs or SSNs are not populated directly within the harvest file



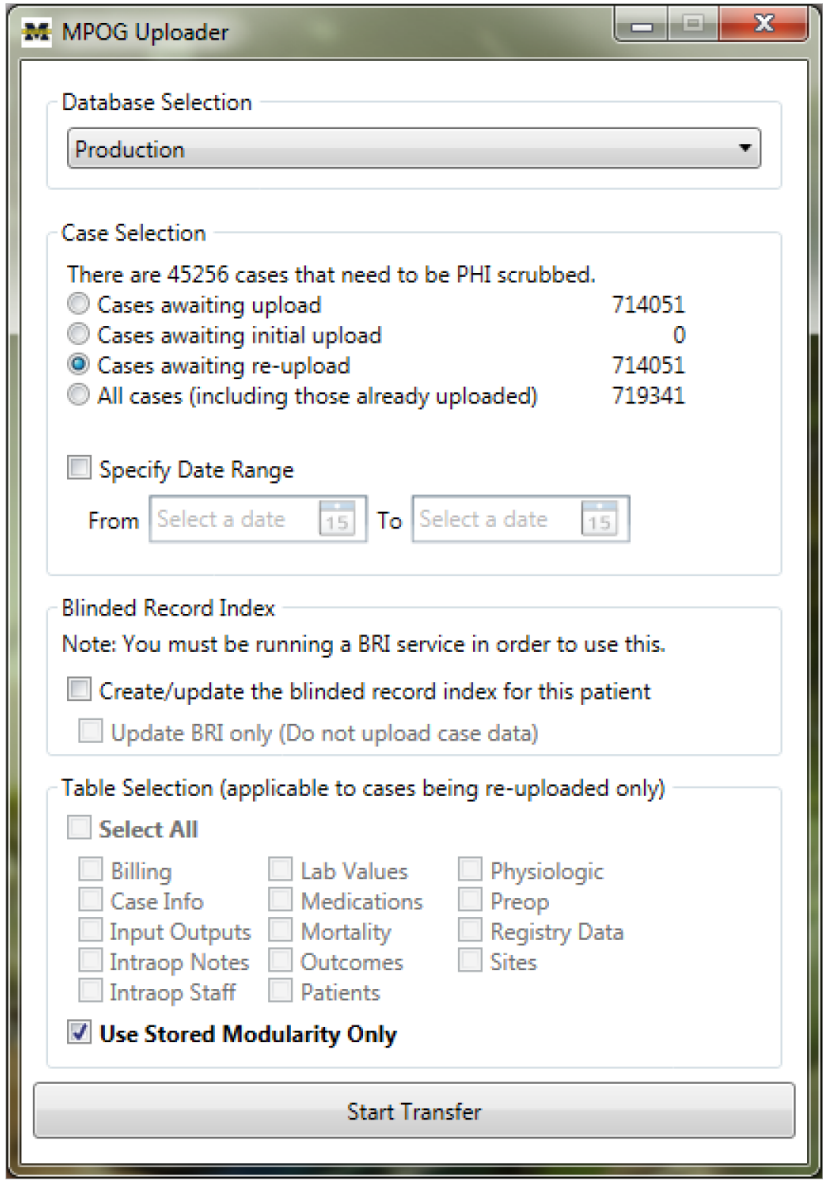
MPOG Import

5. Click OK to start the import process. The process will import the STS data into the local MPOG database, perform patient matching, and set any PHI scrubber flags and transfer flags appropriately. After the process is complete, please run the PHI scrubber on “cases waiting for PHI scrub”



MPOG Import

6. To transfer the scrubbed STS records, please use the transfer application. Select “cases awaiting re-upload” and leave “use stored modularity only” option checked



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Contact Info

- For questions, please contact support@mpog.zendesk.com for any technical assistance with the STS import application