Data Review:
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: Data Review - 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.
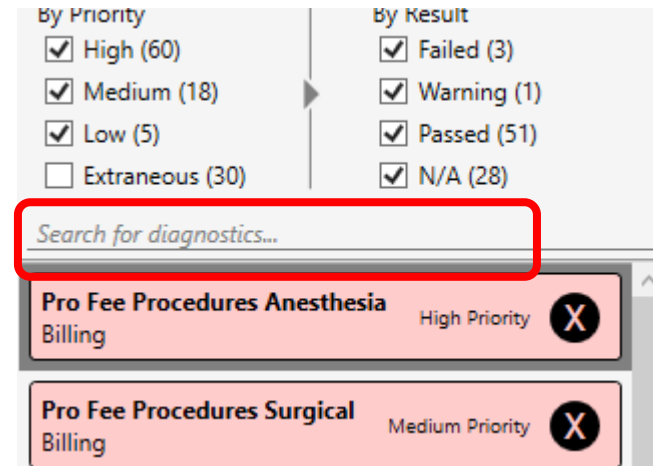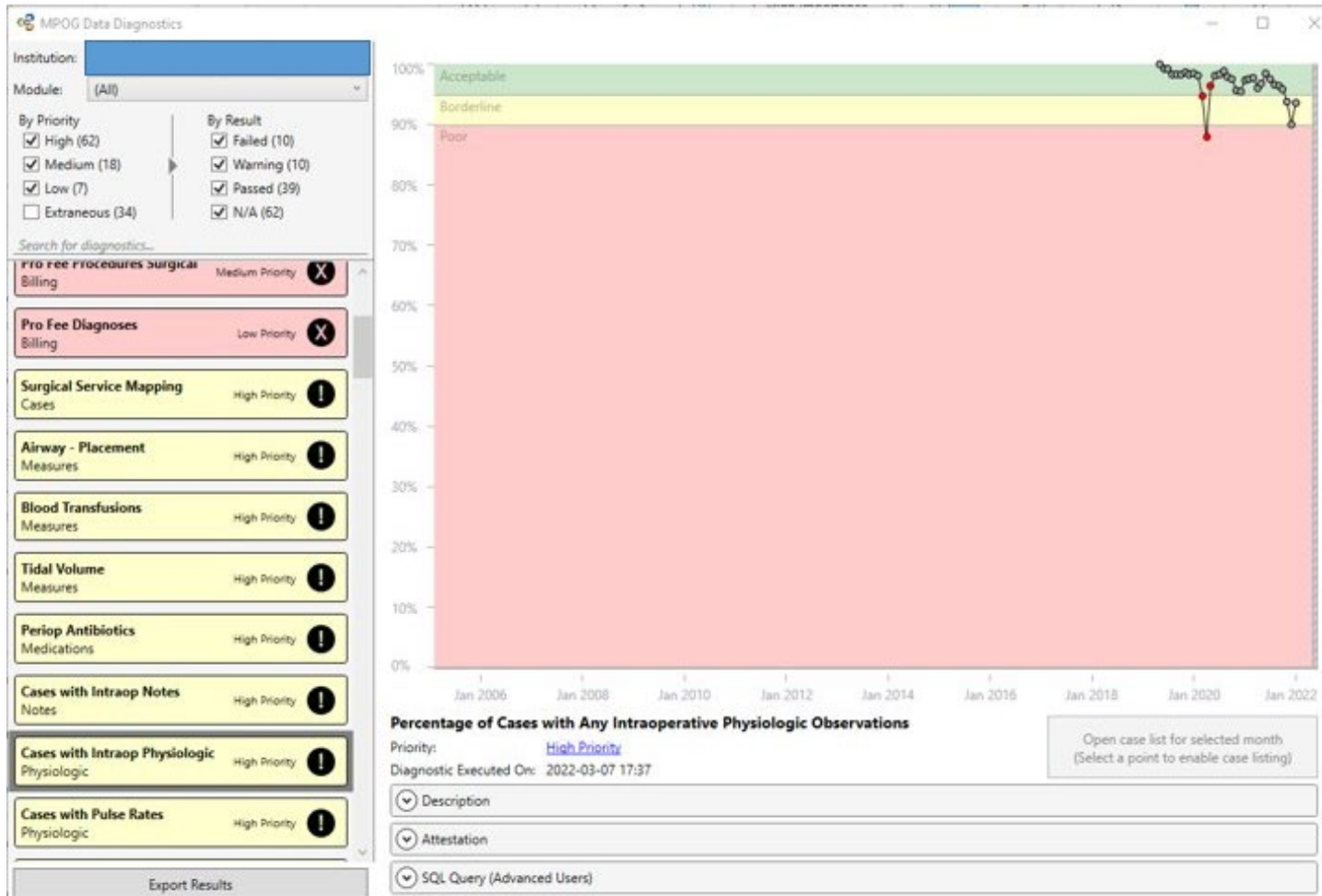
Diagnostic Search

- 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.


- The graph for 'Cases with Intraop Physiologic' displays the percentage of cases with intraop physiologic observations sorted by month.
- The data for this diagnostic should be in the green area. The months that dip into the yellow area should be reviewed for accuracy. The lower scores could be related to a practice change, new variables that need to be mapped (see Module: Getting Started – Variable Mapping), or consume/handoff errors (see Module: Data Review – IM assistant).

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

Percentage of Outpatient Cases with a LMA Note
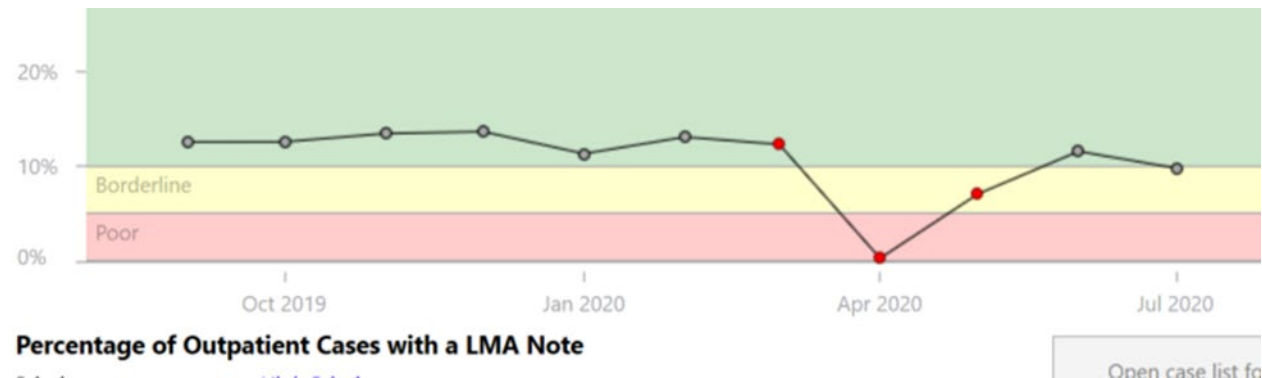
To understand when the Diagnostic was last updated, view the 'Diagnostic Executed On: XX/XX/XXXX' date listed beneath the graph.
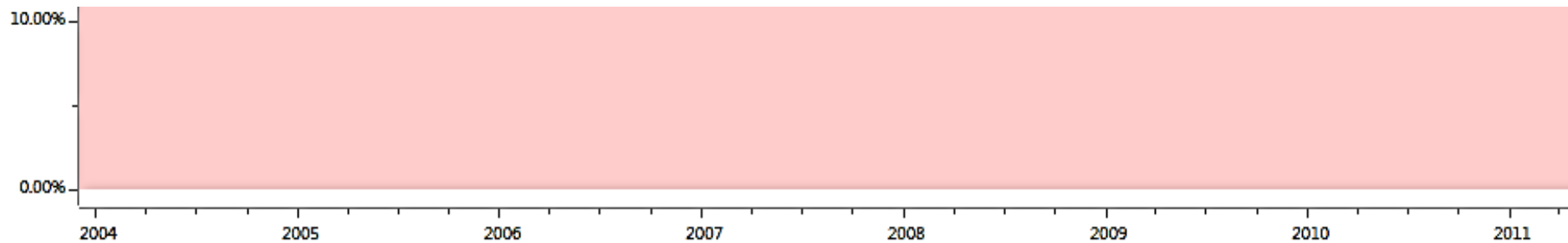
- To seek further clarification for the diagnostic selected, click on the "Description" header beneath the graph.
- Clicking on the Description will expand the box to display the definition of the Data Diagnostic shown as well as the MPOG concept IDs that impact that diagnostic.

Percentage of Outpatient Cases with a LMA Note

Priority: High Priority
Diagnostic Executed On: 10/30/2019

⌃ Description

Percentage of outpatient cases with an LMA (laryngeal mask airway) note between anesthesia start and anesthesia end. Excludes inpatient cases. Check extract or mapping if inconsistent with your institution's practices.

Concepts Used:
◢ **LMA Notes**

50141	Airway - Laryngeal Mask airway type
50142	Airway - Laryngeal Mask airway size
50143	Airway - Laryngeal mask airway placement difficulty
50144	Airway - Laryngeal mask airway placement technique

Open case list for selected month
(Select a point to enable case listing)

Attestation

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

- You can attest to the accuracy of your data multiple times throughout the month, but **Attestation is required to be completed at least once per month prior to upload to MPOG Central.**

Contact: support@mpog.zendesk.com

Attestation

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

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 (typically scheduled to run overnight), the current attestation will move to the 'Previous Attestation' box on right side of the screen with an associated date.

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
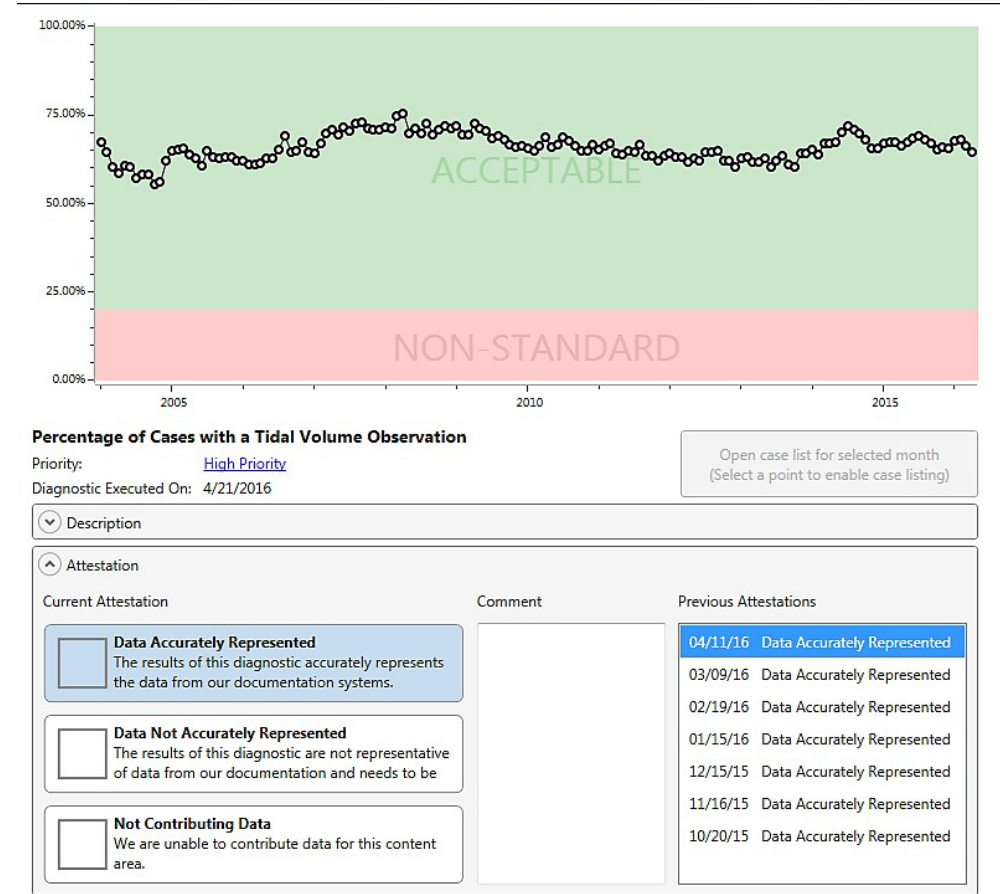
- Previous attestation graph will display in a new window
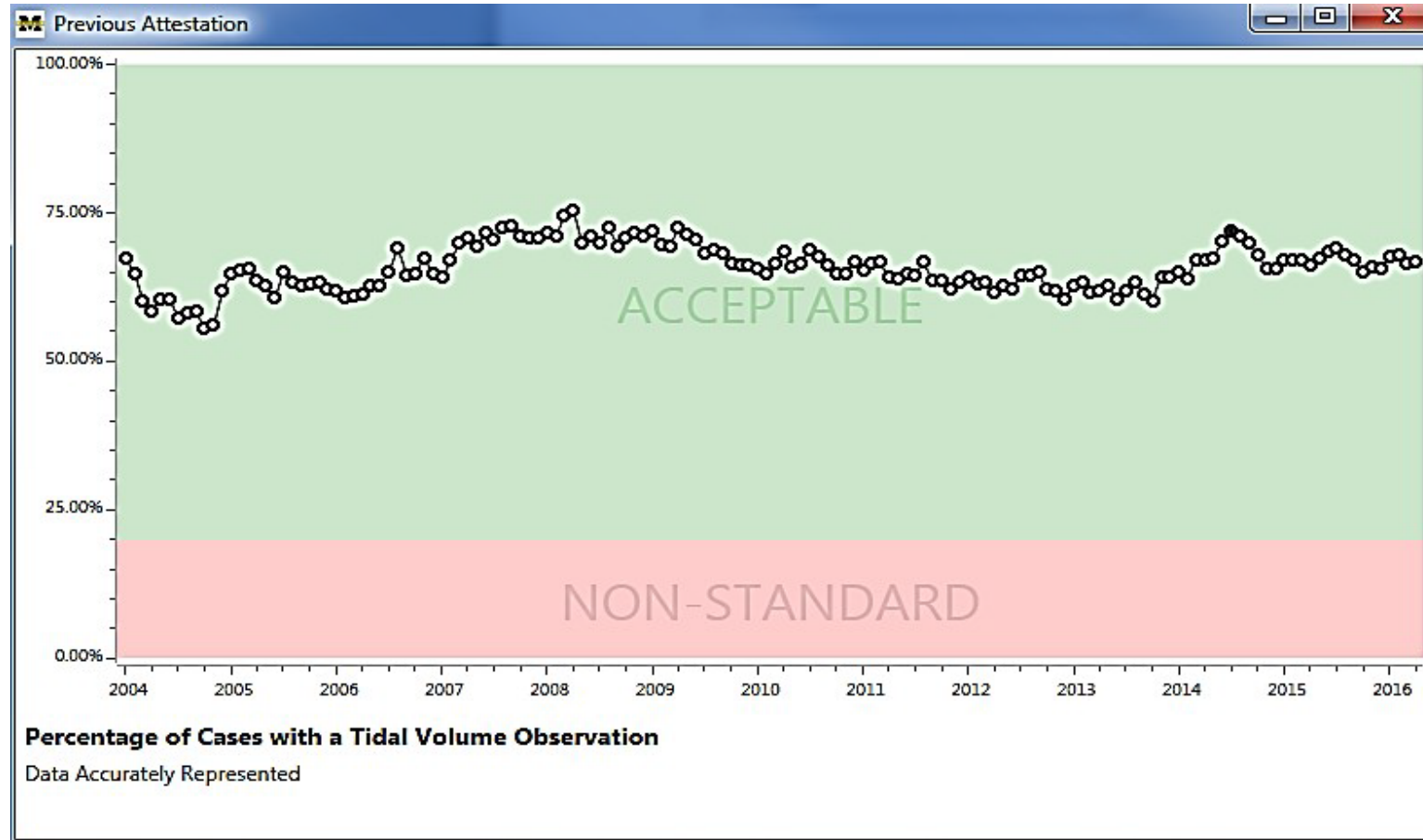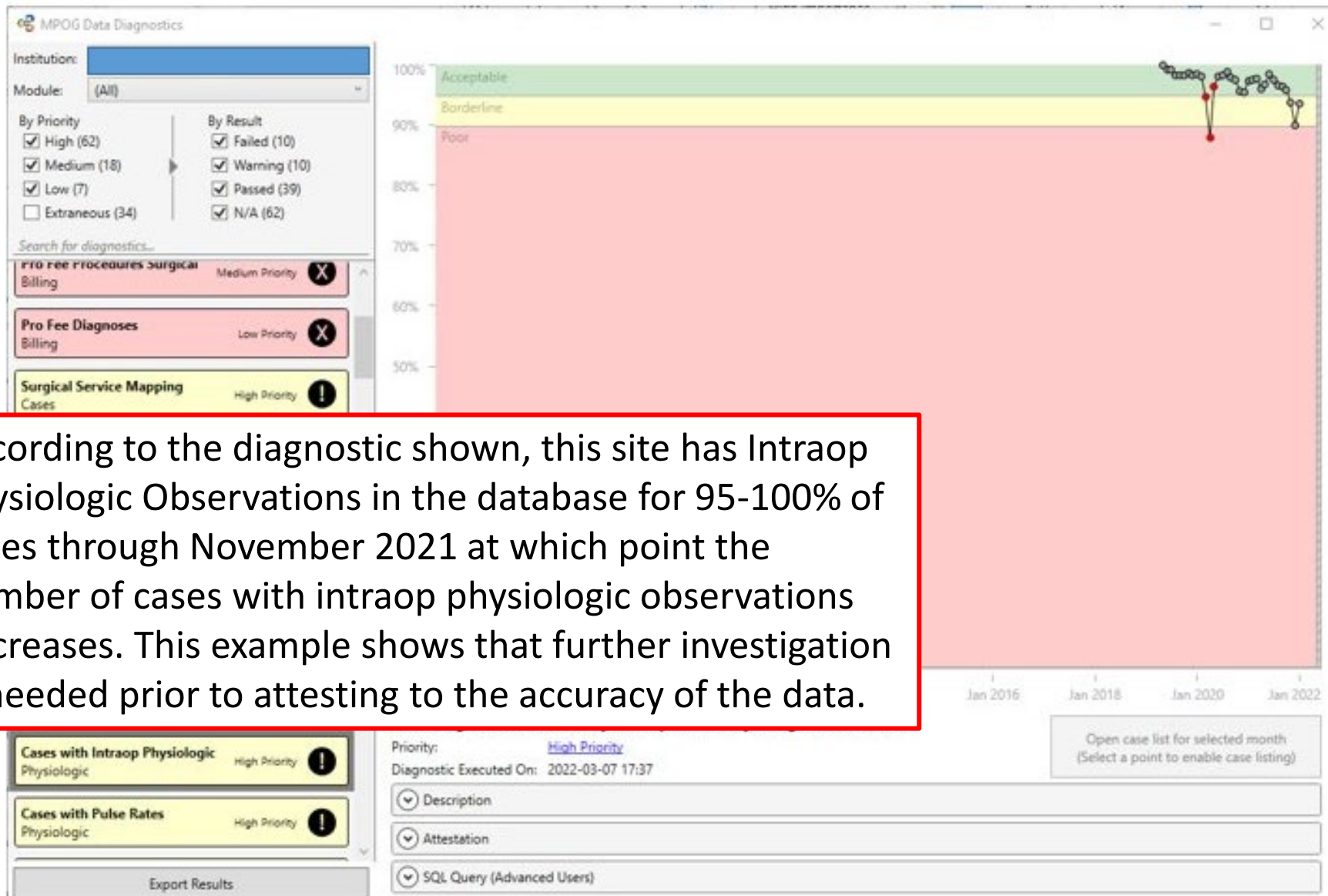
According to the diagnostic shown, this site has Intraop Physiologic Observations in the database for 95-100% of cases through November 2021 at which point the number of cases with intraop physiologic observations decreases. This example shows that further investigation is needed prior to attesting to the accuracy of the data.

Investigating Diagnostics

- When data is not accurately represented (gaps in the data or values are higher or lower than expected), further investigation is needed.

- Thresholds for many of the diagnostics are reflective of common practice across many sites
  - Acceptable (green)
  - Borderline (yellow)
  - Non-standard (red)
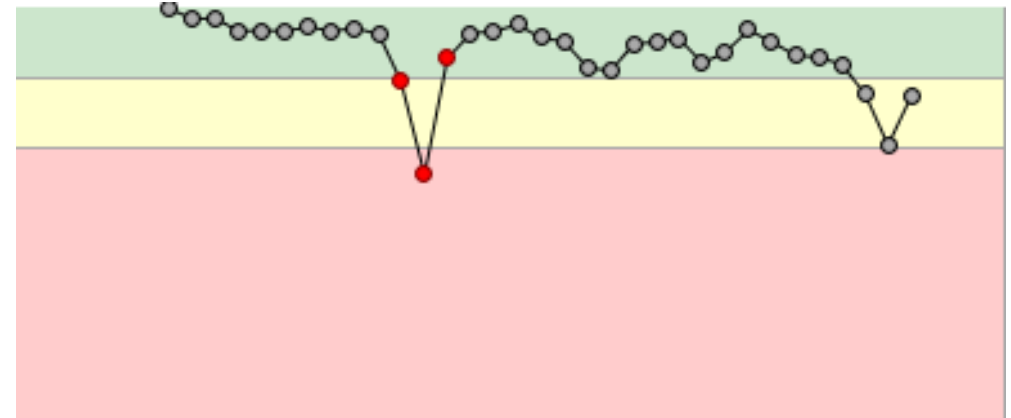
Diagnostics Investigation

- 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.

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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.

Step 1: Click on a data point.

Step 2: Click on "Open case list for selected month"

Percentage of Cases with Any Intraoperative Physiologic Observations
Priority: High Priority
Diagnostic Executed On: 2022-03-07 17:37

Open case list for selected month

MPOG
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OUTCOMES GROUP
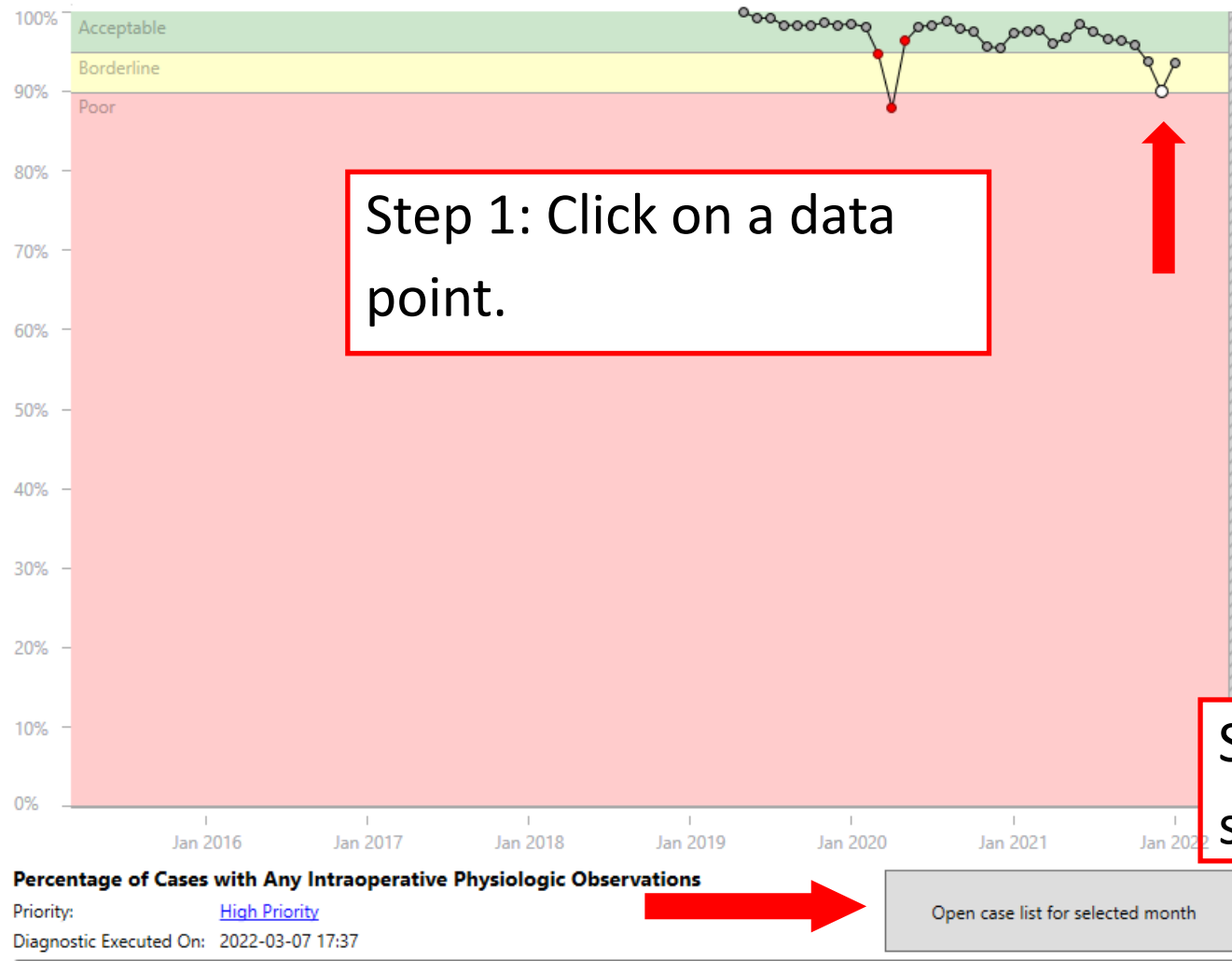
- A case list will open showing a random sampling of cases from the selected month
- Open cases as needed in case viewer for further investigation
- Clicking on the column names will allow you to sort based on Procedure, date, location, and Pass diagnostic Yes/No

Percentage of Cases with Any Intraoperative Physiologic Observations

The selection has 1,474 cases available, with 1,380 cases meeting the diagnostics criteria.

Procedure	Date	Location	Has Intraop Physiologic?	
ESOPHAGOGASTRODUODENOSCOPY (N/A); COLONOSCOPY (N/A)			Yes	
CYSTOSCOPY, LEFT RETROGRADE PYELOGRAM, LEFT STENT INSERTION (Left Ureter)			Yes	
Emergent Intubation			No	
COVID 19 ICU Care			No	
IM nailing femoral shaft retrograde (Left Leg Upper)			Yes	
CYSTOSCOPY WITH INSERTION STENT URETER (Bilateral Bladder)			Yes	
CYSTOSCOPY WITH EVACUATION CLOTS, fulguration (N/A Bladder)			Yes	
BYPASS GRAFT CORONARY ARTERY X 4 LITA TO LAD SVG TO PDA SEQ TO DIAG SVG TO RAMUS INTERMEDIATE EVH LEFT LEG, TPW (N/A)			Yes	
Lumbar Puncture			No	
Laparoscopic cholecystectomy, possible open, intraoperative cholangiogram and all other indicated procedures (N/A Abdomen)			Yes	
CESAREAN SECTION (N/A Abdomen)			Yes	
Unscheduled Blood Patch			No	
Central line and arterial line			No	
Labor Epidural			Yes	
ROBOT-ASSISTED CORONARY ARTERY BYPASS GRAFT X 1 LITA			Yes	

Open Case   Cancel

Step 1: Highlight row for case to review.

Step 2: Select "Open Case" to open in Case Viewer or double click

- A date column also allows users to quickly see any trends to missing data by date on which the cases occurred

- The Location column allows users to quickly see any trends in specific rooms based on Location Mapping (see Module: Getting Started – Location Mapping).

- 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 Any Intraoperative Physiologic Observations

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CYSTOSCOPY, LEFT RETROGRADE PYELOGRAM, LEFT STENT INSERTION (Left Ureter)			Yes
Emergent Intubation			No
COVID 19 ICU Care			No
IM nailing femoral shaft retrograde (Left Leg Upper)			Yes
CYSTOSCOPY WITH INSERTION STENT URETER (Bilateral Bladder)			Yes
CYSTOSCOPY WITH EVACUATION CLOTS, fulguration (N/A Bladder)			Yes
BYPASS GRAFT CORONARY ARTERY X 4 LITA TO LAD SVG TO PDA SEQ TO DIAG SVG TO RAMUS INTERMEDIATE EVH LEFT LEG, TPW (N/A)			Yes
Lumbar Puncture			No
Laparoscopic cholecystectomy, possible open, intraoperative cholangiogram and all other indicated procedures (N/A Abdomen)			Yes
CESAREAN SECTION (N/A Abdomen)			Yes
Unscheduled Blood Patch			No
Central line and arterial line			No
Labor Epidural			Yes
ROBOT-ASSISTED CORONARY ARTERY BYPASS GRAFT X 1 LITA			Yes

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Attestation

- For the purpose of this example (slide 17), "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

Billing

Required Billing Diagnostics	Optional Billing Diagnostics	Epic Sites Only
Pro Fee Procedures Anesthesia	Discharge Procedure Codes	Cases with PMH Code (ICD-9/10)
Pro Fee Procedures Surgical	Hospital Discharge Procedures	
Pro Fee Procedures	Pro Fee Diagnoses	
Hospital Discharge Diagnoses	Hospital Discharge Multi-Day	

Billing
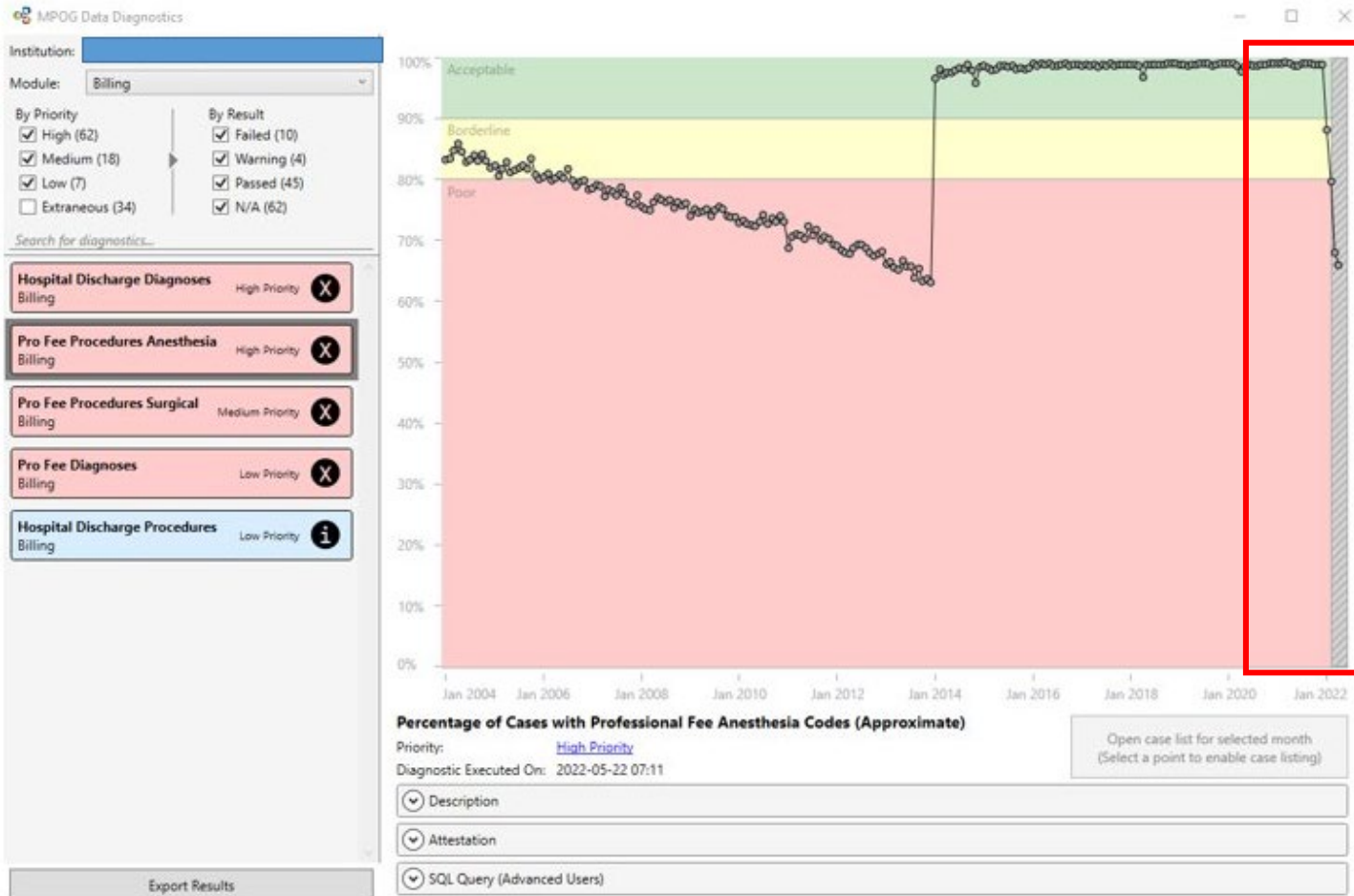
- Since there can be a delay in completing billing, we allow a 3-month grace period for the billing diagnostics.

- The gray section to the right of the graph represents the 3-month delay period

- Dips into the yellow or red areas are expected during this time frame, but should be investigated

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

Percentage of Cases with Hemoglobin or Potassium Labs - 30 Days Post

Priority: Medium Priority

Diagnostic Executed On: 4/20/2016

Step 1: Click on the Priority type for definition.

Percentage of Cases with Hemoglobin or Potassium Labs - 30 Days Post

Priority: Medium Priority

Diagnostic Executed On:

Description

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.

Attestation

Step 2: A definition window will present with the priority definition.

Diagnostics Priorities

* **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 or by Result. 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

- All 'Extraneous' diagnostics are highlighted blue. (Note: There are blue diagnostics that are also low, medium, or high priority.)

- Blue coding is used to 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 organization's case mix, population, practice, and distribution.
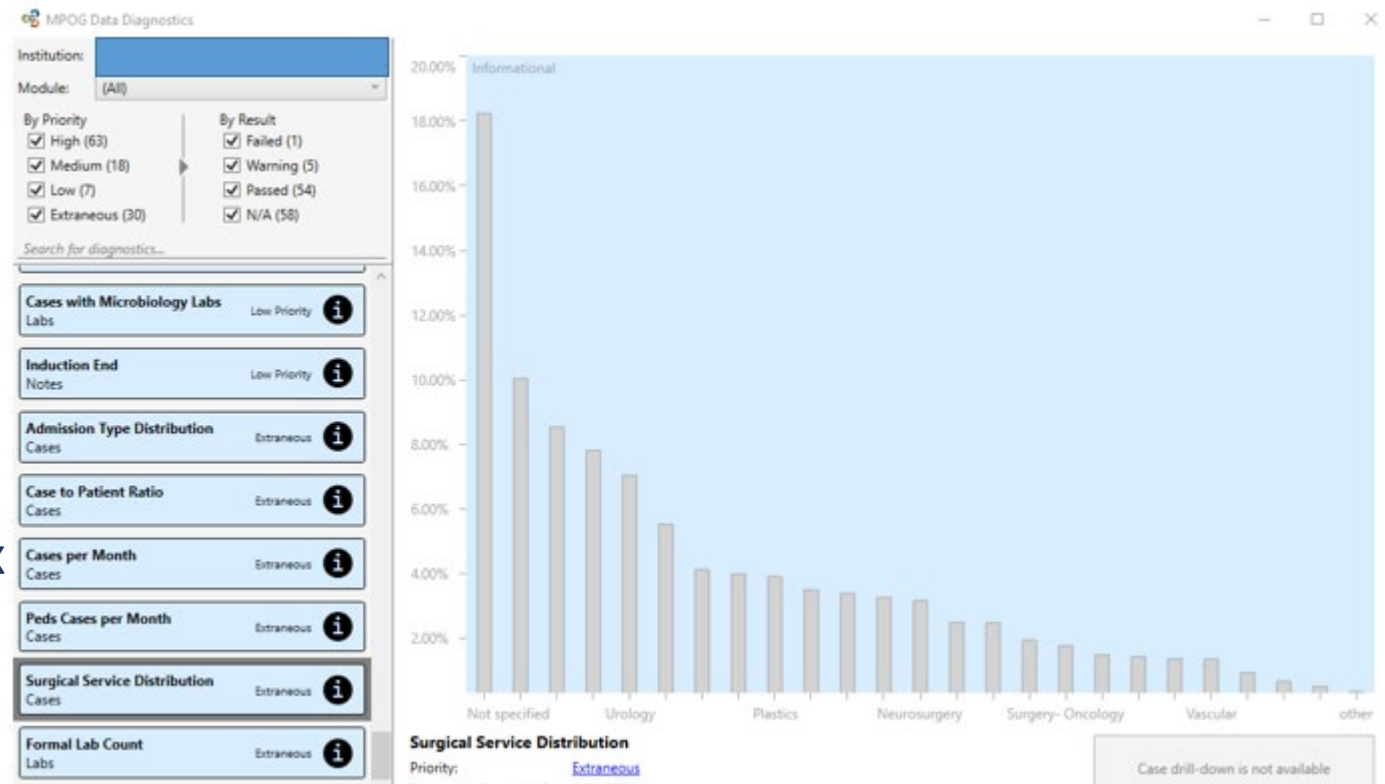
Exporting Diagnostics

- 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 your contact person at the Coordinating Center. This report does not contain PHI and can be sent through email.
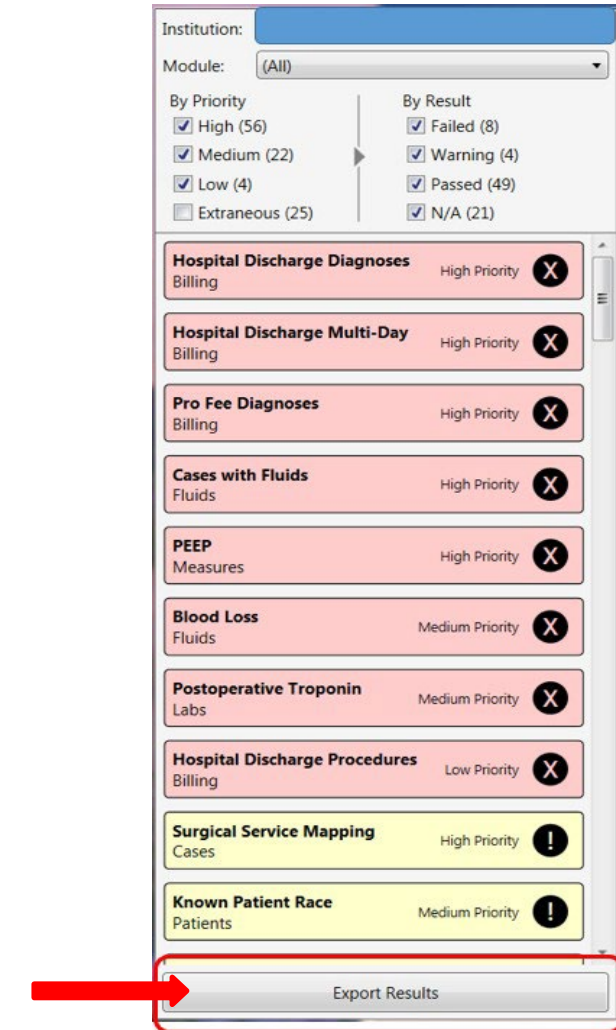
Exporting Diagnostics

- Helpful when comparing local diagnostics to MPOG Central Diagnostics

- Local Diagnostics refresh each night

- MPOG Central Diagnostics refresh each Sunday