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.
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.

Percentage of Cases with Hospital Discharge Procedure Codes

Priority: Required
Diagnostic Executed On: 4/14/2016
Description
Attestation
SQL Query (Advanced Users)
• 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.

<table>
<thead>
<tr>
<th>Description</th>
<th>Attestation</th>
<th>Previous Attestations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use this chart to verify that professional fee procedure codes have been successfully imported. If this percentage is low, check your extract.</td>
<td></td>
<td>04/11/16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>03/02/16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>02/19/16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>01/18/16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/14/15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10/23/15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>09/23/15</td>
</tr>
</tbody>
</table>

- **Data Accurately Represented**
  - The results of this diagnostic accurately represent the data from our documentation systems.

- **Data Not Accurately Represented**
  - The results of this diagnostic are not representative of data from our documentation and needs to be

- **Not Contributing Data**
  - We are unable to contribute data for this content area.
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.

Last Updated: 3/19/2020
Contact: support@mpog.zendesk.com
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

<table>
<thead>
<tr>
<th>Current Attestation</th>
<th>Comment</th>
<th>Previous Attestations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Accurately Represented</td>
<td>✓</td>
<td>04/11/15 Data Accurately Represented</td>
</tr>
<tr>
<td>Data Not Accurately Represented</td>
<td></td>
<td>03/02/16 Data Accurately Represented</td>
</tr>
<tr>
<td>Not Contributing Data</td>
<td></td>
<td>02/19/16 Data Not Accurately Represented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>01/18/16 Data Not Accurately Represented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/14/15 Data Not Accurately Represented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10/21/15 Data Not Accurately Represented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>09/23/15 Data Not Accurately Represented</td>
</tr>
</tbody>
</table>
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 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.
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.”
• 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

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.

• By drilling down into 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.
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

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**Step 1:** Click on the Priority type for definition.

**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.

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

* **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 Priorities

**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 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.

Last Updated: 3/19/2020
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Exporting Diagnostics

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