Chapter 6: Data Diagnostics

Data Diagnostics Background

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. 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 20 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 Chapter 7: Case by Case Validation module). This module reviews the Data Diagnostic application. **Data Diagnostic review and attestation is 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.**



1. Access Data Diagnostics on the MPOG Suite

2. 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.

MPOG Da	ata Diagnostics	1.2.14
Institution:	University of Minan Health System	
Module:	(All)	
By Priority	(All)	\leftarrow
Require	Patients	
V High (39	Medications	Use these settings to filter the
Medium	Notes	list of diagnostics
Low (8)	Physiologic Preon	
Extrane	Labs	
	Staff	
Pro Fee Pro	Sites	
Procedures	Outcomes	
	Diagnoses	Click on a diagnostic to view its results
Locations	Procedures	
Cases	· · · ·	

3. Click on the name of the Data Diagnostic in the left column to display the graphical results on the right. For example, Pro Fee Procedures are highlighted in the left column, 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.

Institution: Module: (All)			Ĩ
By Priority By Result Required (13) High (39) By Result Failed (13) Warning (5)	By Attestation Status Accurate (0) Not Accurate (0)	BORDERLINE	
Image: Wedium (27) Image: Passed (45) Image: Passed (45) Image: Passed (45) Image: Passed (45) Image: Passed (45) Image: Passed (45) Image: Passed (45) Image: Passed (45) <th>Not Contributing (0) Missing (87)</th> <th>75.00% -</th> <th></th>	Not Contributing (0) Missing (87)	75.00% -	
Pro Fee Procedures Procedures	Required		
Locations Cases	High Priority	50.00%-	
Hospital Discharge Diagnoses Diagnoses	High Priority	NON-STANDARD	•
Pro Fee Diagnoses Diagnoses	High Priority		
Cases with Fluids Fluids	High Priority		
Hospital Discharge Procedures Procedures	High Priority		
Non-Orphaned Locations Cases	Medium Priority	0.00% - 2005 2010 2015	
Blood Loss Fluids	Medium Priority	Percentage of Cases with Hospital Discharge Procedure Codes Priority: Required Open case list for selected month (Select a point to enable case listin	
Dextrose Medium Priority		Diagnostic Executed On: 4/21/2016	
Dextrose Fluids	Medium Priority	Attestation SQL Query (Advanced Users)	
Poston Labs Exist			

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

2004 2005 2007 2008 2009 2010 2011 2012 2013 2014	2015 2016
Percentage of Cases with Hospital Design Procedure Codes	Open case list for selected month
Diagnostic Executed On: 4/14/2016	(Select a point to enable case listing)
 ♥ Attestation 	
SQL Query (Advanced Users)	

5. To seek further clarification for the diagnostic selected, click on the "Description" header beneath the graph:

10.0%-	
2004 2005 2006 2007 2008 2010 2011 2012 2013 2014	2015 2016
Percentage of Cases with Hospital Discharge Procedure Codes	
Priority: Required	Open case list for selected month (Select a point to enable case listing)
Diagnostic Executed On: 4/14/2016	· · ·
⊘ Description	
(✓) Attestation	
SQL Query (Advanced Users)	

6. Clicking on the Description will expand the box to display the definition of the Data Diagnostic shown.

Percentage of Cases with Hospital Discharge Procedure Codes

Priority:	Required			
Diagnostic Executed On:	4/14/2016			
Description				
Use this chart to verify that professional fee procedure codes have been successfully imported. If this percentage is low, check your extract.				

7. Beneath the description is an Attestation section. Click on the arrow next to Attestation to open.

Description					
Use this chart to verify that professional fee procedure codes ha	ve been successfully imported. If this end				
Attestation					
Current Attestation	Comment	Previous Attestations			
Data Accurately Represented		04/11/16 Data Accurately Represented			
The results of this diagnostic accurately represents the data from our documentation systems.		03/02/16 Data Accurately Represented			
		02/19/16 Data Not Accurately Represented			
Data Not Accurately Represented		01/18/16 Data Not Accurately Represented			
of data from our documentation and needs to be		12/14/15 Data Not Accurately Represented			
		10/21/15 Data Accurately Represented			
Not Contributing Data We are unable to contribute data for this content		09/23/15 Data Not Accurately Represented			
area.					

8. 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 EMR or billing software). 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. For the purpose of this example, "Data Accurately Represented" would be chosen since the data reflects the documentation for the cases that have been loaded to date. 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.



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



10. Previous attestation graph will display in a new window:



11. When attesting to diagnostics, it is important to conduct further investigation if the data is not accurately represented (gaps in the data or values are higher or lower than expected). To assist Quality Champions or ACQRs with this analysis, the Coordinating Center has established thresholds for many of the diagnostics that are reflective of common practice across many sites. Thresholds are indicated by the terms: Acceptable, Borderline, and Non-standard sections highlighted in green, yellow and red accordingly.

MPOG Data Diagnostics		
nstitution:	100.00%-	and a second
October (AM) Py Presity By Result By Attribution Stati Ø Required (12) Ø Falled (18) Ø Accurate (0) Ø High (19) Ø Marring (7) Ø Net Accurate (0) Ø Medium (24) Ø Passed (18) Ø Net Accurate (18) Ø Medium (24) Ø Passed (18) Ø Net Accurate (18) Ø Medium (24) Ø Passed (14) Ø Netsing (116)	ny (0) 75.00%-	BORDERLINE
Medications High Proving		
Cnown Patient Race Medium Priority	50.00%-	
Diagnosis Text Fill Rate		
Tuid Route Mapping Low Priority		
Cases with Bolus Meds Required Medications	25.00%-	
Cases with Notes Required Votes		
Note Timestamps Required Votes		
Cnown Patient Gender Required	Percentag	e of Cases with Bolus Medications Required Open Case list for selected month
Cases with Invasive BP Required VitySologic	Diagnostic E	ecuted On: 4/16/2016 Celet a point to enable case bitting) for
ases with Non-Invasive BP Required	Attesta	ion
Cases with Physiologic	SQL Qu	ery (Advanced Users)

12. 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.



13. Click on the row for the case to review (selecting a row highlighted in red will show a case that is missing the data evaluated in the diagnostic). Click on "Open Case" to conduct further investigation in Case Viewer. By reviewing several cases in this way, it may be possible to determine if a mapping issue exists. Contact the QI Coordinators at ASPIRE/MPOG to identify next steps to improving the data quality.



14. Diagnostics that 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: Diagnostic Executed On:	Medium Priority 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:	uted On: Medium priority diagnostics must be attested to and generally should pass. Failure to pass these diagnostics is acceptable but usually not				
 Description 					
Attactation	recommended in otherwise possible.	Step 2: A definition window will present with			
		the priority definition.			

Diagnostic Priority Definitions (* indicated monthly attestation required):

***<u>Required</u>**: A required diagnostic MUST be passed before submission to MPOG.

- *<u>High Priority</u>: 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.
- *<u>Medium Priority</u>: 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.
- 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.

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

stitution:		_
odule: (All)		•
y Priority Required (13) High (39) Medium (24) Low (8) Extraneous (32)	By Result Failed (18) Passed (18) Passed (40) N/A (51)	By Attestation Status Accurate (0) Not Accurate (0) Not Contributing (0) Missing (116)
Medication Route	Mapping	High Priority
Known Patient Ra Patients	ce	Medium Priority
Diagnosis Text Fil Cases	l Rate	Low Priority
Fluid Route Mapp Fluids	ing	Low Priority
Cases with Bolus I Medications	Meds	Required
Cases with Notes		

16. 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.

	Module: (All)		•
	By Priority	By Result	By Attestation Status
	Required (13)	Failed (6)	Accurate (0)
	I High (39)	Warning (2)	🗹 Not Accurate (0)
	Medium (27)	Passed (34)	Not Contributing (0)
Use checkboxes to filter	Low (8)	🗷 N/A (10)	Missing (52)
	Extraneous (32)		

17. Finally, by clicking on "Extraneous" in the Priority filter list, a list of diagnostics that are helpful to understand site case mix and demographic types with populate at the bottom of the diagnostic list and coded blue. Blue diagnostics 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. See example of an extraneous diagnostic below:



18. An ASPIRE QI Coordinator will be available either on site or via web conference to conduct the first review of data diagnostics with the site.

For questions or comments, please contact:

Jaime Osborne, MS, RN QI Coordinator ASPIRE/MPOG jsulek@med.umich.edu 734-764-9852

Katie Buehler, MS, RN QI Coordinator ASPIRE/MPOG <u>kjbucrek@med.umich.edu</u> 734-936-7525